
**Industrial automation systems and
integration — Product data representation
and exchange —**

Part 307:
**Abstract test suite: Sheet metal die
planning and design**

*Systèmes d'automatisation industrielle et intégration — Représentation et
échange de données de produits —*

*Partie 307: Suite d'essais abstraits: Conception et planification de matrices
de tôle*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 10303-307, which is a Technical Report of type 2, was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*, Subcommittee SC 4, *Industrial data*.

There is an urgent need for guidance on how to test implementations of ISO 10303 application protocols for conformance to the standard. This Technical Report contains abstract test cases that can be used to test implementations for conformance to ISO 10303-207.

This document is being issued in the Technical Report (type 2) series of publications (according to subclause G.3.2.2 of part 1 of the ISO/IEC Directives 1995 as a "prospective standard for provisional application" in the field of conformance testing of ISO 10303 application protocols because there is an urgent need for guidance on how standards in this field should be used to meet an identified need.

This document is not to be regarded as an "International Standard". It is proposed for provisional application so that experience of its use in practice may be gathered. Comments on the content of this document should be sent to the ISO Central Secretariat.

A review of this Technical Report (type 2) will be carried out not later than three years after its publication with the options of: extension for another three years; conversion into an International Standard; or withdrawal.

ISO 10303 consists of the following parts under the general title Industrial automation systems and integration - Product data representation and exchange:

- Part 1, Overview and fundamental principles;
- Part 11, Description methods: The EXPRESS language reference manual;
- Part 12, Description method: The EXPRESS-I language reference manual;
- Part 21, Implementation methods: Clear text encoding of the exchange structure;
- Part 22, Implementation method: Standard data access interface specification;
- Part 23, Implementation method: C++ language binding to the standard data access interface;
- Part 24, Implementation method: C language binding to the standard data access interface;
- Part 26, Implementation method: Interface definition language binding to the standard data access;
- Part 31, Conformance testing methodology and framework: General concepts;
- Part 32, Conformance testing methodology and framework: Requirements on testing laboratories and clients;
- Part 33, Conformance testing methodology and framework: Structure and use of abstract test suites;
- Part 34, Conformance testing methodology and framework: Abstract test methods;
- Part 35, Conformance testing methodology and framework: Abstract test methods for SDAI implementations;
- Part 41, Integrated generic resources: Fundamentals of product description and support;
- Part 42, Integrated generic resources: Geometric and topological representation;
- Part 43, Integrated generic resources: Representation structures;
- Part 44, Integrated generic resources: Product structure configuration;
- Part 45, Integrated generic resource: Materials;
- Part 46, Integrated generic resources: Visual presentation;
- Part 47, Integrated generic resource: Shape variation tolerances;
- Part 49, Integrated generic resource: Process structure and properties;

- Part 101, Integrated application resource: Draughting;
- Part 104, Integrated application resource: Finite element analysis;
- Part 105, Integrated application resource: Kinematics;
- Part 106, Integrated application resource: Building construction core model;
- Part 201, Application protocol: Explicit draughting;
- Part 202, Application protocol: Associative draughting;
- Part 203, Application protocol: Configuration controlled design;
- Part 204, Application protocol: Mechanical design using boundary representation;
- Part 205, Application protocol: Mechanical design using surface representation;
- Part 207, Application protocol: Sheet metal die planning and design;
- Part 208, Application protocol: Life cycle management - Change process;
- Part 209, Application protocol: Composite and metallic structural analysis and related design;
- Part 210, Application protocol: Electronic assembly, interconnect, and packaging design;
- Part 212, Application protocol: Electrotechnical design and installation
- Part 213, Application protocol: Numerical control process plans for machined parts;
- Part 214, Application protocol: Core data for automotive design;
- Part 215, Application protocol: Ship arrangement;
- Part 216, Application protocol: Ship moulded forms;
- Part 217, Application protocol: Ship piping;
- Part 218, Application protocol: Ship structures;
- Part 220, Application protocol: Process planning, manufacture, and assembly of layered electronic products;
- Part 221, Application protocol: Functional data and their schematic representation for process plant;
- Part 222, Application protocol: Exchange of product data for composite structures;

- Part 223, Application protocol: Exchange of design and manufacturing product information for casting parts;
- Part 224, Application protocol: Mechanical product definition for process plans using machining features;
- Part 225, Application protocol: Building elements using explicit shape representation;
- Part 226, Application protocol: Ship mechanical systems;
- Part 227, Application protocol: Plant spatial configuration;
- Part 228, Application protocol: Building services: Heating, ventilation, and air conditioning;
- Part 229, Application protocol: Exchange of design and manufacturing product information for forged parts;
- Part 230, Application protocol: Building structural frame: Steelwork;
- Part 231, Application protocol: Process engineering data: Process design and process specification of major equipment;
- Part 232, Application protocol: Technical data packaging core information and exchange;
- Part 301, Abstract test suite: Explicit draughting;
- Part 302, Abstract test suite: Associative draughting;
- Part 303, Abstract test suite: Configuration controlled design;
- Part 304, Abstract test suite: Mechanical design using boundary representation;
- Part 305, Abstract test suite: Mechanical design using surface representation;
- Part 307, Abstract test suite: Sheet metal die planning and design;
- Part 308, Abstract test suite: Life cycle management - Change process;
- Part 309, Abstract test suite: Composite and metallic structural analysis and related design;
- Part 310, Abstract test suite: Electronic assembly, interconnect, and packaging design;
- Part 312, Abstract test suite: Electrotechnical design and installation;
- Part 313, Abstract test suite: Numerical control process plans for machined parts;
- Part 314, Abstract test suite: Core data for automotive mechanical design;
- Part 315, Abstract test suite: Ship arrangement;

- Part 316, Abstract test suite: Ship moulded forms;
- Part 317, Abstract test suite: Ship piping;
- Part 318, Abstract test suite: Ship structures;
- Part 320, Abstract test suite: Process planning, manufacture, and assembly of layered electronic products;
- Part 321, Abstract test suite: Functional data and their schematic representation for process plant;
- Part 322, Abstract test suite: Exchange of product data for composite structures;
- Part 323, Abstract test suite: Exchange of design and manufacturing product information for casting parts;
- Part 324, Abstract test suite: Mechanical product definition for process plans using machining features;
- Part 325, Abstract test suite: Building elements using explicit shape representation;
- Part 326, Abstract test suite: Ship mechanical systems;
- Part 327, Abstract test suite: Plant spatial configuration;
- Part 328, Abstract test suite: Building services: Heating, ventilation, and air conditioning;
- Part 329, Abstract test suite: Exchange of design and manufacturing product information for forged parts;
- Part 330, Abstract test suite: Building structural frame: Steelwork;
- Part 331, Abstract test suite: Process engineering data: Process design and process specification of major equipment;
- Part 332, Abstract test suite: Technical data packaging core information and exchange;
- Part 501, Application interpreted construct: Edge-based wireframe;
- Part 502, Application interpreted construct: Shell-based wireframe;
- Part 503, Application interpreted construct: Geometrically bounded 2D wireframe;
- Part 504, Application interpreted construct: Draughting annotation;
- Part 505, Application interpreted construct: Drawing structure and administration;
- Part 506, Application interpreted construct: Draughting elements;

- Part 507, Application interpreted construct: Geometrically bounded surface;
- Part 508, Application interpreted construct: Non-manifold surface;
- Part 509, Application interpreted construct: Manifold surface;
- Part 510, Application interpreted construct: Geometrically bounded wireframe;
- Part 511, Application interpreted construct: Topologically bounded surface;
- Part 512, Application interpreted construct: Faceted boundary representation;
- Part 513, Application interpreted construct: Elementary boundary representation;
- Part 514, Application interpreted construct: Advanced boundary representation;
- Part 515, Application interpreted construct: Constructive solid geometry;
- Part 517, Application interpreted construct: Mechanical design geometric presentation;
- Part 518, Application interpreted construct: Mechanical design shaded representation.

The structure of this International Standard is described in ISO 10303-1. The numbering of the parts of the International Standard reflects its structure:

- Parts 11 and 12 specify the description methods,
- Parts 21 to 26 specify the implementation methods,
- Parts 31 to 35 specify the conformance testing methodology and framework,
- Parts 41 to 49 specify the integrated generic resources,
- Parts 101 to 106 specify the integrated application resources,
- Parts 201 to 232 specify the application protocols,
- Parts 301 to 332 specify the abstract test suites, and
- Parts 501 to 518 specify the application interpreted constructs.

Should further parts be published, they will follow the same numbering pattern.

Annexes A, B and C form a normative part of ISO 10303. Annex D is for information only.

Introduction

ISO 10303 is an International Standard for the computer-interpretable representation and exchange of product data. The objective is to provide a neutral mechanism capable of describing product data throughout the life cycle of a product independent from any particular system. The nature of this description makes it suitable not only for neutral file exchange, but also as a basis for implementing and sharing product databases and archiving.

This International Standard is organized as a series of parts, each published separately. The parts of ISO 10303 fall into one of the following series: description methods, integrated resources, application interpreted constructs, application protocols, abstract test suites, implementation methods, and conformance testing. The series are described in ISO 10303-1. This part of ISO 10303 is a member of the abstract test suite series.

The purpose of an abstract test suite is to provide a basis for evaluating whether a particular implementation of an application protocol actually conforms to the requirements of that application protocol. A standard abstract test suite helps ensure that evaluations of conformance are conducted in a consistent manner by different test laboratories.

This part of ISO 10303 specifies the abstract test suite for ISO 10303-207, Application protocol: Sheet metal die planning and design. The abstract test cases presented here are the basis for conformance testing of implementations of ISO 10303-207.

This abstract test suite is made up of two major parts:

- the test purposes, the specific items to be covered by conformance testing;
- the set of abstract test cases that meet those test purposes.

The test purposes are statements of the application protocol requirements that are to be addressed by the abstract test cases. Test purposes are derived primarily from the application protocol's application elements and application interpreted model, as well as from other sources such as standards referenced by the application protocol and other requirements stated in the application protocol conformance requirements clause.

The abstract test cases address the test purposes by:

- specifying the requirements for input data to be used when testing an implementation of the application protocol;
- specifying the verdict criteria to be used when evaluating whether the implementation successfully converted the input data to a different form.

The abstract test cases set the requirements for the executable test cases that are required to actually conduct a conformance test. Executable test cases contain the scripts, detailed values, and other explicit information required to conduct a conformance test on a specific implementation of the application protocol.

At the time of publication of this document, conformance testing requirements had been established for implementations of application protocols in combination with ISO 10303-21 and ISO 10303-22. Accordingly, this part of ISO 10303 only specifies test purposes and abstract test cases appropriate to such implementations.

For ISO 10303-21, two kinds of implementations, preprocessors and postprocessors, must be tested. Both of these are addressed in this abstract test suite.

For ISO 10303-22, a class of applications that possesses the capability to upload and download application protocol-conforming to standard data access interface-models and/or schema instances to and from applications that implement the standard data access interface.

Industrial automation systems and integration — Product data representation and exchange — Part 307: Abstract test suite: Sheet metal die planning and design

1 Scope

This part of ISO 10303 specifies the abstract test suite to be used in the conformance testing of implementations of ISO 10303-207. The following are within the scope of this part of ISO 10303:

- the specification of the test purposes associated with ISO 10303-207;
- the verdict criteria to be applied during conformance testing of an implementation of ISO 10303-207 using ISO 10303-21;

NOTE - The verdict criteria are used to ascertain whether a test purpose has been satisfactorily met by an implementation under test (IUT) within the context of a given test case.

- the abstract test cases to be used as the basis for the executable test cases for conformance testing.

NOTE - This document provides test cases for conformance classes 1, 2, 4, 5, and 7. Testcases for conformance classes 3, 6, 8, 9, 10, 11, 12, 13, 14 are not provided in this document.

The following are outside the scope of this part of ISO 10303:

- the creation of executable test cases;
- testing other than conformance testing;
- other implementation methods.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10303. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10303 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 10303-1:1994, *Industrial automation systems and integration - Product data representation and exchange - Part 1: Overview and fundamental principles.*

ISO 10303-11:1994, *Industrial automation systems and integration - Product data representation and exchange - Part 11: Description methods: The EXPRESS language reference manual.*

ISO 10303-21:1994, *Industrial automation systems and integration - Product data representation and exchange - Part 21: Implementation methods: Clear text encoding of the exchange structure.*

ISO 10303-22:1998, : *Industrial automation systems and integration - Product data representation and exchange - Part 22: Implementation methods: Standard Data Access Interface.*

ISO 10303-31:1994, *Industrial automation systems and integration - Product data representation and exchange - Part 31: Conformance testing methodology and framework: General concepts .*

ISO/FDIS 10303-207, *Industrial automation systems and integration - Product data representation and exchange - Part 207: Application Protocol: Sheet metal die planning and design.*

3 Definitions and abbreviations

3.1 Terms defined in ISO 10303-1

This part of ISO 10303 makes use of the following terms defined in ISO 10303-1:

- abstract test suite (ATS);
- application interpreted model (AIM);
- application object;
- application protocol (AP);
- application reference model (ARM);
- conformance class (CC);
- implementation method.

3.2 Terms defined in ISO 10303-31

This part of ISO 10303 makes use of the following abbreviations defined in ISO 10303-31:

- abstract test case (ATC);
- conformance testing;
- executable test case;

- implementation under test (IUT);
- postprocessor;
- preprocessor;
- test purpose;
- verdict criteria.

3.3 Terms defined in ISO 10303-207

This part of ISO 10303 makes use of the following terms defined in ISO 10303-207:

- cam;
- die;
- die face;
- die set;
- die structure;
- feature;
- feature property;
- hard aid;
- in-process;
- mating die;
- part process plan;
- sheet metal;
- sheet metal part;
- stamping press.

3.4 Other definitions

For the purposes of this part of ISO 10303, the following definitions apply:

3.4.1 application element (AE): an application object, attribute, or assertion defining the information requirements in clause 4 of an AP.

3.4.2 domain test purpose: a type of test purpose that is based on general requirements of the application domain of the application protocol.

3.4.3 external reference test purpose: a type of test purpose that is based on an external standard referenced by the application protocol.

3.4.4 input specification: a description of the information to be used in preprocessor conformance testing to build the required model to satisfy the test purpose and verdict criteria.

3.5 Abbreviations

For the purposes of this part of ISO 10303, the following abbreviations apply:

ATC	Abstract Test Case
ATS	Abstract Test Suite
AE	Application Element
AIM	Application Interpreted Model
AP	Application Protocol
ARM	Application Reference Model
CC	Conformance Class
IUT	Implementation Under Test
SI	International System of Units
B-rep	Boundary representation
CSG	Constructive Solid Geometry

4 Test purposes

This clause specifies the test purposes for this part of ISO 10303. Test purposes in 4.1 and 4.2 are derived from the information requirements contained in clause 4 of ISO 10303-207 and the AIM EXPRESS schema in annex A of ISO 10303-207. Each test purpose statement identifies some specific element from the AEs or the AIM. Every test purpose statement implicitly requires that the identified element, as specified in the test purpose statement, will be correctly instantiated by the implementation under test.

4.1 Application element test purposes

AE test purposes are individually identified by the prefix “ae” in the test purpose number. Each test purpose derived from the information requirements shall be interpreted as given in the following

statement: the IUT shall preserve the semantic associated with the unique application element from which the test purpose was derived. This implies that the semantics of the application element are preserved by the IUT between the input and output of a test, according to the reference path specified in the mapping table of the AP. AE test purposes apply to the input specifications of both preprocessor and postprocessor test cases. AE test purposes are derived from the AP information requirements as follows:

- application objects (see 4.2 of ISO 10303-207). A test purpose derived from an application object is a simple statement of the object's name. Each application object test purpose is documented in a separate subclause.
- application objects with categorisations (subtypes) (see 4.2 of ISO 10303-207). Test purposes derived from application objects with categorisations are statements of the application object name as a specific subtype.
- application object attributes (see 4.2 of ISO 10303-207). Test purposes derived from application object attributes are statements of the application object name with a specific attribute name.
- application assertions (see 4.3 of ISO 10303-207). Test purposes derived from application assertions are statements describing the relationship between two application objects. Application assertion test purposes address the directions of relationships as well as the number (cardinality) of relationships.

Each application object test purpose is listed as a separate subclause, with its related application object attribute test purposes and assertion test purposes.

4.1.1 Angle_distance_dimension

ae1 Angle_distance_dimension
 ae2 Angle_distance_dimension with clockwise = EQUAL
 ae3 Angle_distance_dimension with clockwise = SMALL
 ae4 Angle_distance_dimension with clockwise = LARGE
 ae5 Angle_distance_dimension with orientation = EQUAL
 ae6 Angle_distance_dimension with orientation = SMALL
 ae7 Angle_distance_dimension with orientation = LARGE

4.1.2 Assembly_component_relationship

ae57 Assembly_component_relationship (6.18)
 ae58 Assembly_component_relationship with component_quantity (6.18)
 ae59 Assembly_component_relationship <substitutes for> zero Assembly_component_relationship (6.18)
 ae60 Assembly_component_relationship <substitutes for> one Assembly_component_relationship
 ae61 Assembly_component_relationship <substitutes for> many Assembly_component_relationship
 ae62 Assembly_component_relationship <has as the shape of the component in the assembly> zero Shape_definition (6.18)
 ae63 Assembly_component_relationship <has as the shape of the component in the assembly> one Shape_definition
 ae64 Assembly_component_relationship <has as the shape of the component in the assembly> many Shape_definition

ae65 Assembly_component_relationship <is substitute for> zero Assembly_component_relationship (6.18)

ae66 Assembly_component_relationship <is substitute for> one Assembly_component_relationship

ae67 Assembly_component_relationship <is substitute for> many Assembly_component_relationship

4.1.3 Change_order

ae117 Change_order (6.4)

ae118 Change_order with change_design_location (6.4)

ae119 Change_order with implementor (6.4)

ae120 Change_order <is based on> zero Work_item (6.4)

ae121 Change_order <is based on> one Work_item

ae122 Change_order <is based on> many Work_item

ae123 Change_order <is the subject of> zero Work_item (6.4)

ae124 Change_order <is the subject of> one Work_item

ae125 Change_order <is the subject of> many Work_item

4.1.4 Change_request

ae175 Change_request (6.2, 6.4)

ae176 Change_request with problem_change_description (6.2, 6.4)

ae177 Change_request with recommended_solution (6.2 6.4)

4.1.5 Coincidence_defaults

ae227 Coincidence_defaults (6.10, 6.11, 6.12)

ae228 Coincidence_defaults with position (6.10, 6.11, 6.12)

ae229 Coincidence_defaults with angle

ae230 Coincidence_defaults <provides default uncertainties for> zero Shape_definition (6.10, 6.11, 6.12)

ae231 Coincidence_defaults <provides default uncertainties for> one Shape_definition

ae232 Coincidence_defaults <provides default uncertainties for> many Shape_definition

4.1.6 Curve_distance_dimension

ae282 Curve_distance_dimension

4.1.7 Curve_length_size_dimension

ae332 Curve_length_size_dimension

4.1.8 Designed_item

ae382 Designed_item (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.25)

ae383 Designed_item with creation_date_and_time (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.25)

ae384 Designed_item with data_exchange_history (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.25)

ae385 Designed_item with data_ownership (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19,

6.25)

ae386 Designed_item with designer (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.25)

ae387 Designed_item with generating_system_information (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.25)

ae388 Designed_item with media_requirements (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.25)

4.1.9 Diameter_size_dimension

ae438 Diameter_size_dimension

4.1.10 Die

ae488 Die (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)

4.1.11 Die_definition

ae538 Die_definition (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)

ae539 Die_definition with die_function_description (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)

ae540 Die_definition with die_layout_specification_reference (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)

ae541 Die_definition with die_structure_specification_reference (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)

ae542 Die_definition with die_weight (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)

ae543 Die_definition with pattern_casting_specification (6.6, 6.7, 6.8, 6.9, 6.18, 6.19, 6.21)

ae544 Die_definition <is constrained by> zero Die_definition_constraint (6.6, 6.7, 6.8, 6.9, 6.18, 6.19, 6.21)

ae545 Die_definition <is constrained by> one Die_definition_constraint (6.15)

ae546 Die_definition <is constrained by> many Die_definition_constraint

ae547 Die_definition <defines tool for> zero Process_operation (6.6, 6.7, 6.8, 6.9, 6.18, 6.19, 6.21)

ae548 Die_definition <defines tool for> one Process_operation

ae549 Die_definition <defines tool for> many Process_operation

4.1.12 Die_definition_constraint

ae599 Die_definition_constraint (6.15)

ae600 Die_definition_constraint with constraint_description (6.15)

ae601 Die_definition_constraint <constrains> zero Die_definition (6.15)

ae602 Die_definition_constraint <constrains> one Die_definition (6.15)

ae603 Die_definition_constraint <constrains> many Die_definition

4.1.13 Die_shape_definition

ae653 Die_shape_definition (6.8, 6.9)

ae654 Die_shape_definition <is called out by> zero Shape_tolerance

ae655 Die_shape_definition <is called out by> one Shape_tolerance

ae656 Die_shape_definition <is called out by> many Shape_tolerance

4.1.14 Dimension_tolerance_range

ae762 Dimension_tolerance_range
 ae763 Dimension_tolerance_range with tolerance_fitting_type
 ae764 Dimension_tolerance_range <has as upper limit> zero Tolerance_value
 ae765 Dimension_tolerance_range <has as upper limit> one Tolerance_value
 ae766 Dimension_tolerance_range <has as upper limit> many Tolerance_value
 ae767 Dimension_tolerance_range <has as lower limit> zero Tolerance_value
 ae768 Dimension_tolerance_range <has as lower limit> one Tolerance_value
 ae769 Dimension_tolerance_range <has as lower limit> many Tolerance_value
 ae770 Dimension_tolerance_range <describes permissible variation of> zero Dimensional_representation
 ae771 Dimension_tolerance_range <describes permissible variation of> one Dimensional_representation
 ae772 Dimension_tolerance_range <describes permissible variation of> many Dimensional_representation
 ae773 Dimension_tolerance_range <describes permissible variation of> zero Dimensional_representation
 ae774 Dimension_tolerance_range <describes permissible variation of> one Dimensional_representation
 ae775 Dimension_tolerance_range <describes permissible variation of> many Dimensional_representation

4.1.15 Dimensional_representation

ae706 Dimensional_representation (6.10)
 ae707 Dimensional_representation <may vary according to> zero Dimension_tolerance_range (6.10)
 ae708 Dimensional_representation <may vary according to> one Dimension_tolerance_range
 ae709 Dimensional_representation <may vary according to> many Dimension_tolerance_range
 ae710 Dimensional_representation <may vary according to> zero Dimension_tolerance_range (6.10)
 ae711 Dimensional_representation <may vary according to> one Dimension_tolerance_range
 ae712 Dimensional_representation <may vary according to> many Dimension_tolerance_range

4.1.16 Distance_dimension

ae825 Distance_dimension (6.10)

4.1.17 Envelope_relationship

ae875 Envelope_relationship

4.1.18 External_item_reference

ae925 External_item_reference (6.7, 6.10, 6.11, 6.12, 6.20)
 ae926 External_item_reference with manual_reference_description (6.7, 6.10, 6.11, 6.12, 6.20)
 ae927 External_item_reference with name (6.7, 6.10, 6.11, 6.12, 6.20)
 ae928 External_item_reference with needed_modifications (6.7, 6.10, 6.11, 6.12, 6.20)

4.1.19 External_order

ae978 External_order (6.4)
 ae979 External_order with contractual_requirement (6.4)
 ae980 External_order with purchase_order_number (6.4)
 ae981 External_order with purchasing_agent (6.4)

ae982 External_order with supplier_identification (6.4)
 ae983 External_order <role description> zero Start_order (6.4)
 ae984 External_order <role description> one Start_order
 ae985 External_order <role description> many Start_order

4.1.20 Feature

ae1035 Feature (6.10)
 ae1036 Feature with designer
 ae1037 Feature with feature_name (6.10)
 ae1038 Feature <possesses> zero Feature_property (6.10)
 ae1039 Feature <possesses> one Feature_property
 ae1040 Feature <possesses> many Feature_property
 ae1041 Feature <defines the shape of> zero Shape_definition
 ae1042 Feature <defines the shape of> one Shape_definition (6.10)
 ae1043 Feature <defines the shape of> many Shape_definition
 ae1044 Feature <is included in> zero Item_definition (6.10)
 ae1045 Feature <is included in> one Item_definition
 ae1046 Feature <is included in> many Item_definition

4.1.21 Feature_property

ae1096 Feature_property
 ae1097 Feature_property with property_description
 ae1098 Feature_property with property_type
 ae1099 Feature_property <is possessed by> zero Feature
 ae1100 Feature_property <is possessed by> one Feature
 ae1101 Feature_property <is possessed by> many Feature

4.1.22 Feature_shape_definition

ae1151 Feature_shape_definition
 ae1152 Feature_shape_definition <is called out by> zero Shape_tolerance
 ae1153 Feature_shape_definition <is called out by> one Shape_tolerance
 ae1154 Feature_shape_definition <is called out by> many Shape_tolerance

4.1.23 Final_part_definition

ae1204 Final_part_definition (6.5, 6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21, 6.25)
 ae1205 Final_part_definition <defines the part on> zero Part_on_product (6.5, 6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21)
 ae1206 Final_part_definition <defines the part on> one Part_on_product (6.25)
 ae1207 Final_part_definition <defines the part on> many Part_on_product
 ae1208 Final_part_definition <has manufacture defined by> zero Part_process_plan (6.5, 6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21, 6.25)
 ae1209 Final_part_definition <has manufacture defined by> one Part_process_plan
 ae1210 Final_part_definition <has manufacture defined by> many Part_process_plan

4.1.24 In_process_part_definition

ae1366 In_process_part_definition (6.10, 6.11, 6.12)

ae1367 In_process_part_definition <is operated upon by> zero Process_operation (6.10, 6.11, 6.12)

ae1368 In_process_part_definition <is operated upon by> one Process_operation

ae1369 In_process_part_definition <is operated upon by> many Process_operation

4.1.25 Input_item_die_relationship

ae1260 Input_item_die_relationship (6.21)

ae1261 Input_item_die_relationship <has input item position within the die described by> zero Shape_definition (6.21)

ae1262 Input_item_die_relationship <has input item position within the die described by> one Shape_definition

ae1263 Input_item_die_relationship <has input item position within the die described by> many Shape_definition

4.1.26 Internal_order

ae1313 Internal_order (6.3)

ae1314 Internal_order with authorized_hours (6.3)

ae1315 Internal_order with charge_number (6.3)

ae1316 Internal_order with source_department (6.3)

4.1.27 Item

ae1419 Item (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

ae1420 Item with item_description (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

ae1421 Item with item_name (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

ae1422 Item with item_number (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

ae1423 Item <is classified by> zero Item_classification (6.25)

ae1424 Item <is classified by> one Item_classification (6.15, 6.20, 6.21, 6.22)

ae1425 Item <is classified by> many Item_classification (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.25)

ae1426 Item <is versioned by> zero Item_version (6.22)

ae1427 Item <is versioned by> one Item_version (6.15, 6.25)

ae1428 Item <is versioned by> many Item_version (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.1.28 Item_classification

ae1478 Item_classification (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

ae1479 Item_classification with classification_description (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

- ae1480 Item_classification with classification_identification (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)
- ae1481 Item_classification with classification_name (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)
- ae1482 Item_classification <is primary in> zero Item_classification_relationship (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1483 Item_classification <is primary in> one Item_classification_relationship (6.22)
- ae1484 Item_classification <is primary in> many Item_classification_relationship
- ae1485 Item_classification <is secondary in> zero Item_classification_relationship (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1486 Item_classification <is secondary in> one Item_classification_relationship (6.22)
- ae1487 Item_classification <is secondary in> many Item_classification_relationship
- ae1488 Item_classification <classifies> zero Item
- ae1489 Item_classification <classifies> one Item (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1490 Item_classification <classifies> many Item (6.16, 6.17, 6.18, 6.19, 6.22)

4.1.29 Item_classification_relationship

- ae1540 Item_classification_relationship (6.22)
- ae1541 Item_classification_relationship with relationship_description (6.22)
- ae1542 Item_classification_relationship <has as primary> zero Item_classification
- ae1543 Item_classification_relationship <has as primary> one Item_classification
- ae1544 Item_classification_relationship <has as primary> many Item_classification (6.22)
- ae1545 Item_classification_relationship <has as secondary> zero Item_classification
- ae1546 Item_classification_relationship <has as secondary> one Item_classification
- ae1547 Item_classification_relationship <has as secondary> many Item_classification (6.22)

4.1.30 Item_definition

- ae1597 Item_definition (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1598 Item_definition with approval (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1599 Item_definition with approval_status (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1600 Item_definition with definition_description (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1601 Item_definition with procurement_information (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1602 Item_definition with proprietary_security_usage_information (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1603 Item_definition <includes> zero Feature
- ae1604 Item_definition <includes> one Feature (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1605 Item_definition <includes> many Feature
- ae1606 Item_definition <is first in> zero Item_definition_relationship
- ae1607 Item_definition <is first in> one Item_definition_relationship (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1608 Item_definition <is first in> many Item_definition_relationship
- ae1609 Item_definition <is second in> zero Item_definition_relationship

- ae1610 Item_definition <is second in> one Item_definition_relationship (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1611 Item_definition <is second in> many Item_definition_relationship
- ae1612 Item_definition <has shape characterized by> zero Shape_definition
- ae1613 Item_definition <has shape characterized by> one Shape_definition (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1614 Item_definition <has shape characterized by> many Shape_definition
- ae1615 Item_definition <defines> zero Item_version
- ae1616 Item_definition <defines> one Item_version (6.5, 6.6, 6.7, 6.8, 6.9, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1617 Item_definition <defines> many Item_version

4.1.31 Item_definition_relationship

- ae1667 Item_definition_relationship (6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21)
- ae1668 Item_definition_relationship with relationship_description (6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21)
- ae1669 Item_definition_relationship <has as first> zero Item_definition (6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21)
- ae1670 Item_definition_relationship <has as first> one Item_definition (6.18, 6.19)
- ae1671 Item_definition_relationship <has as first> many Item_definition
- ae1672 Item_definition_relationship <has as second> zero Item_definition (6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21)
- ae1673 Item_definition_relationship <has as second> one Item_definition (6.18, 6.19)
- ae1674 Item_definition_relationship <has as second> many Item_definition

4.1.32 Item_version

- ae1724 Item_version (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1725 Item_version with approval (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1726 Item_version with approval_status (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1727 Item_version with description (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1728 Item_version with item_version_identification (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1729 Item_version with revision_date_and_time (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1730 Item_version <is defined by> zero Item_definition (6.10, 6.11, 6.12)
- ae1731 Item_version <is defined by> one Item_definition (6.5, 6.11, 6.12, 6.20, 6.25)
- ae1732 Item_version <is defined by> many Item_definition (6.6, 6.7, 6.8, 6.9, 6.10, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1733 Item_version <versions> zero Item
- ae1734 Item_version <versions> one Item (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- ae1735 Item_version <versions> many Item

4.1.33 Linear_distance_dimension

ae1785 Linear_distance_dimension (6.10)

4.1.34 Made_in_house

ae1835 Made_in_house (6.5, 6.6)

4.1.35 Make_similar_to_relationship

ae1885 Make_similar_to_relationship (6.16)

4.1.36 Marketable_assembly

ae1935 Marketable_assembly (6.25)

ae1936 Marketable_assembly with model_identification (6.25)

ae1937 Marketable_assembly with production_year (6.25)

ae1938 Marketable_assembly with style_identification (6.25)

ae1939 Marketable_assembly <is the product for> zero Part_on_product (6.25)

ae1940 Marketable_assembly <is the product for> one Part_on_product

ae1941 Marketable_assembly <is the product for> many Part_on_product

4.1.37 Material

ae1991 Material (6.20)

4.1.38 Material_definition

ae2041 Material_definition (6.20)

ae2042 Material_definition with material_description (6.20)

ae2043 Material_definition with material_specification (6.20)

ae2044 Material_definition <specifies material for> zero Part_definition (6.20)

ae2045 Material_definition <specifies material for> one Part_definition

ae2046 Material_definition <specifies material for> many Part_definition

4.1.39 Material_shape_definition

ae2096 Material_shape_definition

ae2097 Material_shape_definition <is called out by> zero Shape_tolerance

ae2098 Material_shape_definition <is called out by> one Shape_tolerance

ae2099 Material_shape_definition <is called out by> many Shape_tolerance

4.1.40 Mating_relationship

ae2149 Mating_relationship

ae2150 Mating_relationship <has on the shape of the interface> zero Shape_definition

ae2151 Mating_relationship <has on the shape of the interface> one Shape_definition

ae2152 Mating_relationship <has on the shape of the interface> many Shape_definition

4.1.41 Part

ae2202 Part (6.5, 6.10, 6.11, 6.12, 6.15, 6.17, 6.20, 6.21, 6.22, 6.25)

4.1.42 Part_definition

ae2252 Part_definition (6.5, 6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21, 6.25)

ae2253 Part_definition <has material specified by> zero Material_definition (6.5, 6.10, 6.11, 6.12, 6.16, 6.17, 6.20, 6.21, 6.25)

ae2254 Part_definition <has material specified by> one Material_definition

ae2255 Part_definition <has material specified by> many Material_definition

4.1.43 Part_on_product

ae2305 Part_on_product (6.25)

ae2306 Part_on_product <is located at> zero Part_on_product_location

ae2307 Part_on_product <is located at> one Part_on_product_location (6.25)

ae2308 Part_on_product <is located at> many Part_on_product_location

ae2309 Part_on_product <has> zero Production_effectivity

ae2310 Part_on_product <has> one Production_effectivity (6.25)

ae2311 Part_on_product <has> many Production_effectivity

ae2312 Part_on_product <is defined by> zero Final_part_definition

ae2313 Part_on_product <is defined by> one Final_part_definition (6.25)

ae2314 Part_on_product <is defined by> many Final_part_definition

ae2315 Part_on_product <has> zero Marketable_assembly (6.25)

ae2316 Part_on_product <has> one Marketable_assembly

ae2317 Part_on_product <has> many Marketable_assembly

4.1.44 Part_on_product_location

ae2367 Part_on_product_location (6.25)

ae2368 Part_on_product_location with intraproduct_location (6.25)

ae2369 Part_on_product_location <has> zero Part_on_product

ae2370 Part_on_product_location <has> one Part_on_product (6.25)

ae2371 Part_on_product_location <has> many Part_on_product

4.1.45 Part_process_plan

ae2421 Part_process_plan (6.13, 6.14, 6.15)

ae2422 Part_process_plan with approval (6.13, 6.14, 6.15)

ae2423 Part_process_plan with approval_status (6.13, 6.14, 6.15)

ae2424 Part_process_plan with creation_date_and_time (6.13, 6.14, 6.15)

ae2425 Part_process_plan with data_ownership (6.13, 6.14, 6.15)

ae2426 Part_process_plan with generating_system_information (6.13, 6.14, 6.15)

ae2427 Part_process_plan with part_process_version_identification (6.13, 6.14, 6.15)

ae2428 Part_process_plan with plan_status (6.13, 6.14, 6.15)

ae2429 Part_process_plan with planner (6.13, 6.14, 6.15)

ae2430 Part_process_plan with production_rate (6.13, 6.14)

ae2431 Part_process_plan with proprietary_security_usage_information (6.13, 6.14, 6.15)
 ae2432 Part_process_plan with review_date_and_time (6.13, 6.14, 6.15)
 ae2433 Part_process_plan with version_description (6.13, 6.15)
 ae2434 Part_process_plan <substitutes for> zero Part_process_plan (6.13, 6.14, 6.15)
 ae2435 Part_process_plan <substitutes for> one Part_process_plan
 ae2436 Part_process_plan <substitutes for> many Part_process_plan
 ae2437 Part_process_plan <is previous part_process_plan in> zero Part_process_plan_version_ -
 relationship (6.13, 6.14, 6.15)
 ae2438 Part_process_plan <is previous part process plan in> one Part_process_plan_version_relationship
 ae2439 Part_process_plan <is previous part process plan in> many Part_process_plan_version_ -
 relationship
 ae2440 Part_process_plan <is next part_process_plan in> zero Part_process_plan_version_relationship
 (6.13, 6.14, 6.15)
 ae2441 Part_process_plan <is next part_process_plan in> one Part_process_plan_version_relationship
 ae2442 Part_process_plan <is next part_process_plan in> many Part_process_plan_version_relationship
 ae2443 Part_process_plan <is constrained by> zero Plant_constraint (6.13, 6.14, 6.15)
 ae2444 Part_process_plan <is constrained by> one Plant_constraint
 ae2445 Part_process_plan <is constrained by> many Plant_constraint
 ae2446 Part_process_plan <defines a series of > zero Process_operation (6.13, 6.14, 6.15)
 ae2447 Part_process_plan <defines a series of> one Process_operation
 ae2448 Part_process_plan <defines a series of> many Process_operation
 ae2449 Part_process_plan <defines manufacture of> zero Final_part_definition (6.13, 6.14, 6.15)
 ae2450 Part_process_plan <defines manufacture of> one Final_part_definition
 ae2451 Part_process_plan <defines manufacture of> many Final_part_definition
 ae2452 Part_process_plan <is substitute for> zero Part_process_plan (6.13, 6.14, 6.15)
 ae2453 Part_process_plan <is substitute for> one Part_process_plan
 ae2454 Part_process_plan <is substitute for> many Part_process_plan
 ae2455 Part_process_plan <has as a template> zero Part_process_plan_template (6.13, 6.14, 6.15)
 ae2456 Part_process_plan <has as a template> one Part_process_plan_template
 ae2457 Part_process_plan <has as a template> many Part_process_plan_template

4.1.46 Part_process_plan_template

ae2507 Part_process_plan_template
 ae2508 Part_process_plan_template <is the template for> zero Part_process_plan
 ae2509 Part_process_plan_template <is the template for> one Part_process_plan
 ae2510 Part_process_plan_template <is the template for> many Part_process_plan

4.1.47 Part_process_plan_version_relationship

ae2560 Part_process_plan_version_relationship
 ae2561 Part_process_plan_version_relationship with revision_reason
 ae2562 Part_process_plan_version_relationship <has as previous part_process_plan> zero Part_process_ -
 plan
 ae2563 Part_process_plan_version_relationship <has as previous part_process_plan> one Part_process_ -
 plan
 ae2564 Part_process_plan_version_relationship <has as previous part_process_plan> many Part_ -
 process_plan

ae2565 Part_process_plan_version_relationship <has as next part_process_plan> zero Part_process_plan
 ae2566 Part_process_plan_version_relationship <has as next part_process_plan> one Part_process_plan
 ae2567 Part_process_plan_version_relationship <has as next part_process_plan> many Part_process_plan

4.1.48 Part_shape_definition

ae2617 Part_shape_definition
 ae2618 Part_shape_definition <is called out by> zero Shape_tolerance
 ae2619 Part_shape_definition <is called out by> one Shape_tolerance
 ae2620 Part_shape_definition <is called out by> many Shape_tolerance

4.1.49 Physical_representation

ae2670 Physical_representation
 ae2671 Physical_representation with hard_aid_description
 ae2672 Physical_representation with hard_aid_identification
 ae2673 Physical_representation with hard_aid_type

4.1.50 Plant_constraint

ae2723 Plant_constraint (6.15)
 ae2724 Plant_constraint with constraint_description (6.15)
 ae2725 Plant_constraint with constraint_type (6.15)
 ae2726 Plant_constraint with constraint_value (6.15)
 ae2727 Plant_constraint with plant_identification (6.15)
 ae2728 Plant_constraint <constrains> zero Part_process_plan (6.15)
 ae2729 Plant_constraint <constrains> one Part_process_plan
 ae2730 Plant_constraint <constrains> many Part_process_plan

4.1.51 Position_orientation_representation

ae2780 Position_orientation_representation (6.4, 6.8, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.23)

4.1.52 Press_definition

ae2830 Press_definition (6.15)
 ae2831 Press_definition with automation_equipment (6.15)
 ae2832 Press_definition with press_forces (6.15)
 ae2833 Press_definition with press_identification (6.15)
 ae2834 Press_definition with press_line (6.15)
 ae2835 Press_definition with press_location (6.15)
 ae2836 Press_definition with press_size (6.15)
 ae2837 Press_definition with press_specification_reference (6.15)
 ae2838 Press_definition with press_type (6.15)
 ae2839 Press_definition <is alternate for> zero Press_definition
 ae2840 Press_definition <is alternate for> one Press_definition (6.15)
 ae2841 Press_definition <is alternate for> many Press_definition

- ae2842 Press_definition <defines a press used for> zero Process_operation
- ae2843 Press_definition <defines a press used for> one Process_operation (6.15)
- ae2844 Press_definition <defines a press used for> many Process_operation
- ae2845 Press_definition <serves alternate for> zero Press_definition
- ae2846 Press_definition <serves alternate for> one Press_definition (6.15)
- ae2847 Press_definition <serves alternate for> many Press_definition

4.1.53 Process_operation

- ae2897 Process_operation (6.13, 6.15)
- ae2898 Process_operation with operation_description (6.13, 6.15)
- ae2899 Process_operation with operation_sequence_number (6.13, 6.15)
- ae2900 Process_operation with reference_specifications (6.13, 6.15)
- ae2901 Process_operation with required_shut_height (6.13, 6.15)
- ae2902 Process_operation with required_stamping_forces (6.13, 6.15)
- ae2903 Process_operation with scrap_percentage (6.13, 6.15)
- ae2904 Process_operation with units_per_operation (6.13, 6.15)
- ae2905 Process_operation <is alternate for> zero Process_operation (6.13, 6.15)
- ae2906 Process_operation <is alternate for> one Process_operation
- ae2907 Process_operation <is alternate for> many Process_operation
- ae2908 Process_operation <uses> zero Scrap_definition (6.13, 6.15)
- ae2909 Process_operation <uses> one Scrap_definition
- ae2910 Process_operation <uses> many Scrap_definition
- ae2911 Process_operation <produces> zero Scrap_definition (6.13, 6.15)
- ae2912 Process_operation <produces> one Scrap_definition
- ae2913 Process_operation <produces> many Scrap_definition
- ae2914 Process_operation <requires as tool(s) the die defined by> zero Die_definition (6.13, 6.15)
- ae2915 Process_operation <requires as tool(s) the die defined by> one Die_definition
- ae2916 Process_operation <requires as tool(s) the die defined by> many Die_definition
- ae2917 Process_operation <operates upon> zero In_process_part_definition (6.13, 6.15)
- ae2918 Process_operation <operates upon> one In_process_part_definition
- ae2919 Process_operation <operates upon> many In_process_part_definition
- ae2920 Process_operation <is defined by> zero Part_process_plan (6.13, 6.15)
- ae2921 Process_operation <is defined by> one Part_process_plan
- ae2922 Process_operation <is defined by> many Part_process_plan
- ae2923 Process_operation <uses> zero Press_definition (6.13, 6.15)
- ae2924 Process_operation <uses> one Press_definition
- ae2925 Process_operation <uses> many Press_definition
- ae2926 Process_operation <serves alternately fo> zero Process_operation (6.13, 6.14, 6.15)
- ae2927 Process_operation <serves alternately for> one Process_operation
- ae2928 Process_operation <serves alternately for> many Process_operation

4.1.54 Production_effectivity

- ae2978 Production_effectivity (6.25)
- ae2979 Production_effectivity with date_and_time_effectivity (6.25)
- ae2980 Production_effectivity with effectivity_identification (6.25)
- ae2981 Production_effectivity with sequence_effectivity (6.25)
- ae2982 Production_effectivity <applies to> zero Part_on_product

ae2983 Production_effectivity <applies to> one Part_on_product (6.25)

ae2984 Production_effectivity <applies to> many Part_on_product

4.1.55 Purchased

ae3034 Purchased (6.7, 6.8, 6.9)

ae3035 Purchased with purchase_requirements (6.7, 6.8, 6.9)

4.1.56 Radius_size_dimension

ae3085 Radius_size_dimension

4.1.57 Representation_element

ae3135 Representation_element (6.8, 6.9, 6.10, 6.11, 6.12)

ae3136 Representation_element <represents> zero Shape_definition (6.8, 6.9, 6.10, 6.11, 6.12)

ae3137 Representation_element <represents> one Shape_definition (6.10)

ae3138 Representation_element <represents> many Shape_definition

4.1.58 Scrap_definition

ae3188 Scrap_definition

ae3189 Scrap_definition <is used by> zero Process_operation

ae3190 Scrap_definition <is used by> one Process_operation

ae3191 Scrap_definition <is used by> many Process_operation

ae3192 Scrap_definition <is produced by> zero Process_operation

ae3193 Scrap_definition <is produced by> one Process_operation

ae3194 Scrap_definition <is produced by> many Process_operation

4.1.59 Shape_definition

ae3244 Shape_definition (6.8, 6.9, 6.10, 6.11, 6.12)

ae3245 Shape_definition with shape_description (6.8, 6.9, 6.10, 6.11, 6.12)

ae3246 Shape_definition <is primary in> zero Shape_definition_relationship (6.8, 6.9, 6.11, 6.12)

ae3247 Shape_definition <is primary in> one Shape_definition_relationship (6.10)

ae3248 Shape_definition <is primary in> many Shape_definition_relationship

ae3249 Shape_definition <is secondary in> zero Shape_definition_relationship (6.8, 6.9, 6.11, 6.12)

ae3250 Shape_definition <is secondary in> one Shape_definition_relationship (6.10)

ae3251 Shape_definition <is secondary in> many Shape_definition_relationship

ae3252 Shape_definition <defines the shape of> zero Feature (6.8, 6.9, 6.10, 6.11, 6.12)

ae3253 Shape_definition <defines the shape of> one Feature (6.10)

ae3254 Shape_definition <defines the shape of> many Feature

ae3255 Shape_definition <characterizes shape of> zero Item_definition (6.8, 6.9, 6.10, 6.11, 6.12)

ae3256 Shape_definition <characterizes shape of> one Item_definition

ae3257 Shape_definition <characterizes shape of> many Item_definition

ae3258 Shape_definition <defines the shape of> zero Assembly_component_relationship (6.8, 6.9, 6.10, 6.11, 6.12)

ae3259 Shape_definition <defines the shape of> one Assembly_component_relationship

ae3260 Shape_definition <defines the shape of> many Assembly_component_relationship
 ae3261 Shape_definition <defines the shape of> zero Input_item_die_relationship (6.8, 6.9, 6.10, 6.11, 6.12)
 ae3262 Shape_definition <defines the shape of> one Input_item_die_relationship
 ae3263 Shape_definition <defines the shape of> many Input_item_die_relationship
 ae3264 Shape_definition <defines the shape of> zero Mating_relationship (6.8, 6.9, 6.10, 6.11, 6.12)
 ae3265 Shape_definition <defines the shape of> one Mating_relationship
 ae3266 Shape_definition <defines the shape of> many Mating_relationship
 ae3267 Shape_definition <is represented by> zero Representation_element (6.8, 6.9, 6.10, 6.11, 6.12)
 ae3268 Shape_definition <is represented by> one Representation_element (6.10)
 ae3269 Shape_definition <is represented by> many Representation_element
 ae3270 Shape_definition <has as default uncertainty> zero Coincidence_defaults (6.8, 6.9, 6.10, 6.11, 6.12)
 ae3271 Shape_definition <has as default uncertainty> one Coincidence_defaults
 ae3272 Shape_definition <has as default uncertainty> many Coincidence_defaults

4.1.60 Shape_definition_relationship

ae3322 Shape_definition_relationship (6.10)
 ae3323 Shape_definition_relationship with relationship_description (6.10)
 ae3324 Shape_definition_relationship <has as primary> zero Shape_definition
 ae3325 Shape_definition_relationship <has as primary> one Shape_definition
 ae3326 Shape_definition_relationship <has as primary> many Shape_definition (6.10)
 ae3327 Shape_definition_relationship <has as secondary> zero Shape_definition
 ae3328 Shape_definition_relationship <has as secondary> one Shape_definition
 ae3329 Shape_definition_relationship <has as secondary> many Shape_definition (6.10)

4.1.61 Shape_tolerance

ae3379 Shape_tolerance
 ae3380 Shape_tolerance with tolerance_condition = REGARDLESS_OF_FEATURE_SIZE
 ae3381 Shape_tolerance with tolerance_condition = MAXIMUM_MATERIAL_CONDITION
 ae3382 Shape_tolerance with tolerance_condition = LEAST_MATERIAL_CONDITION
 ae3383 Shape_tolerance with tolerance_datum
 ae3384 Shape_tolerance with tolerance_type
 ae3385 Shape_tolerance <is associated with> zero Die_shape_definition
 ae3386 Shape_tolerance <is associated with> one Die_shape_definition
 ae3387 Shape_tolerance <is associated with> many Die_shape_definition
 ae3388 Shape_tolerance <is associated with> zero Feature_shape_definition
 ae3389 Shape_tolerance <is associated with> one Feature_shape_definition
 ae3390 Shape_tolerance <is associated with> many Feature_shape_definition
 ae3391 Shape_tolerance <is associated with> zero Material_shape_definition
 ae3392 Shape_tolerance <is associated with> one Material_shape_definition
 ae3393 Shape_tolerance <is associated with> many Material_shape_definition
 ae3394 Shape_tolerance <is associated with> zero Part_shape_definition
 ae3395 Shape_tolerance <is associated with> one Part_shape_definition
 ae3396 Shape_tolerance <is associated with> many Part_shape_definition
 ae3397 Shape_tolerance <is bounded by> zero Tolerance_bound
 ae3398 Shape_tolerance <is bounded by> one Tolerance_bound

ae3399 Shape_tolerance <is bounded by> many Tolerance_bound

4.1.62 Similarity_relationship

ae3449 Similarity_relationship (6.16)

4.1.63 Size_dimension

ae3499 Size_dimension

4.1.64 Solid_representation

ae3549 Solid_representation (6.11, 6.12)

ae3550 Solid_representation with B_rep (6.11, 6.12)

ae3551 Solid_representation with CSG

4.1.65 Specified_material_relationship

ae3601 Specified_material_relationship (6.20)

ae3602 Specified_material_relationship with material_quantity (6.20)

ae3603 Specified_material_relationship <substitutes for> zero Specified_material_relationship (6.20)

ae3604 Specified_material_relationship <substitutes for> one Specified_material_relationship

ae3605 Specified_material_relationship <substitutes for> many Specified_material_relationship

ae3606 Specified_material_relationship <is a substitute of> zero Specified_material_relationship (6.20)

ae3607 Specified_material_relationship <is a substitute of> one Specified_material_relationship

ae3608 Specified_material_relationship <is a substitute of> many Specified_material_relationship

4.1.66 Start_order

ae3658 Start_order (6.3, 6.23, 6.24)

ae3659 Start_order <is implemented by> zero External_order (6.3, 6.23, 6.24)

ae3660 Start_order <is implemented by> one External_order

ae3661 Start_order <is implemented by> many External_order

ae3662 Start_order <is initiated by> zero Work_item (6.3, 6.24)

ae3663 Start_order <is initiated by> one Work_item (6.23)

ae3664 Start_order <is initiated by> many Work_item

4.1.67 Start_request

ae3714 Start_request (6.1, 6.3, 6.23, 6.24)

ae3715 Start_request with request_description (6.1, 6.3, 6.23, 6.24)

ae3716 Start_request with request_justification (6.1, 6.3, 6.23, 6.24)

4.1.68 Surface_representation

ae3766 Surface_representation (6.9, 6.10)

ae3767 Surface_representation with surface_direction (6.9)

ae3768 Surface_representation with surface_thickness (6.9)

4.1.69 Symmetrical_item_relationship

ae3818 Symmetrical_item_relationship (6.17)

4.1.70 Tolerance_bound

ae3868 Tolerance_bound

ae3869 Tolerance_bound <bounds> zero Shape_tolerance

ae3870 Tolerance_bound <bounds> one Shape_tolerance

ae3871 Tolerance_bound <bounds> many Shape_tolerance

4.1.71 Tolerance_value

ae3921 Tolerance_value

ae3922 Tolerance_value with unit_of_measure

ae3923 Tolerance_value with value

ae3924 Tolerance_value <is lower limit for> zero Dimension_tolerance_range

ae3925 Tolerance_value <is lower limit for> one Dimension_tolerance_range

ae3926 Tolerance_value <is lower limit for> many Dimension_tolerance_range

ae3927 Tolerance_value <is upper limit for> zero Dimension_tolerance_range

ae3928 Tolerance_value <is upper limit for> one Dimension_tolerance_range

ae3929 Tolerance_value <is upper limit for> many Dimension_tolerance_range

4.1.72 Wireframe_representation

ae3979 Wireframe_representation (6.8)

4.1.73 Work_item

ae4029 Work_item (6.23)

ae4030 Work_item with applicable_standards

ae4031 Work_item with approval (6.23)

ae4032 Work_item with completion_date_and_time (6.23)

ae4033 Work_item with order_date_and_time (6.23)

ae4034 Work_item with preliminary_review_date_and_time (6.23)

ae4035 Work_item with priority

ae4036 Work_item with start_date_and_time (6.23)

ae4037 Work_item with work_description

ae4038 Work_item with work_requirements

ae4039 Work_item <initiates> zero Start_order

ae4040 Work_item <initiates> one Start_order (6.23)

ae4041 Work_item <initiates> many Start_order

ae4042 Work_item <is the subject of> zero Change_order (6.23)

ae4043 Work_item <is the subject of> one Change_order

ae4044 Work_item <is the subject of> many Change_order

ae4045 Work_item <is the resultant of> zero Change_order (6.23)

ae4046 Work_item <is the resultant of> one Change_order

ae4047 Work_item <is the resultant of> many Change_order

4.1.74 Work_order

ae4097 Work_order (6.3, 6.4, 6.23, 6.24)
 ae4098 Work_order with applicable_standards (6.3, 6.4)
 ae4099 Work_order with approval (6.3, 6.4, 6.23, 6.24)
 ae4100 Work_order with completion_date_and_time (6.3, 6.4)
 ae4101 Work_order with order_date_and_time (6.3, 6.4)
 ae4102 Work_order with preliminary_review_date_and_time (6.3, 6.4)
 ae4103 Work_order with priority (6.3, 6.4, 6.23, 6.24)
 ae4104 Work_order with production_volume (6.3, 6.4)
 ae4105 Work_order with start_date_and_time (6.3, 6.4)
 ae4106 Work_order with work_description (6.3, 6.4, 6.23, 6.24)
 ae4107 Work_order with work_order_number (6.3, 6.4, 6.23, 6.24)
 ae4108 Work_order with work_requirements
 ae4109 Work_order <is primary in> zero Work_order_relationship (6.3, 6.4, 6.23, 6.24)
 ae4110 Work_order <is primary in> one Work_order_relationship (6.24)
 ae4111 Work_order <is primary in> many Work_order_relationship
 ae4112 Work_order <is secondary in> zero Work_order_relationship (6.3, 6.4, 6.23, 6.24)
 ae4113 Work_order <is secondary in> one Work_order_relationship (6.24)
 ae4114 Work_order <is secondary in> many Work_order_relationship
 ae4115 Work_order <is carried out by> zero Work_order_responsibility (6.3, 6.4, 6.23, 6.24)
 ae4116 Work_order <is carried out by> one Work_order_responsibility
 ae4117 Work_order <is carried out by> many Work_order_responsibility
 ae4118 Work_order <results from> zero Work_request (6.3, 6.4, 6.23, 6.24)
 ae4119 Work_order <results from> one Work_request
 ae4120 Work_order <results from> many Work_request

4.1.75 Work_order_relationship

ae4170 Work_order_relationship (6.24)
 ae4171 Work_order_relationship with description (6.24)
 ae4172 Work_order_relationship <has as primary> zero Work_order
 ae4173 Work_order_relationship <has as primary> one Work_order
 ae4174 Work_order_relationship <has as primary> many Work_order (6.24)
 ae4175 Work_order_relationship <has as secondary> zero Work_order
 ae4176 Work_order_relationship <has as secondary> one Work_order
 ae4177 Work_order_relationship <has as secondary> many Work_order (6.24)

4.1.76 Work_order_responsibility

ae4227 Work_order_responsibility (6.4)
 ae4228 Work_order_responsibility with role (6.4)
 ae4229 Work_order_responsibility <is responsible for> zero Work_order (6.4)
 ae4230 Work_order_responsibility <is responsible for> one Work_order
 ae4231 Work_order_responsibility <is responsible for> many Work_order

4.1.77 Work_request

ae4281 Work_request (6.1, 6.2, 6.3 6.4, 6.23, 6.24)
 ae4282 Work_request with date_and_time_of_request (6.1, 6.2, 6.4, 6.23, 6.24)
 ae4283 Work_request with requestor (6.1, 6.2, 6.3, 6.4, 6.23, 6.24)
 ae4284 Work_request with work_request_identification (6.1, 6.2, 6.3, 6.4, 6.23, 6.24)
 ae4285 Work_request <results in> zero Work_order (6.1, 6.2, 6.3, 6.4, 6.23, 6.24)
 ae4286 Work_request <results in> one Work_order
 ae4287 Work_request <results in> many Work_order

4.2 AIM test purposes

AIM test purposes are identified by the prefix “aim” in the test purpose identifier. Each test purpose derived from the AIM EXPRESS shall be interpreted as given in the following statement: the postprocessor shall accept the input in accordance with the AIM EXPRESS structure corresponding to this test purpose. This implies that the semantics of the application element represented by the AIM element are preserved by the IUT between the input and output of a test according to the reference path specified in the mapping table of the AP. This also implies no violations of any constraints (e.g., where rules or global rules) that apply to the AIM element. AIM test purposes apply to the input specifications of postprocessor test cases only. AIM test purposes are derived directly from the expanded EXPRESS listing contained in annex A of ISO 10303-207 as follows:

- AIM entities. A test purpose derived from an AIM entity is a simple statement of the entity name.
- AIM entity attributes. A test purpose derived from an AIM entity attribute is a statement of the AIM entity with a given attribute.

Each AIM entity test purpose is grouped with its attribute test purposes. Excluded test purposes can be found in Annex D.

4.2.1 Action_Directive

aim2 Action_Directive (6.3, 6.4, 6.23, 6.24)
 aim3 Action_Directive with requests of one element (6.3, 6.23, 6.24)
 aim4 Action_Directive with requests of many elements

4.2.2 Action_Method_With_Associated_Documents

aim7 Action_Method_With_Associated_Documents (6.2, 6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)
 aim8 Action_Method_With_Associated_Documents with documents of one element (6.2, 6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)
 aim9 Action_Method_With_Associated_Documents with documents of many elements

4.2.3 Action_Property

aim10 Action_Property (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)
 aim11 Action_Property with definition as Action (6.4)
 aim12 Action_Property with definition as Action_Method (6.3, 6.13, 6.14, 6.15, 6.23, 6.24)
 aim13 Action_Property with definition as Action_Method_Relationship

aim14 Action_Property with definition as Action_Relationship

4.2.4 Action_Property_Representation

aim15 Action_Property_Representation (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)

4.2.5 Action_Relationship

aim16 Action_Relationship (6.13, 6.14, 6.15)

4.2.6 Action_Resource

aim18 Action_Resource (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)

aim19 Action_Resource with usage of one element (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)

aim20 Action_Resource with usage of many elements

aim21 Action_Resource with usage as Action_Directive

aim22 Action_Resource with usage as Action (6.3, 6.4, 6.23, 6.24)

aim23 Action_Resource with usage as Action_Method (6.13, 6.14, 6.15)

4.2.7 Action_Resource_Relationship

aim24 Action_Resource_Relationship

4.2.8 Action_Resource_Requirement_Relationship

aim32 Action_Resource_Requirement_Relationship

4.2.9 Action_Resource_Type

aim33 Action_Resource_Type (6.3, 6.4, 6.23, 6.24)

4.2.10 Advanced_Brep_Shape_Representation

aim34 Advanced_Brep_Shape_Representation (6.11, 6.12)

aim35 Advanced_Brep_Shape_Representation with items of one element (6.11)

aim36 Advanced_Brep_Shape_Representation with items of many elements

4.2.11 Advanced_Face

aim37 Advanced_Face (6.10, 6.11, 6.12)

aim38 Advanced_Face with bounds of one element (6.10)

aim39 Advanced_Face with bounds of many elements (6.11, 6.12)

aim40 Advanced_Face with same_sense = TRUE (6.10, 6.12)

aim41 Advanced_Face with same_sense = FALSE (6.11)

4.2.12 Angular_Location

- aim42 Angular_Location
- aim43 Angular_Location with angle_selection = equal
- aim44 Angular_Location with angle_selection = large
- aim45 Angular_Location with angle_selection = small

4.2.13 Application_Context

- aim46 Application_Context (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

4.2.14 Application_Protocol_Definition

- aim48 Application_Protocol_Definition

4.2.15 Approval

- aim49 Approval (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.16 Approval_Date_Time

- aim50 Approval_Date_Time (6.3, 6.4, 6.23, 6.24)
- aim51 Approval_Date_Time with date_time as Date (6.3, 6.4)
- aim52 Approval_Date_Time with date_time as Date_And_Time
- aim53 Approval_Date_Time with date_time as Local_Time

4.2.17 Approval_Person_Organization

- aim54 Approval_Person_Organization (6.4, 6.23, 6.24)
- aim55 Approval_Person_Organization with person_organization as Organization
- aim56 Approval_Person_Organization with person_organization as Person (6.4, 6.23, 6.24)
- aim57 Approval_Person_Organization with person_organization as Person_And_Organization

4.2.18 Approval_Role

- aim58 Approval_Role (6.3, 6.4, 6.23, 6.24)

4.2.19 Approval_Status

- aim59 Approval_Status (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.20 Assembly_Component_Usage

- aim60 Assembly_Component_Usage (6.25)

aim61 Assembly_Component_Usage with reference_designator (6.25)

aim62 Assembly_Component_Usage with reference_designator not present

4.2.21 Assembly_Component_Usage_Substitute

aim63 Assembly_Component_Usage_Substitute

4.2.22 Axis2_Placement_3d

aim70 Axis2_Placement_3d (6.9, 6.10, 6.11, 6.12)

aim71 Axis2_Placement_3d with axis (6.9, 6.10, 6.11, 6.12)

aim72 Axis2_Placement_3d with axis not present

aim73 Axis2_Placement_3d with ref_direction

aim74 Axis2_Placement_3d with ref_direction not present

4.2.23 B_Spline_Curve

aim75 B_Spline_Curve

aim76 B_Spline_Curve with control_points_list of many elements

aim77 B_Spline_Curve with curve_form = circular_arc

aim78 B_Spline_Curve with curve_form = elliptic_arc

aim79 B_Spline_Curve with curve_form = hyperbolic_arc

aim80 B_Spline_Curve with curve_form = parabolic_arc

aim81 B_Spline_Curve with curve_form = polyline_form

aim82 B_Spline_Curve with curve_form = unspecified

aim83 B_Spline_Curve with closed_curve = TRUE

aim84 B_Spline_Curve with closed_curve = FALSE

aim85 B_Spline_Curve with closed_curve = UNKNOWN

aim86 B_Spline_Curve with self_intersect = TRUE

aim87 B_Spline_Curve with self_intersect = FALSE

aim88 B_Spline_Curve with self_intersect = UNKNOWN

4.2.24 B_Spline_Curve_With_Knots

aim89 B_Spline_Curve_With_Knots

aim90 B_Spline_Curve_With_Knots with control_points_list of many elements

aim91 B_Spline_Curve_With_Knots with curve_form = circular_arc

aim92 B_Spline_Curve_With_Knots with curve_form = elliptic_arc

aim93 B_Spline_Curve_With_Knots with curve_form = hyperbolic_arc

aim94 B_Spline_Curve_With_Knots with curve_form = parabolic_arc

aim95 B_Spline_Curve_With_Knots with curve_form = polyline_form

aim96 B_Spline_Curve_With_Knots with curve_form = unspecified

aim97 B_Spline_Curve_With_Knots with closed_curve = TRUE

aim98 B_Spline_Curve_With_Knots with closed_curve = FALSE

aim99 B_Spline_Curve_With_Knots with closed_curve = UNKNOWN

aim100 B_Spline_Curve_With_Knots with self_intersect = TRUE

aim101 B_Spline_Curve_With_Knots with self_intersect = FALSE

aim102 B_Spline_Curve_With_Knots with self_intersect = UNKNOWN

- aim103 B_Spline_Curve_With_Knots with knot_multiplicities of many elements
- aim104 B_Spline_Curve_With_Knots with knots of many elements
- aim105 B_Spline_Curve_With_Knots with knot_spec = piecewise_bezier_knots
- aim106 B_Spline_Curve_With_Knots with knot_spec = quasi_uniform_knots
- aim107 B_Spline_Curve_With_Knots with knot_spec = uniform_knots
- aim108 B_Spline_Curve_With_Knots with knot_spec = unspecified

4.2.25 B_Spline_Surface

- aim109 B_Spline_Surface
- aim110 B_Spline_Surface with control_points_list of many elements
- aim111 B_Spline_Surface with surface_form = plane_surf
- aim112 B_Spline_Surface with surface_form = conical_surf
- aim113 B_Spline_Surface with surface_form = cylindrical_surf
- aim114 B_Spline_Surface with surface_form = generalised_cone
- aim115 B_Spline_Surface with surface_form = quadric_surf
- aim116 B_Spline_Surface with surface_form = ruled_surf
- aim117 B_Spline_Surface with surface_form = spherical_surf
- aim118 B_Spline_Surface with surface_form = surf_of_linear_extrusion
- aim119 B_Spline_Surface with surface_form = surf_of_revolution
- aim120 B_Spline_Surface with surface_form = toroidal_surf
- aim121 B_Spline_Surface with surface_form = unspecified
- aim122 B_Spline_Surface with u_closed = TRUE
- aim123 B_Spline_Surface with u_closed = FALSE
- aim124 B_Spline_Surface with u_closed = UNKNOWN
- aim125 B_Spline_Surface with v_closed = TRUE
- aim126 B_Spline_Surface with v_closed = FALSE
- aim127 B_Spline_Surface with v_closed = UNKNOWN
- aim128 B_Spline_Surface with self_intersect = TRUE
- aim129 B_Spline_Surface with self_intersect = FALSE
- aim130 B_Spline_Surface with self_intersect = UNKNOWN

4.2.26 B_Spline_Surface_With_Knots

- aim131 B_Spline_Surface_With_Knots
- aim132 B_Spline_Surface_With_Knots with control_points_list of many elements
- aim133 B_Spline_Surface_With_Knots with surface_form = plane_surf
- aim134 B_Spline_Surface_With_Knots with surface_form = conical_surf
- aim135 B_Spline_Surface_With_Knots with surface_form = cylindrical_surf
- aim136 B_Spline_Surface_With_Knots with surface_form = generalised_cone
- aim137 B_Spline_Surface_With_Knots with surface_form = quadric_surf
- aim138 B_Spline_Surface_With_Knots with surface_form = ruled_surf
- aim139 B_Spline_Surface_With_Knots with surface_form = spherical_surf
- aim140 B_Spline_Surface_With_Knots with surface_form = surf_of_linear_extrusion
- aim141 B_Spline_Surface_With_Knots with surface_form = surf_of_revolution
- aim142 B_Spline_Surface_With_Knots with surface_form = toroidal_surf
- aim143 B_Spline_Surface_With_Knots with surface_form = unspecified
- aim144 B_Spline_Surface_With_Knots with u_closed = TRUE
- aim145 B_Spline_Surface_With_Knots with u_closed = FALSE

aim146 B_Spline_Surface_With_Knots with u_closed = UNKNOWN
 aim147 B_Spline_Surface_With_Knots with v_closed = TRUE
 aim148 B_Spline_Surface_With_Knots with v_closed = FALSE
 aim149 B_Spline_Surface_With_Knots with v_closed = UNKNOWN
 aim150 B_Spline_Surface_With_Knots with self_intersect = TRUE
 aim151 B_Spline_Surface_With_Knots with self_intersect = FALSE
 aim152 B_Spline_Surface_With_Knots with self_intersect = UNKNOWN
 aim153 B_Spline_Surface_With_Knots with u_multiplicities of many elements
 aim154 B_Spline_Surface_With_Knots with v_multiplicities of many elements
 aim155 B_Spline_Surface_With_Knots with u_knots of many elements
 aim156 B_Spline_Surface_With_Knots with v_knots of many elements
 aim157 B_Spline_Surface_With_Knots with knot_spec = piecewise_bezier_knots
 aim158 B_Spline_Surface_With_Knots with knot_spec = quasi_uniform_knots
 aim159 B_Spline_Surface_With_Knots with knot_spec = uniform_knots
 aim160 B_Spline_Surface_With_Knots with knot_spec = unspecified

4.2.27 Bezier_Curve

aim161 Bezier_Curve
 aim162 Bezier_Curve with control_points_list of many elements
 aim163 Bezier_Curve with curve_form = circular_arc
 aim164 Bezier_Curve with curve_form = elliptic_arc
 aim165 Bezier_Curve with curve_form = hyperbolic_arc
 aim166 Bezier_Curve with curve_form = parabolic_arc
 aim167 Bezier_Curve with curve_form = polyline_form
 aim168 Bezier_Curve with curve_form = unspecified
 aim169 Bezier_Curve with closed_curve = TRUE
 aim170 Bezier_Curve with closed_curve = FALSE
 aim171 Bezier_Curve with closed_curve = UNKNOWN
 aim172 Bezier_Curve with self_intersect = TRUE
 aim173 Bezier_Curve with self_intersect = FALSE
 aim174 Bezier_Curve with self_intersect = UNKNOWN

4.2.28 Bezier_Surface

aim175 Bezier_Surface
 aim176 Bezier_Surface with control_points_list of many elements
 aim177 Bezier_Surface with surface_form = plane_surf
 aim178 Bezier_Surface with surface_form = conical_surf
 aim179 Bezier_Surface with surface_form = cylindrical_surf
 aim180 Bezier_Surface with surface_form = generalised_cone
 aim181 Bezier_Surface with surface_form = quadric_surf
 aim182 Bezier_Surface with surface_form = ruled_surf
 aim183 Bezier_Surface with surface_form = spherical_surf
 aim184 Bezier_Surface with surface_form = surf_of_linear_extrusion
 aim185 Bezier_Surface with surface_form = surf_of_revolution
 aim186 Bezier_Surface with surface_form = toroidal_surf
 aim187 Bezier_Surface with surface_form = unspecified
 aim188 Bezier_Surface with u_closed = TRUE

- aim189 Bezier_Surface with u_closed = FALSE
- aim190 Bezier_Surface with u_closed = UNKNOWN
- aim191 Bezier_Surface with v_closed = TRUE
- aim192 Bezier_Surface with v_closed = FALSE
- aim193 Bezier_Surface with v_closed = UNKNOWN
- aim194 Bezier_Surface with self_intersect = FALSE
- aim195 Bezier_Surface with self_intersect = UNKNOWN

4.2.29 Block

- aim196 Block

4.2.30 Boolean_Result

- aim197 Boolean_Result
- aim198 Boolean_Result with operator = difference
- aim199 Boolean_Result with operator = intersection
- aim200 Boolean_Result with operator = union
- aim201 Boolean_Result with first_operand as Boolean_Result
- aim202 Boolean_Result with first_operand as Csg_Primitive
- aim203 Boolean_Result with first_operand as Half_Space_Solid
- aim204 Boolean_Result with first_operand as Solid_Model
- aim205 Boolean_Result with second_operand as Boolean_Result
- aim206 Boolean_Result with second_operand as Csg_Primitive
- aim207 Boolean_Result with second_operand as Half_Space_Solid
- aim208 Boolean_Result with second_operand as Solid_Model

4.2.31 Bounded_Surface

- aim216 Bounded_Surface

4.2.32 Box_Domain

- aim217 Box_Domain

4.2.33 Boxed_Half_Space

- aim218 Boxed_Half_Space
- aim219 Boxed_Half_Space with agreement_flag = TRUE
- aim220 Boxed_Half_Space with agreement_flag = FALSE

4.2.34 Brep_With_Voids

- aim221 Brep_With_Voids
- aim222 Brep_With_Voids with voids of one element
- aim223 Brep_With_Voids with voids of many elements

4.2.35 Calendar_Date

aim224 Calendar_Date (6.1, 6.2, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.36 Cartesian_Point

aim225 Cartesian_Point (6.8, 6.9, 6.10, 6.11, 6.12)

aim226 Cartesian_Point with coordinates of one element (6.8, 6.9, 6.10, 6.11, 6.12)

aim227 Cartesian_Point with coordinates of many elements

4.2.37 Cartesian_Transformation_Operator_3d

aim235 Cartesian_Transformation_Operator_3d

aim236 Cartesian_Transformation_Operator_3d with axis1

aim237 Cartesian_Transformation_Operator_3d with axis1 not present

aim238 Cartesian_Transformation_Operator_3d with axis2

aim239 Cartesian_Transformation_Operator_3d with axis2 not present

aim240 Cartesian_Transformation_Operator_3d with scale

aim241 Cartesian_Transformation_Operator_3d with scale not present

aim242 Cartesian_Transformation_Operator_3d with axis3

aim243 Cartesian_Transformation_Operator_3d with axis3 not present

4.2.38 Change_Order

aim244 Change_Order (6.3)

4.2.39 Circle

aim245 Circle (6.9, 6.11, 6.12)

aim247 Circle with position as Axis2_Placement_3d (6.9, 6.11, 6.12)

4.2.40 Composite_Curve_On_Surface

aim257 Composite_Curve_On_Surface

aim258 Composite_Curve_On_Surface with segments of one element

aim259 Composite_Curve_On_Surface with segments of many elements

aim260 Composite_Curve_On_Surface with self_intersect = TRUE

aim261 Composite_Curve_On_Surface with self_intersect = FALSE

aim262 Composite_Curve_On_Surface with self_intersect = UNKNOWN

4.2.41 Configuration_Item

aim271 Configuration_Item (6.25)

aim272 Configuration_Item with description

aim273 Configuration_Item with description not present (6.25)

aim274 Configuration_Item with purpose

aim275 Configuration_Item with purpose not present (6.25)

4.2.42 Conic

aim276 Conic

aim277 Conic with position as Axis2_Placement_2d

aim278 Conic with position as Axis2_Placement_3d

4.2.43 Conical_Surface

aim279 Conical_Surface (6.9, 6.12)

4.2.44 Connected_Edge_Set

aim280 Connected_Edge_Set

aim281 Connected_Edge_Set with ces_edges of one element

aim282 Connected_Edge_Set with ces_edges of many elements

4.2.45 Context_Dependent_Unit

aim286 Context_Dependent_Unit (6.3, 6.13, 6.14, 6.15, 6.18, 6.23, 6.24)

4.2.46 Contract

aim287 Contract (6.4, 6.7, 6.8, 6.9, 6.20)

4.2.47 Contract_Type

aim288 Contract_Type (6.4, 6.7, 6.8, 6.9)

4.2.48 Conversion_Based_Unit

aim289 Conversion_Based_Unit (6.9)

4.2.49 Coordinated_Universal_Time_Offset

aim290 Coordinated_Universal_Time_Offset (6.25)

aim291 Coordinated_Universal_Time_Offset with minute_offset

aim292 Coordinated_Universal_Time_Offset with minute_offset not present

aim293 Coordinated_Universal_Time_Offset with sense = ahead (6.25)

aim294 Coordinated_Universal_Time_Offset with sense = behind

4.2.50 Csg_Shape_Representation

aim295 Csg_Shape_Representation

aim296 Csg_Shape_Representation with items of one element

aim297 Csg_Shape_Representation with items of many elements

4.2.51 Csg_Solid

aim298 Csg_Solid

aim299 Csg_Solid with tree_root_expression as Boolean_Result

aim300 Csg_Solid with tree_root_expression as Csg_Primitive

4.2.52 Curve

aim301 Curve

aim302 Curve_Bounded_Surface (6.9)

aim303 Curve_Bounded_Surface with boundaries of one element (6.9)

aim304 Curve_Bounded_Surface with boundaries of many elements

aim305 Curve_Bounded_Surface with implicit_outer = TRUE

aim306 Curve_Bounded_Surface with implicit_outer = FALSE (6.9)

4.2.53 Curve_Replica

aim307 Curve_Replica

4.2.54 Cylindrical_Surface

aim308 Cylindrical_Surface (6.11, 6.12)

4.2.55 Date_And_Time

aim310 Date_And_Time (6.25)

4.2.56 Date_Role

aim311 Date_Role (6.1, 6.2, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.24)

4.2.57 Date_Time_Role

aim312 Date_Time_Role

4.2.58 Dated_Effectivity

aim313 Dated_Effectivity (6.25)

aim314 Dated_Effectivity with effectivity_end_date (6.25)

aim315 Dated_Effectivity with effectivity_end_date not present

4.2.59 Datum

aim316 Datum (6.9, 6.10)

aim317 Datum with product_definitional = TRUE (6.9, 6.10)

aim318 Datum with product_definitional = FALSE

aim319 Datum with product_definitional = UNKNOWN

4.2.60 Datum_Reference

aim320 Datum_Reference

4.2.61 Datum_Target

aim321 Datum_Target

aim322 Datum_Target with product_definitional = TRUE

aim323 Datum_Target with product_definitional = FALSE

aim324 Datum_Target with product_definitional = UNKNOWN

4.2.62 Definitional_Representation

aim325 Definitional_Representation

aim326 Definitional_Representation with items of one element

aim327 Definitional_Representation with items of many elements

4.2.63 Degenerate_Toroidal_Surface

aim329 Degenerate_Toroidal_Surface

aim330 Degenerate_Toroidal_Surface with select_outer = TRUE

aim331 Degenerate_Toroidal_Surface with select_outer = FALSE

4.2.64 Derived_Unit

aim332 Derived_Unit

aim333 Derived_Unit with elements of one element

aim334 Derived_Unit with elements of many elements

4.2.65 Derived_Unit_Element

aim335 Derived_Unit_Element

4.2.66 Descriptive_Representation_Item

aim336 Descriptive_Representation_Item

4.2.67 Die_Definition_Constraint_Relationship

aim337 Die_Definition_Constraint_Relationship

4.2.68 Dimensional_Characteristic_Representation

- aim338 Dimensional_Characteristic_Representation (6.9, 6.10)
aim339 Dimensional_Characteristic_Representation with dimension as Dimensional_Location (6.9, 6.10)
aim340 Dimensional_Characteristic_Representation with dimension as Dimensional_Size

4.2.69 Dimensional_Exponents

- aim341 Dimensional_Exponents (6.3, 6.4, 6.9, 6.11, 6.12, 6.13, 6.14, 6.15, 6.18, 6.20, 6.23, 6.24)

4.2.70 Dimensional_Location

- aim342 Dimensional_Location (6.9, 6.10)

4.2.71 Dimensional_Location_With_Path

- aim343 Dimensional_Location_With_Path

4.2.72 Dimensional_Size

- aim344 Dimensional_Size

4.2.73 Directed_Action

- aim345 Directed_Action (6.3,6.4, 6.23, 6.24)

4.2.74 Direction

- aim346 Direction (6.9, 6.10, 6.11, 6.12)
aim347 Direction with direction_ratios of many elements

4.2.75 Document

- aim348 Document (6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.76 Document_Type

- aim349 Document_Type (6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17,6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.77 Edge_Based_Wireframe_Model

- aim351 Edge_Based_Wireframe_Model
aim352 Edge_Based_Wireframe_Model with ebwm_boundary of one element
aim353 Edge_Based_Wireframe_Model with ebwm_boundary of many elements

4.2.78 Edge_Based_Wireframe_Shape_Representation

aim354 Edge_Based_Wireframe_Shape_Representation

aim355 Edge_Based_Wireframe_Shape_Representation with items of one element

aim356 Edge_Based_Wireframe_Shape_Representation with items of many elements

4.2.79 Edge_Curve

aim357 Edge_Curve (6.10, 6.11, 6.12)

aim358 Edge_Curve with same_sense = TRUE (6.10, 6.11, 6.12)

aim359 Edge_Curve with same_sense = FALSE

4.2.80 Edge_Loop

aim360 Edge_Loop (6.10, 6.11, 6.12)

aim361 Edge_Loop with edge_list of one element (6.11, 6.12)

aim362 Edge_Loop with edge_list of many elements (6.10)

4.2.81 Effectivity

aim363 Effectivity

4.2.82 Ellipse

aim365 Ellipse

aim367 Ellipse with position as Axis2_Placement_3d

4.2.83 Evaluated_Degenerate_Pcurve

aim368 Evaluated_Degenerate_Pcurve

4.2.84 Executed_Action

aim369 Executed_Action (6.3, 6.23)

4.2.85 Extruded_Area_Solid

aim370 Extruded_Area_Solid

4.2.86 Face

aim371 Face

aim372 Face with bounds of one element

aim373 Face with bounds of many elements

4.2.87 Face_Outer_Bound

- aim377 Face_Outer_Bound (6.10, 6.11, 6.12)
- aim378 Face_Outer_Bound with orientation = TRUE (6.10)
- aim379 Face_Outer_Bound with orientation = FALSE (6.11, 6.12)

4.2.88 Faceted_Brep

- aim385 Faceted_Brep

4.2.89 Faceted_Brep_Shape_Representation

- aim386 Faceted_Brep_Shape_Representation
- aim387 Faceted_Brep_Shape_Representation with items of one element
- aim388 Faceted_Brep_Shape_Representation with items of many elements

4.2.90 Geometric_Curve_Set

- aim390 Geometric_Curve_Set (6.8)
- aim391 Geometric_Curve_Set with elements of one element
- aim392 Geometric_Curve_Set with elements of many elements (6.8)
- aim393 Geometric_Curve_Set with elements as Curve
- aim394 Geometric_Curve_Set with elements as Point (6.8)
- aim395 Geometric_Curve_Set with elements as Surface

4.2.91 Geometric_Representation_Context

- aim396 Geometric_Representation_Context (6.8, 6.9, 6.10, 6.11, 6.12)

4.2.92 Geometric_Representation_Item

- aim397 Geometric_Representation_Item (6.11, 6.12)

4.2.93 Geometric_Tolerance_elements

- aim404 Geometric_Tolerance_elements

4.2.94 Geometric_Tolerance_With_Datum_Reference

- aim405 Geometric_Tolerance_With_Datum_Reference
- aim406 Geometric_Tolerance_With_Datum_Reference with datum_system of one element
- aim407 Geometric_Tolerance_With_Datum_Reference with datum_system of many elements

4.2.95 Geometrically_Bounded_Surface_Shape_Representation

- aim408 Geometrically_Bounded_Surface_Shape_Representation (6.9)
- aim409 Geometrically_Bounded_Surface_Shape_Representation with items of one element
- aim410 Geometrically_Bounded_Surface_Shape_Representation with items of many elements

4.2.96 Geometrically_Bounded_Wireframe_Shape_Representation

- aim411 Geometrically_Bounded_Wireframe_Shape_Representation (6.8)
- aim412 Geometrically_Bounded_Wireframe_Shape_Representation with items of one element (6.8)
- aim413 Geometrically_Bounded_Wireframe_Shape_Representation with items of many elements

4.2.97 Global_Uncertainty_Assigned_Context

- aim414 Global_Uncertainty_Assigned_Context (6.8, 6.9, 6.10, 6.11, 6.12)
- aim415 Global_Uncertainty_Assigned_Context with uncertainty of one element (6.8, 6.11, 6.12)
- aim416 Global_Uncertainty_Assigned_Context with uncertainty of many elements (6.10)

4.2.98 Hyperbola

- aim420 Hyperbola
- aim422 Hyperbola with position as Axis2_Placement_3d

4.2.99 Input_Item_Die_Relationship

- aim423 Input_Item_Die_Relationship (6.21)

4.2.100 Intersection_Curve

- aim424 Intersection_Curve
- aim425 Intersection_Curve with associated_geometry of one element
- aim426 Intersection_Curve with associated_geometry of many elements
- aim427 Intersection_Curve with associated_geometry as Pcurve
- aim428 Intersection_Curve with associated_geometry as Surface
- aim429 Intersection_Curve with master_representation = curve_3d
- aim430 Intersection_Curve with master_representation = pcurve_s1
- aim431 Intersection_Curve with master_representation = pcurve_s2

4.2.101 Item_Defined_Transformation

- aim432 Item_Defined_Transformation

4.2.102 Length_Measure_With_Unit

- aim433 Length_Measure_With_Unit (6.9)
- aim434 Length_Measure_With_Unit with value_component as Count_Measure
- aim435 Length_Measure_With_Unit with value_component as Length_Measure
- aim436 Length_Measure_With_Unit with value_component as Mass_Measure
- aim437 Length_Measure_With_Unit with value_component as Parameter_Value
- aim438 Length_Measure_With_Unit with value_component as Plane_Angle_Measure
- aim439 Length_Measure_With_Unit with value_component as Positive_Length_Measure (6.9)
- aim440 Length_Measure_With_Unit with value_component as Positive_Plane_Angle_Measure
- aim441 Length_Measure_With_Unit with unit_component as Derived_Unit
- aim442 Length_Measure_With_Unit with unit_component as Named_Unit

4.2.103 Length_Unit

aim443 Length_Unit (6.8, 6.9, 6.10, 6.11)

4.2.104 Limits_And_Fits

aim444 Limits_And_Fits

4.2.105 Line

aim445 Line (6.10)

4.2.106 Local_Time

aim446 Local_Time (6.25)

aim447 Local_Time with minute_component

aim448 Local_Time with minute_component not present (6.25)

aim449 Local_Time with second_component

aim450 Local_Time with second_component not present (6.25)

4.2.107 Make_From_Usage_Option

aim452 Make_From_Usage_Option (6.20)

4.2.108 Make_From_Usage_Option_Group

aim453 Make_From_Usage_Option_Group

aim454 Make_From_Usage_Option_Group with members of many elements

4.2.109 Manifold_Solid_Brep

aim455 Manifold_Solid_Brep (6.11, 6.12)

4.2.110 Manifold_Surface_Shape_Representation

aim456 Manifold_Surface_Shape_Representation (6.10)

aim457 Manifold_Surface_Shape_Representation with items of one element (6.10)

aim458 Manifold_Surface_Shape_Representation with items of many elements

4.2.111 Mapped_Item

aim459 Mapped_Item

4.2.112 Material_Property

aim460 Material_Property

aim461 Material_Property with definition as Characterized_Product_Definition

aim462 Material_Property with definition as Shape_Definition

4.2.113 Measure_Representation_Item

aim463 Measure_Representation_Item (6.3, 6.4, 6.9, 6.10, 6.13, 6.14, 6.15, 6.23, 6.24)

aim464 Measure_Representation_Item with value_component as Count_Measure (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)

aim465 Measure_Representation_Item with value_component as Length_Measure (6.15)

aim466 Measure_Representation_Item with value_component as Mass_Measure

aim467 Measure_Representation_Item with value_component as Parameter_Value

aim468 Measure_Representation_Item with value_component as Plane_Angle_Measure

aim469 Measure_Representation_Item with value_component as Positive_Length_Measure

aim470 Measure_Representation_Item with value_component as Positive_Plane_Angle_Measure

aim471 Measure_Representation_Item with unit_component as Derived_Unit

aim472 Measure_Representation_Item with unit_component as Named_Unit (6.3, 6.4)

4.2.114 Measure_With_Unit

aim473 Measure_With_Unit (6.18, 6.20)

aim474 Measure_With_Unit with value_component as Count_Measure (6.18, 6.20)

aim475 Measure_With_Unit with value_component as Length_Measure

aim476 Measure_With_Unit with value_component as Mass_Measure

aim477 Measure_With_Unit with value_component as Parameter_Value

aim478 Measure_With_Unit with value_component as Plane_Angle_Measure

aim479 Measure_With_Unit with value_component as Positive_Length_Measure

aim480 Measure_With_Unit with value_component as Positive_Plane_Angle_Measure

aim481 Measure_With_Unit with unit_component as Derived_Unit

aim482 Measure_With_Unit with unit_component as Named_Unit

4.2.115 Modified_Geometric_Tolerance

aim483 Modified_Geometric_Tolerance

aim484 Modified_Geometric_Tolerance with modifier = least_material_condition

aim485 Modified_Geometric_Tolerance with modifier = maximum_material_condition

aim486 Modified_Geometric_Tolerance with modifier = regardless_of_feature_size

4.2.116 Offset_Curve_3d

aim488 Offset_Curve_3d

aim489 Offset_Curve_3d with self_intersect = TRUE

aim490 Offset_Curve_3d with self_intersect = FALSE

aim491 Offset_Curve_3d with self_intersect = UNKNOWN

4.2.117 Offset_Surface

aim492 Offset_Surface
aim493 Offset_Surface with self_intersect = TRUE
aim494 Offset_Surface with self_intersect = FALSE
aim495 Offset_Surface with self_intersect = UNKNOWN

4.2.118 Ordinal_Date

aim499 Ordinal_Date

4.2.119 Organization

aim500 Organization (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
aim501 Organization with id (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
aim502 Organization with id not present

4.2.120 Organization_Role

aim503 Organization_Role (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.121 Oriented_Closed_Shell

aim504 Oriented_Closed_Shell
aim505 Oriented_Closed_Shell with cfs_faces of one element
aim506 Oriented_Closed_Shell with cfs_faces of many elements
aim507 Oriented_Closed_Shell with orientation = TRUE
aim508 Oriented_Closed_Shell with orientation = FALSE

4.2.122 Oriented_Edge

aim509 Oriented_Edge (6.10, 6.11, 6.12)
aim510 Oriented_Edge with orientation = TRUE (6.10, 6.11, 6.12)
aim511 Oriented_Edge with orientation = FALSE

4.2.123 Oriented_Face

aim512 Oriented_Face
aim513 Oriented_Face with bounds of one element
aim514 Oriented_Face with bounds of many elements
aim515 Oriented_Face with orientation = TRUE
aim516 Oriented_Face with orientation = FALSE

4.2.124 Oriented_Open_Shell

- aim517 Oriented_Open_Shell
- aim518 Oriented_Open_Shell with cfs_faces of one element
- aim519 Oriented_Open_Shell with cfs_faces of many elements
- aim520 Oriented_Open_Shell with orientation = TRUE
- aim521 Oriented_Open_Shell with orientation = FALSE

4.2.125 Oriented_Path

- aim522 Oriented_Path
- aim523 Oriented_Path with edge_list of one element
- aim524 Oriented_Path with edge_list of many elements
- aim525 Oriented_Path with orientation = TRUE
- aim526 Oriented_Path with orientation = FALSE

4.2.126 Outer_Boundary_Curve

- aim527 Outer_Boundary_Curve (6.9)
- aim528 Outer_Boundary_Curve with segments of one element (6.9)
- aim529 Outer_Boundary_Curve with segments of many elements
- aim530 Outer_Boundary_Curve with self_intersect = TRUE
- aim531 Outer_Boundary_Curve with self_intersect = FALSE
- aim532 Outer_Boundary_Curve with self_intersect = UNKNOWN (6.9)

4.2.127 Parabola

- aim533 Parabola
- aim534 Parabola with position as Axis2_Placement_2d
- aim535 Parabola with position as Axis2_Placement_3d

4.2.128 Parametric_Representation_Context

- aim536 Parametric_Representation_Context

4.2.129 Pcurve

- aim540 Pcurve

4.2.130 Person

- aim541 Person (6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim542 Person with last_name (6.1, 6.4, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.18, 6.23)
- aim543 Person with last_name not present (6.2, 6.3, 6.4, 6.5, 6.6, 6.16, 6.17, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim544 Person with first_name (6.1, 6.4, 6.8, 6.9, 6.10, 6.11, 6.12, 6.14, 6.15, 6.18, 6.23)
- aim545 Person with first_name not present (6.2, 6.3, 6.4, 6.5, 6.6, 6.16, 6.17, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

- aim546 Person with middle_names of one element
- aim547 Person with middle_names of many elements
- aim548 Person with middle_names not present (6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim549 Person with prefix_titles of one element
- aim550 Person with prefix_titles of many elements
- aim551 Person with prefix_titles not present (6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.14, 6.15, 6.16, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim552 Person with suffix_titles of one element
- aim553 Person with suffix_titles of many elements
- aim554 Person with suffix_titles not present (6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.14, 6.15, 6.16, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.131 Person_And_Organization

- aim555 Person_And_Organization (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.132 Person_And_Organization_Role

- aim556 Person_And_Organization_Role (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.133 Person_Role

- aim557 Person_Role elements (6.1, 6.2, 6.3, 6.4, 6.5, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

4.2.134 Physically_Modelled_Product_Definition

- aim558 Physically_Modelled_Product_Definition

4.2.135 Plane

- aim560 Plane (6.9, 6.10, 6.11, 6.12)

4.2.136 Plane_Angle_Measure_With_Unit

- aim561 Plane_Angle_Measure_With_Unit (6.9)
- aim562 Plane_Angle_Measure_With_Unit with value_component as Count_Measure
- aim563 Plane_Angle_Measure_With_Unit with value_component as Length_Measure
- aim564 Plane_Angle_Measure_With_Unit with value_component as Mass_Measure
- aim565 Plane_Angle_Measure_With_Unit with value_component as Parameter_Value
- aim566 Plane_Angle_Measure_With_Unit with value_component as Plane_Angle_Measure
- aim567 Plane_Angle_Measure_With_Unit with value_component as Positive_Length_Measure
- aim568 Plane_Angle_Measure_With_Unit with value_component as Positive_Plane_Angle_Measure (6.9)
- aim569 Plane_Angle_Measure_With_Unit with unit_component as Derived_Unit

aim570 Plane_Angle_Measure_With_Unit with unit_component as Named_Unit

4.2.137 Plane_Angle_Unit

aim571 Plane_Angle_Unit (6.8, 6.9)

4.2.138 Plus_Minus_Tolerance

aim572 Plus_Minus_Tolerance

aim573 Plus_Minus_Tolerance with range as Limits_And_Fits

aim574 Plus_Minus_Tolerance with range as Tolerance_Value

aim575 Plus_Minus_Tolerance with toleranced_dimension as Dimensional_Location

aim576 Plus_Minus_Tolerance with toleranced_dimension as Dimensional_Size

4.2.139 Point

aim577 Point

4.2.140 Point_On_Curve

aim578 Point_On_Curve

4.2.141 Point_On_Surface

aim579 Point_On_Surface

4.2.142 Point_Replica

aim580 Point_Replica

4.2.143 Poly_Loop

aim581 Poly_Loop

aim582 Poly_Loop with polygon of many elements

4.2.144 Polyline

aim583 Polyline (6.8)

aim584 Polyline with points of many elements (6.8)

4.2.145 Process_Plan

aim585 Process_Plan (6.13, 6.14, 6.15)

4.2.146 Process_Product_Association

aim586 Process_Product_Association (6.15)

aim587 Process_Product_Association with defined_product as Product_Definition (6.15)

aim588 Process_Product_Association with defined_product as Product_Definition_Relationship

4.2.147 Product

aim589 Product (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

aim590 Product with frame_of_reference of one element (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

aim591 Product with frame_of_reference of many elements

4.2.148 Product_Category_Relationship

aim595 Product_Category_Relationship (6.22)

4.2.149 Product_Concept

aim596 Product_Concept (6.25)

4.2.150 Product_Concept_Context

aim597 Product_Concept_Context (6.25)

4.2.151 Product_Context

aim598 Product_Context (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

4.2.152 Product_Definition

aim599 Product_Definition (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.153 Product_Definition_Context

aim600 Product_Definition_Context (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.154 Product_Definition_Effectivity

aim601 Product_Definition_Effectivity (6.25)

4.2.155 Product_Definition_Formation_With_Specified_Source

aim603 Product_Definition_Formation_With_Specified_Source (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

aim604 Product_Definition_Formation_With_Specified_Source with make_or_buy = bought (6.7, 6.8,

6.9)

aim605 Product_Definition_Formation_With_Specified_Source with make_or_buy = made (6.5, 6.6, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21)

aim606 Product_Definition_Formation_With_Specified_Source with make_or_buy = not_known

4.2.156 Product_Definition_Process

aim607 Product_Definition_Process (6.13, 6.14, 6.15)

4.2.157 Product_Definition_Relationship

aim608 Product_Definition_Relationship (6.15, 6.16, 6.17, 6.18, 6.19)

4.2.158 Product_Definition_Shape

aim609 Product_Definition_Shape (6.8, 6.9, 6.10, 6.11, 6.12)

aim610 Product_Definition_Shape with definition as Characterized_Product_Definition (6.8, 6.9, 6.10, 6.11, 6.12)

aim611 Product_Definition_Shape with definition as Shape_Definition

4.2.159 Product_Definition_Substitute

aim612 Product_Definition_Substitute

4.2.160 Product_Definition_With_Associated_Documents

aim614 Product_Definition_With_Associated_Documents (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

aim615 Product_Definition_With_Associated_Documents with documentation_ids of one element (6.5, 6.6, 6.7, 6.8, 6.10, 6.11, 6.12, 6.25)

aim616 Product_Definition_With_Associated_Documents with documentation_ids of many elements (6.7, 6.8, 6.9, 6.16)

4.2.161 Product_Type

aim622 Product_Type (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

aim623 Product_Type with description (6.5, 6.6, 6.7)

aim624 Product_Type with description not present (6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.25)

aim625 Product_Type with products of one element (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22)

aim626 Product_Type with products of many elements

4.2.162 Promissory_Usage_Occurrence

aim627 Promissory_Usage_Occurrence

aim628 Promissory_Usage_Occurrence with reference_designator

aim629 Promissory_Usage_Occurrence with reference_designator not present

4.2.163 Property_Definition

aim630 Property_Definition (6.8, 6.9, 6.10)

aim631 Property_Definition with definition as Characterized_Product_Definition (6.8)

aim632 Property_Definition with definition as Shape_Definition (6.9, 6.10)

4.2.164 Quantified_Assembly_Component_Usage

aim634 Quantified_Assembly_Component_Usage (6.18)

aim635 Quantified_Assembly_Component_Usage with reference_designator

aim636 Quantified_Assembly_Component_Usage with reference_designator not present (6.18)

4.2.165 Quasi_Uniform_Curve

aim637 Quasi_Uniform_Curve

aim638 Quasi_Uniform_Curve with control_points_list of many elements

aim639 Quasi_Uniform_Curve with curve_form = circular_arc

aim640 Quasi_Uniform_Curve with curve_form = elliptic_arc

aim641 Quasi_Uniform_Curve with curve_form = hyperbolic_arc

aim642 Quasi_Uniform_Curve with curve_form = parabolic_arc

aim643 Quasi_Uniform_Curve with curve_form = polyline_form

aim644 Quasi_Uniform_Curve with curve_form = unspecified

aim645 Quasi_Uniform_Curve with closed_curve = TRUE

aim646 Quasi_Uniform_Curve with closed_curve = FALSE

aim647 Quasi_Uniform_Curve with closed_curve = UNKNOWN

aim648 Quasi_Uniform_Curve with self_intersect = TRUE

aim649 Quasi_Uniform_Curve with self_intersect = FALSE

aim650 Quasi_Uniform_Curve with self_intersect = UNKNOWN

4.2.166 Quasi_Uniform_Surface

aim651 Quasi_Uniform_Surface

aim652 Quasi_Uniform_Surface with control_points_list of many elements

aim653 Quasi_Uniform_Surface with surface_form = plane_surf

aim654 Quasi_Uniform_Surface with surface_form = conical_surf

aim655 Quasi_Uniform_Surface with surface_form = cylindrical_surf

aim656 Quasi_Uniform_Surface with surface_form = generalised_cone

aim657 Quasi_Uniform_Surface with surface_form = quadric_surf

aim658 Quasi_Uniform_Surface with surface_form = ruled_surf

aim659 Quasi_Uniform_Surface with surface_form = spherical_surf

aim660 Quasi_Uniform_Surface with surface_form = surf_of_linear_extrusion

aim661 Quasi_Uniform_Surface with surface_form = surf_of_revolution

aim662 Quasi_Uniform_Surface with surface_form = toroidal_surf

aim663 Quasi_Uniform_Surface with surface_form = unspecified

aim664 Quasi_Uniform_Surface with u_closed = TRUE

aim665 Quasi_Uniform_Surface with u_closed = FALSE

aim666 Quasi_Uniform_Surface with u_closed = UNKNOWN
 aim667 Quasi_Uniform_Surface with v_closed = TRUE
 aim668 Quasi_Uniform_Surface with v_closed = FALSE
 aim669 Quasi_Uniform_Surface with v_closed = UNKNOWN
 aim670 Quasi_Uniform_Surface with self_intersect = TRUE
 aim671 Quasi_Uniform_Surface with self_intersect = FALSE
 aim672 Quasi_Uniform_Surface with self_intersect = UNKNOWN

4.2.167 Rational_B_Spline_Curve

aim673 Rational_B_Spline_Curve
 aim674 Rational_B_Spline_Curve with control_points_list of many elements
 aim675 Rational_B_Spline_Curve with curve_form = circular_arc
 aim676 Rational_B_Spline_Curve with curve_form = elliptic_arc
 aim677 Rational_B_Spline_Curve with curve_form = hyperbolic_arc
 aim678 Rational_B_Spline_Curve with curve_form = parabolic_arc
 aim679 Rational_B_Spline_Curve with curve_form = polyline_form
 aim680 Rational_B_Spline_Curve with curve_form = unspecified
 aim681 Rational_B_Spline_Curve with closed_curve = TRUE
 aim682 Rational_B_Spline_Curve with closed_curve = FALSE
 aim683 Rational_B_Spline_Curve with closed_curve = UNKNOWN
 aim684 Rational_B_Spline_Curve with self_intersect = TRUE
 aim685 Rational_B_Spline_Curve with self_intersect = FALSE
 aim686 Rational_B_Spline_Curve with self_intersect = UNKNOWN
 aim687 Rational_B_Spline_Curve with weights_data of many elements

4.2.168 Rational_B_Spline_Surface

aim688 Rational_B_Spline_Surface
 aim689 Rational_B_Spline_Surface with control_points_list of many elements
 aim690 Rational_B_Spline_Surface with surface_form = plane_surf
 aim691 Rational_B_Spline_Surface with surface_form = conical_surf
 aim692 Rational_B_Spline_Surface with surface_form = cylindrical_surf
 aim693 Rational_B_Spline_Surface with surface_form = generalised_cone
 aim694 Rational_B_Spline_Surface with surface_form = quadric_surf
 aim695 Rational_B_Spline_Surface with surface_form = ruled_surf
 aim696 Rational_B_Spline_Surface with surface_form = spherical_surf
 aim697 Rational_B_Spline_Surface with surface_form = surf_of_linear_extrusion
 aim698 Rational_B_Spline_Surface with surface_form = surf_of_revolution
 aim699 Rational_B_Spline_Surface with surface_form = toroidal_surf
 aim700 Rational_B_Spline_Surface with surface_form = unspecified
 aim701 Rational_B_Spline_Surface with u_closed = TRUE
 aim702 Rational_B_Spline_Surface with u_closed = FALSE
 aim703 Rational_B_Spline_Surface with u_closed = UNKNOWN
 aim704 Rational_B_Spline_Surface with v_closed = TRUE
 aim705 Rational_B_Spline_Surface with v_closed = FALSE
 aim706 Rational_B_Spline_Surface with v_closed = UNKNOWN
 aim707 Rational_B_Spline_Surface with self_intersect = TRUE
 aim708 Rational_B_Spline_Surface with self_intersect = FALSE

aim709 Rational_B_Spline_Surface with self_intersect = UNKNOWN
 aim710 Rational_B_Spline_Surface with weights_data of many elements

4.2.169 Rectangular_Composite_Surface

aim711 Rectangular_Composite_Surface
 aim712 Rectangular_Composite_Surface with segments of one element
 aim713 Rectangular_Composite_Surface with segments of many elements

4.2.170 Rectangular_Trimmed_Surface

aim714 Rectangular_Trimmed_Surface
 aim715 Rectangular_Trimmed_Surface with usense = TRUE
 aim716 Rectangular_Trimmed_Surface with usense = FALSE
 aim717 Rectangular_Trimmed_Surface with vsense = TRUE
 aim718 Rectangular_Trimmed_Surface with vsense = FALSE

4.2.171 Reparametrised_Composite_Curve_Segment

aim719 Reparametrised_Composite_Curve_Segment
 aim720 Reparametrised_Composite_Curve_Segment with transition = cont_same_gradient
 aim721 Reparametrised_Composite_Curve_Segment with transition = cont_same_gradient_same_-
 curvature
 aim722 Reparametrised_Composite_Curve_Segment with transition = continuous
 aim723 Reparametrised_Composite_Curve_Segment with transition = discontinuous
 aim724 Reparametrised_Composite_Curve_Segment with same_sense = TRUE
 aim725 Reparametrised_Composite_Curve_Segment with same_sense = FALSE

4.2.172 Replacement_Relationship

aim726 Replacement_Relationship

4.2.173 Representation

aim727 Representation (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)
 aim728 Representation with items of one element (6.3, 6.4, 6.23, 6.24)
 aim729 Representation with items of many elements (6.13, 6.14, 6.15)

4.2.174 Representation_Context

aim730 Representation_Context (6.3, 6.4, 6.13, 6.14, 6.15, 6.23, 6.24)

4.2.175 Representation_Item

aim731 Representation_Item (6.4, 6.13, 6.14, 6.15)

4.2.176 Representation_Map

aim732 Representation_Map

4.2.177 Representation_Relationship

aim733 Representation_Relationship

4.2.178 Representation_Relationship_With_Transformation

aim734 Representation_Relationship_With_Transformation

aim735 Representation_Relationship_With_Transformation with transformation_operator as Functionally_Defined_Transformation

aim736 Representation_Relationship_With_Transformation with transformation_operator as Item_Defined_Transformation

4.2.179 Requirement_For_Action_Resource

aim737 Requirement_For_Action_Resource (6.13, 6.14, 6.15)

aim738 Requirement_For_Action_Resource with operations of one element

aim739 Requirement_For_Action_Resource with operations of many elements (6.13, 6.14, 6.15)

aim740 Requirement_For_Action_Resource with operations as Action

aim741 Requirement_For_Action_Resource with operations as Action_Method (6.13, 6.14, 6.15)

aim742 Requirement_For_Action_Resource with operations as Action_Method_Relationship

aim743 Requirement_For_Action_Resource with operations as Action_Relationship

aim744 Requirement_For_Action_Resource with resources of one element

aim745 Requirement_For_Action_Resource with resources of many elements

4.2.180 Resource_Property

aim746 Resource_Property (6.15)

aim747 Resource_Property with resource as Action_Resource

aim748 Resource_Property with resource as Action_Resource_Relationship

aim749 Resource_Property with resource as Action_Resource_Requirement (6.15)

aim750 Resource_Property with resource as Action_Resource_Requirement_Relationship

4.2.181 Resource_Property_Representation

aim751 Resource_Property_Representation (6.15)

4.2.182 Resource_Requirement_Type

aim752 Resource_Requirement_Type

4.2.183 Revolved_Area_Solid

aim753 Revolved_Area_Solid

4.2.184 Right_Angular_Wedge

aim754 Right_Angular_Wedge

4.2.185 Right_Circular_Cone

aim755 Right_Circular_Cone

4.2.186 Right_Circular_Cylinder

aim756 Right_Circular_Cylinder

4.2.187 Seam_Curve

aim757 Seam_Curve

aim758 Seam_Curve with associated_geometry of one element

aim759 Seam_Curve with associated_geometry of many elements

aim760 Seam_Curve with associated_geometry as Pcurve

aim761 Seam_Curve with associated_geometry as Surface

aim762 Seam_Curve with master_representation = curve_3d

aim763 Seam_Curve with master_representation = pcurve_s1

aim764 Seam_Curve with master_representation = pcurve_s2

4.2.188 Security_Classification

aim765 Security_Classification (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.189 Security_Classification_Level

aim766 Security_Classification_Level (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.190 Sequenced_Product_Definition_Relationship

aim767 Sequenced_Product_Definition_Relationship (6.5, 6.6, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.191 Sequential_Method

aim768 Sequential_Method (6.13, 6.14, 6.15)

4.2.192 Serial_Numbered_Effectivity

aim770 Serial_Numbered_Effectivity (6.25)

aim771 Serial_Numbered_Effectivity with effectivity_end_id

aim772 Serial_Numbered_Effectivity with effectivity_end_id not present (6.25)

4.2.193 Shape_Aspect_Relationship

aim777 Shape_Aspect_Relationship

4.2.194 Shape_Definition_Representation

aim778 Shape_Definition_Representation (6.8, 6.9, 6.10, 6.11, 6.12)

4.2.195 Shape_Dimension_Representation

aim779 Shape_Dimension_Representation (6.9, 6.10)

aim780 Shape_Dimension_Representation with items of one element

aim781 Shape_Dimension_Representation with items of many elements (6.9)

4.2.196 Shape_Representation_Relationship

aim785 Shape_Representation_Relationship

4.2.197 Sheet_Metal_Action_Assignment

aim786 Sheet_Metal_Action_Assignment (6.23)

aim787 Sheet_Metal_Action_Assignment with items of one element (6.23)

aim788 Sheet_Metal_Action_Assignment with items of many elements

aim789 Sheet_Metal_Action_Assignment with items as Executed_Action (6.23)

aim790 Sheet_Metal_Action_Assignment with items as Process_Plan

aim791 Sheet_Metal_Action_Assignment with items as Product_Definition

aim792 Sheet_Metal_Action_Assignment with items as Product_Definition_Formation

4.2.198 Sheet_Metal_Approval_Assignment

aim793 Sheet_Metal_Approval_Assignment (6.3, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)

aim794 Sheet_Metal_Approval_Assignment with items of one element (6.3, 6.5, 6.6, 6.7,6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.24, 6.25)

aim795 Sheet_Metal_Approval_Assignment with items of many elements (6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23)

aim796 Sheet_Metal_Approval_Assignment with items as Executed_Action (6.3, 6.23, 6.24)

aim797 Sheet_Metal_Approval_Assignment with items as Process_Plan (6.13, 6.14,v6.15)

aim798 Sheet_Metal_Approval_Assignment with items as Product_Definition (6.5, 6.6,6.25)

aim799 Sheet_Metal_Approval_Assignment with items as Product_Definition_Formation (6.7,6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21)

aim800 Sheet_Metal_Approval_Assignment with items as Sheet_Metal_Action_Assignment

4.2.199 Sheet_Metal_Contract_Assignment

aim801 Sheet_Metal_Contract_Assignment (6.4, 6.7, 6.8, 6.9)

aim802 Sheet_Metal_Contract_Assignment with items of one element (6.4, 6.7, 6.8,6.9)

aim803 Sheet_Metal_Contract_Assignment with items of many elements

- aim804 Sheet_Metal_Contract_Assignment with items as Change_Order
- aim805 Sheet_Metal_Contract_Assignment with items as Executed_Action (6.4)
- aim806 Sheet_Metal_Contract_Assignment with items as Product_Definition_Formation_With_Specified_Source (6.7, 6.8, 6.9)
- aim807 Sheet_Metal_Contract_Assignment with items as Start_Order

4.2.200 Sheet_Metal_Date_And_Time_Assignment

- aim808 Sheet_Metal_Date_And_Time_Assignment
- aim809 Sheet_Metal_Date_And_Time_Assignment with items of one element
- aim810 Sheet_Metal_Date_And_Time_Assignment with items of many elements
- aim811 Sheet_Metal_Date_And_Time_Assignment with items as Executed_Action
- aim812 Sheet_Metal_Date_And_Time_Assignment with items as Process_Plan
- aim813 Sheet_Metal_Date_And_Time_Assignment with items as Product_Concept
- aim814 Sheet_Metal_Date_And_Time_Assignment with items as Product_Definition
- aim815 Sheet_Metal_Date_And_Time_Assignment with items as Product_Definition_Formation
- aim816 Sheet_Metal_Date_And_Time_Assignment with items as Sheet_Metal_Action_Assignment
- aim817 Sheet_Metal_Date_And_Time_Assignment with items as Versioned_Action_Request

4.2.201 Sheet_Metal_Date_Assignment

- aim818 Sheet_Metal_Date_Assignment (6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim819 Sheet_Metal_Date_Assignment with items of one element (6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim820 Sheet_Metal_Date_Assignment with items of many elements
- aim821 Sheet_Metal_Date_Assignment with items as Executed_Action (6.3, 6.4, 6.23, 6.24)
- aim822 Sheet_Metal_Date_Assignment with items as Process_Plan (6.13, 6.14, 6.15)
- aim823 Sheet_Metal_Date_Assignment with items as Product_Concept
- aim824 Sheet_Metal_Date_Assignment with items as Product_Definition
- aim825 Sheet_Metal_Date_Assignment with items as Product_Definition_Formation (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- aim826 Sheet_Metal_Date_Assignment with items as Sheet_Metal_Action_Assignment
- aim827 Sheet_Metal_Date_Assignment with items as Versioned_Action_Request (6.1, 6.2)

4.2.202 Sheet_Metal_Document_Reference

- aim828 Sheet_Metal_Document_Reference (6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 6.13, 6.14, 6.15, 6.18, 6.19, 6.21, 6.23, 6.24)
- aim829 Sheet_Metal_Document_Reference with items of one element (6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 6.13, 6.14, 6.15, 6.18, 6.19, 6.21, 6.24)
- aim830 Sheet_Metal_Document_Reference with items of many elements (6.23)
- aim831 Sheet_Metal_Document_Reference with items as Action_Resource_Requirement
- aim832 Sheet_Metal_Document_Reference with items as Executed_Action (6.3, 6.4, 6.23, 6.24)
- aim833 Sheet_Metal_Document_Reference with items as Process_Plan (6.14, 6.15)
- aim834 Sheet_Metal_Document_Reference with items as Product_Definition (6.6, 6.7, 6.8, 6.9, 6.15, 6.18, 6.19, 6.21)
- aim835 Sheet_Metal_Document_Reference with items as Sheet_Metal_Action_Assignment

4.2.203 Sheet_Metal_Organization_Assignment

- aim836 Sheet_Metal_Organization_Assignment (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim837 Sheet_Metal_Organization_Assignment with items of one element (6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.23, 6.24, 6.25)
- aim838 Sheet_Metal_Organization_Assignment with items of many elements (6.16, 6.17, 6.18, 6.19, 6.20, 6.21)
- aim839 Sheet_Metal_Organization_Assignment with items as Change_Order (6.4)
- aim840 Sheet_Metal_Organization_Assignment with items as Contract
- aim841 Sheet_Metal_Organization_Assignment with items as Executed_Action (6.3, 6.23, 6.24)
- aim842 Sheet_Metal_Organization_Assignment with items as Product_Definition (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- aim843 Sheet_Metal_Organization_Assignment with items as Start_Order

4.2.204 Sheet_Metal_Person_And_Organization_Assignment

- aim844 Sheet_Metal_Person_And_Organization_Assignment (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)
- aim845 Sheet_Metal_Person_And_Organization_Assignment with items of one element (6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.25)
- aim846 Sheet_Metal_Person_And_Organization_Assignment with items of many elements (6.16, 6.17, 6.18, 6.19, 6.20, 6.21)
- aim847 Sheet_Metal_Person_And_Organization_Assignment with items as Change_Order
- aim848 Sheet_Metal_Person_And_Organization_Assignment with items as Process_Plan (6.13, 6.14, 6.15)
- aim849 Sheet_Metal_Person_And_Organization_Assignment with items as Product_Definition (6.5, 6.6, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.205 Sheet_Metal_Person_Assignment

- aim850 Sheet_Metal_Person_Assignment (6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim851 Sheet_Metal_Person_Assignment with items of one element (6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10, 6.11, 6.12, 6.18, 6.19, 6.20, 6.21, 6.23, 6.24, 6.25)
- aim852 Sheet_Metal_Person_Assignment with items of many elements
- aim853 Sheet_Metal_Person_Assignment with items as Change_Order
- aim854 Sheet_Metal_Person_Assignment with items as Contract (6.4)
- aim855 Sheet_Metal_Person_Assignment with items as Product_Definition (6.5, 6.6, 6.9, 6.10, 6.11, 6.12, 6.18, 6.19, 6.20, 6.21, 6.25)
- aim856 Sheet_Metal_Person_Assignment with items as Shape_Aspect
- aim857 Sheet_Metal_Person_Assignment with items as Versioned_Action_Request (6.1, 6.2, 6.3, 6.23, 6.24)

4.2.206 Sheet_Metal_Security_Classification_Assignment

- aim858 Sheet_Metal_Security_Classification_Assignment (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

aim859 Sheet_Metal_Security_Classification_Assignment with items of one element (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.25)

aim860 Sheet_Metal_Security_Classification_Assignment with items of many elements (6.16, 6.17, 6.18, 6.19, 6.20, 6.21)

aim861 Sheet_Metal_Security_Classification_Assignment with items as Process_Plan (6.13, 6.14, 6.15)

aim862 Sheet_Metal_Security_Classification_Assignment with items as Product_Definition (6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.25)

4.2.207 Shell_Based_Surface_Model

aim863 Shell_Based_Surface_Model (6.10)

aim864 Shell_Based_Surface_Model with sbsm_boundary of one element

aim865 Shell_Based_Surface_Model with sbsm_boundary of many elements (6.10)

aim866 Shell_Based_Surface_Model with sbsm_boundary as Closed_Shell

aim867 Shell_Based_Surface_Model with sbsm_boundary as Open_Shell (6.10)

aim868 Shell_Based_Surface_Model with sbsm_boundary as Vertex_Shell

aim869 Shell_Based_Surface_Model with sbsm_boundary as Wire_Shell

4.2.208 Shell_Based_Wireframe_Model

aim870 Shell_Based_Wireframe_Model

aim871 Shell_Based_Wireframe_Model with sbwm_boundary of one element

aim872 Shell_Based_Wireframe_Model with sbwm_boundary of many elements

aim873 Shell_Based_Wireframe_Model with sbwm_boundary as Closed_Shell

aim874 Shell_Based_Wireframe_Model with sbwm_boundary as Open_Shell

aim875 Shell_Based_Wireframe_Model with sbwm_boundary as Vertex_Shell

aim876 Shell_Based_Wireframe_Model with sbwm_boundary as Wire_Shell

4.2.209 Shell_Based_Wireframe_Shape_Representation

aim877 Shell_Based_Wireframe_Shape_Representation

aim878 Shell_Based_Wireframe_Shape_Representation with items of one element

aim879 Shell_Based_Wireframe_Shape_Representation with items of many elements

4.2.210 Si_Unit

aim880 Si_Unit (6.8, 6.9, 6.10, 6.11, 6.15)

aim881 Si_Unit with prefix = atto

aim882 Si_Unit with prefix = centi (6.15)

aim883 Si_Unit with prefix = deca

aim884 Si_Unit with prefix = deci

aim885 Si_Unit with prefix = exa

aim886 Si_Unit with prefix = femto

aim887 Si_Unit with prefix = giga

aim888 Si_Unit with prefix = hecto

aim889 Si_Unit with prefix = kilo (6.15)

aim890 Si_Unit with prefix = mega

aim891 Si_Unit with prefix = micro

aim892 Si_Unit with prefix = milli (6.9, 6.10, 6.11)
aim893 Si_Unit with prefix = nano
aim894 Si_Unit with prefix = peta
aim895 Si_Unit with prefix = pico
aim896 Si_Unit with prefix = tera
aim897 Si_Unit with prefix not present
aim898 Si_Unit with name = ampere
aim899 Si_Unit with name = becquerel
aim900 Si_Unit with name = candela
aim901 Si_Unit with name = coulomb
aim902 Si_Unit with name = degree_celsius
aim903 Si_Unit with name = farad
aim904 Si_Unit with name = gram (6.15)
aim905 Si_Unit with name = gray
aim906 Si_Unit with name = henry
aim907 Si_Unit with name = hertz
aim908 Si_Unit with name = joule
aim909 Si_Unit with name = kelvin
aim910 Si_Unit with name = lumen
aim911 Si_Unit with name = lux
aim912 Si_Unit with name = metre (6.15)
aim913 Si_Unit with name = mole
aim914 Si_Unit with name = newton
aim915 Si_Unit with name = ohm
aim916 Si_Unit with name = pascal
aim917 Si_Unit with name = radian (6.8, 6.9, 6.10)
aim918 Si_Unit with name = second
aim919 Si_Unit with name = siemens
aim920 Si_Unit with name = sievert
aim921 Si_Unit with name = steradian (6.8, 6.9, 6.10)
aim922 Si_Unit with name = tesla
aim923 Si_Unit with name = volt
aim924 Si_Unit with name = watt
aim925 Si_Unit with name = weber
aim926 Solid_Model

4.2.211 Solid_Replica

aim927 Solid_Replica

4.2.212 Sphere

aim928 Sphere

4.2.213 Spherical_Surface

aim929 Spherical_Surface

4.2.214 Start_Order

aim930 Start_Order (6.3, 6.23, 6.24)

4.2.215 Surface_Of_Linear_Extrusion

aim940 Surface_Of_Linear_Extrusion

4.2.216 Surface_Of_Revolution

aim941 Surface_Of_Revolution

4.2.217 Surface_Patch

aim942 Surface_Patch

aim943 Surface_Patch with u_transition = cont_same_gradient

aim944 Surface_Patch with u_transition = cont_same_gradient_same_curvature

aim945 Surface_Patch with u_transition = continuous

aim946 Surface_Patch with u_transition = discontinuous

aim947 Surface_Patch with v_transition = cont_same_gradient

aim948 Surface_Patch with v_transition = cont_same_gradient_same_curvature

aim949 Surface_Patch with v_transition = continuous

aim950 Surface_Patch with v_transition = discontinuous

aim951 Surface_Patch with u_sense = TRUE

aim952 Surface_Patch with u_sense = FALSE

aim953 Surface_Patch with v_sense = TRUE

aim954 Surface_Patch with v_sense = FALSE

4.2.218 Surface_Replica

aim955 Surface_Replica

4.2.219 Swept_Area_Solid

aim956 Swept_Area_Solid

4.2.220 Tolerance_Value

aim958 Tolerance_Value

4.2.221 Tolerance_Zone

aim959 Tolerance_Zone

aim960 Tolerance_Zone with product_definitional = TRUE

aim961 Tolerance_Zone with product_definitional = FALSE

aim962 Tolerance_Zone with product_definitional = UNKNOWN

aim963 Tolerance_Zone with defining_tolerance of one element

aim964 Tolerance_Zone with defining_tolerance of many elements

4.2.222 Tolerance_Zone_Definition

aim965 Tolerance_Zone_Definition

aim966 Tolerance_Zone_Definition with boundaries of one element

aim967 Tolerance_Zone_Definition with boundaries of many elements

4.2.223 Tolerance_Zone_Form

aim968 Tolerance_Zone_Form

4.2.224 Torus

aim971 Torus

4.2.225 Trimmed_Curve

aim972 Trimmed_Curve (6.9)

aim973 Trimmed_Curve with trim_1 of one element (6.9)

aim974 Trimmed_Curve with trim_1 of many elements

aim975 Trimmed_Curve with trim_1 as Cartesian_Point (6.9)

aim976 Trimmed_Curve with trim_1 as Parameter_Value

aim977 Trimmed_Curve with trim_2 of one element (6.9)

aim978 Trimmed_Curve with trim_2 of many elements

aim979 Trimmed_Curve with trim_2 as Cartesian_Point (6.9)

aim980 Trimmed_Curve with trim_2 as Parameter_Value

aim981 Trimmed_Curve with sense_agreement = TRUE (6.9)

aim982 Trimmed_Curve with sense_agreement = FALSE

aim983 Trimmed_Curve with master_representation = cartesian

aim984 Trimmed_Curve with master_representation = parameter

aim985 Trimmed_Curve with master_representation = unspecified

4.2.226 Uncertainty_Measure_With_Unit

aim986 Uncertainty_Measure_With_Unit (6.8, 6.9, 6.10, 6.11, 6.12)

aim987 Uncertainty_Measure_With_Unit with value_component as Count_Measure

aim988 Uncertainty_Measure_With_Unit with value_component as Length_Measure (6.8, 6.10, 6.11, 6.12)

aim989 Uncertainty_Measure_With_Unit with value_component as Mass_Measure

aim990 Uncertainty_Measure_With_Unit with value_component as Parameter_Value

aim991 Uncertainty_Measure_With_Unit with value_component as Plane_Angle_Measure

aim992 Uncertainty_Measure_With_Unit with value_component as Positive_Length_Measure

aim993 Uncertainty_Measure_With_Unit with value_component as Positive_Plane_Angle_Measure

aim994 Uncertainty_Measure_With_Unit with unit_component as Derived_Unit

aim995 Uncertainty_Measure_With_Unit with unit_component as Named_Unit

4.2.227 Uniform_Curve

aim996 Uniform_Curve
 aim997 Uniform_Curve with control_points_list of many elements
 aim998 Uniform_Curve with curve_form = circular_arc
 aim999 Uniform_Curve with curve_form = elliptic_arc
 aim1000 Uniform_Curve with curve_form = hyperbolic_arc
 aim1001 Uniform_Curve with curve_form = parabolic_arc
 aim1002 Uniform_Curve with curve_form = polyline_form
 aim1003 Uniform_Curve with curve_form = unspecified
 aim1004 Uniform_Curve with closed_curve = TRUE
 aim1005 Uniform_Curve with closed_curve = FALSE
 aim1006 Uniform_Curve with closed_curve = UNKNOWN
 aim1007 Uniform_Curve with self_intersect = TRUE
 aim1008 Uniform_Curve with self_intersect = FALSE
 aim1009 Uniform_Curve with self_intersect = UNKNOWN

4.2.228 Uniform_Surface

aim1010 Uniform_Surface
 aim1011 Uniform_Surface with control_points_list of many elements
 aim1012 Uniform_Surface with surface_form = plane_surf
 aim1013 Uniform_Surface with surface_form = conical_surf
 aim1014 Uniform_Surface with surface_form = cylindrical_surf
 aim1015 Uniform_Surface with surface_form = generalised_cone
 aim1016 Uniform_Surface with surface_form = quadric_surf
 aim1017 Uniform_Surface with surface_form = ruled_surf
 aim1018 Uniform_Surface with surface_form = spherical_surface
 aim1019 Uniform_Surface with surface_form = surf_of_linear_extrusion
 aim1020 Uniform_Surface with surface_form = surf_of_revolution
 aim1021 Uniform_Surface with surface_form = toroidal_surf
 aim1022 Uniform_Surface with surface_form = unspecified
 aim1023 Uniform_Surface with u_closed = TRUE
 aim1024 Uniform_Surface with u_closed = FALSE
 aim1025 Uniform_Surface with u_closed = UNKNOWN
 aim1026 Uniform_Surface with v_closed = TRUE
 aim1027 Uniform_Surface with v_closed = FALSE
 aim1028 Uniform_Surface with v_closed = UNKNOWN
 aim1029 Uniform_Surface with self_intersect = TRUE
 aim1030 Uniform_Surface with self_intersect = FALSE
 aim1031 Uniform_Surface with self_intersect = UNKNOWN

4.2.229 Vector

aim1032 Vector (6.10)

4.2.230 Versioned_Action_Request

aim1033 Versioned_Action_Request (6.1, 6.2, 6.3, 6.4, 6.23, 6.24)

4.2.231 Vertex_Loop

aim1035 Vertex_Loop

4.2.232 Vertex_Point

aim1036 Vertex_Point (6.10, 6.11, 6.12)

4.2.233 Vertex_Shell

aim1037 Vertex_Shell

4.2.234 Week_Of_Year_And_Day_Date

aim1038 Week_Of_Year_And_Day_Date

aim1039 Week_Of_Year_And_Day_Date with day_component

aim1040 Week_Of_Year_And_Day_Date with day_component not present

4.2.235 Wire_Shell

aim1041 Wire_Shell

aim1042 Wire_Shell with wire_shell_extent of one element

aim1043 Wire_Shell with wire_shell_extent of many elements

4.2.236 Work_Order_Relationship

aim1045 Work_Order_Relationship (6.24)

4.3 Domain test purposes

No domain test purposes were identified at pilot implementation.

5 General test purposes and verdict criteria

General test purposes are statements of requirements that apply to all abstract test cases, all preprocessor abstract test cases, or all postprocessor abstract test cases. General verdict criteria are the means for evaluating whether the general test purposes are met. General verdict criteria shall be evaluated as a part of every executable test case to which they apply. Each general verdict criterion includes a reference to its associated test purpose.

5.1 General test purposes

The following are the general test purposes for this part of ISO 10303:

g1 The output of an IUT shall preserve all the semantics defined by the input model according to the

reference paths specified in the mapping table defined in clause 5 of ISO 10303-207.

g2 The output of a preprocessor shall conform to the implementation method to which the IUT claims conformance.

g3 The instances in the output of a preprocessor shall be encoded according to the AIM EXPRESS long form and mapping table as defined in Annex A and clause 5 of ISO 10303-207.

g4 A postprocessor shall accept input data which is encoded according the implementation method to which the IUT claims conformance.

g5 A postprocessor shall accept input data structured according to the AIM EXPRESS long form and mapping table as defined in Annex A and clause 5 of ISO 10303-207.

5.2 General verdict criterion for all abstract test cases

The following verdict criterion applies to all abstract test cases in this part of ISO 10303:

gvc1 The semantics of the input model are preserved in the output of the IUT according to the reference paths specified in the mapping table defined in clause 5 of ISO 10303-207 (g1).

5.3 General verdict criterion for preprocessor abstract test cases

The following verdict criterion applies to all preprocessor abstract test cases contained in this part of ISO 10303:

gvc2 The output of a preprocessor conforms to the implementation method to which the IUT claims conformance (g2).

gvc3 The instances in the output of a preprocessor are encoded according to the AIM EXPRESS long form and mapping table as defined in Annex A and clause 5 of ISO 10303-207 (g3).

5.4 General verdict criterion for postprocessor abstract test cases

The following verdict criterion applies to all postprocessor abstract test cases contained in this part of ISO 10303:

gvc4 The postprocessor accepts input data which is encoded according to the implementation method to which the IUT claims conformance (g4, other2-other6).

gvc5 The postprocessor accepts input data which is structured according to the AIM EXPRESS long form and mapping table as defined in Annex A and clause 5 of ISO 10303-207 (g5, other7-other11).

6 Abstract test cases

This clause specifies the abstract test cases for this part of ISO 10303. Each abstract test case addresses one or more test purposes from clause 4. All the test purposes addressed by the test case are referenced either explicitly, in the test purposes covered sections, or indirectly, through the verdicted rows of the preprocessor input specification table.

The abstract test cases are organized by conformance class number starting with class 1 test cases. The title for a class 1 test case indicates a significant feature of the AP that is intended to be tested by it. Test

case names for other CCs are intended to provide a simple description of the shape that is part of the test case. All abstract test case names are unique within this part of ISO 10303.

Each abstract test case has a subclause for the preprocessor test information and a subclause for each postprocessor input specification and related test information. The preprocessor and postprocessor input specifications are mirror images of each other, i.e., they represent the same semantic information. The preprocessor input model is presented in the form of a table with five columns:

- The Id column is used to reference application objects for assertions and categorisations. It uses the same identifier as the test purpose associated with the application element in that row of the table.
- The V column specifies whether, or not, the element in that row of the table is verdicted in this test case. A blank indicates it is not verdicted. A ‘*’ indicates that it is verdicted using a derived verdict criteria. A number references a specific verdict criteria defined in the verdict criteria section that follows the preprocessor input specification table.
- The Application Elements column identifies the particular application element or categorisation instance that is being defined by the table. For assertions the role is specified in parenthesis.
- The Value column specifies a specific value for the application element. For application objects and attributes the value column defines the semantic value for that element’s instance in the input model. A #<number> in the column is a reference to an entity instance name in the postprocessor input specification where the corresponding value is specified. For assertions, this column holds a link to the related application object. For categorisations, the Value column identifies the subtype application object. A “<not_present>” indicates that the application element or categorisation is not present in the input model.
- The Req column specifies whether the value in the Value column is mandatory (M), suggested (S) or constrained (C<number>, where <number> is an integer). A suggested value may be changed by a test realiser. A mandatory value may not be changed due to rules in EXPRESS, rules in the mapping table, or the requirements of the test purpose being verdicted. Each constrained value references a note labelled C<number> at the end of the preprocessor input model table and may be modified according to specific constraints specified in it.

The postprocessor input specifications are defined using ISO 10303-21. The values in the postprocessor specifications are suggested unless declared mandatory or constrained by the preprocessor input table.

The abstract test case specifies all the verdict criteria which are used to assign a verdict during testing. Special verdict criteria for preprocessor and postprocessor testing are defined explicitly in each abstract test case subclause. The relevant derived verdict criteria for preprocessor and postprocessor testing are identified in the V column of the preprocessor input table.

6.1 Test Case 120

Test case summary:

Test case 120 is designed to test the ability to define a Work_request which is of type Start_request.

6.1.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 1 - Application elements for case 120

ID	V	Application Element	Value	Req
@3714	*	Start_request	#1	M
@3715	*	Start_request.request_description	#1,'\$Feasibility Study and line-up'	S
@3716	*	Start_request.request_justification	#1,'start'	S
@4281	*	Work_request	#1	M
@4282	*	Work_request.date_and_time_of_request	#2,#2	S
@4283	*	Work_request.requestor	#5,#5	S
@4284	*	Work_request.work_request_identification	#1	S
@4285		Work_request to Work_order (<role description>)	<not_present>	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.1.2 Postprocessor

Test purposes covered:

aim1033, aim818, aim819, aim827, aim311, aim850, aim851, aim 857, aim541, aim542, aim544, aim557, aim224

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.2 Test Case 130

Test case summary:

Test case 130 is designed to test the ability to define a Work_request which is of type Change_request.

6.2.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 2 - Application elements for case 130

Id	V	Application Element	Value	Req
@175	*	Change_request	#1	M
@176	*	Change_request.problem_change_description	#1,'Design to split and pierce part with operational line-up change'	S
@177	*	Change_request.recommended_solution	#2,#2	S
@4281		Work_request	#1	M
@4282		Work_request.date_and_time_of_request	#3,#3	S
@4283		Work_request.requestor	#6,#6	S
@4284		Work_request.work_request_identification	#1	S
@4285		Work_request to Work_order (<role description>)	<not_present>	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.2.2 Postprocessor

Test purposes covered:

aim1033, aim7, aim8, aim818, aim819, aim827, aim311, aim850, aim851, aim 857, aim541, aim543, aim545, aim548, aim551, aim554, aim557, aim224, aim348, aim349

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.3 Test case 140

Test case summary:

Test case 140 is designed to test the ability to define a Work_request which is of type Start_request, a Work_order of type Start_order with target implementation type as Internal_order, generated from the Work_request.

6.3.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 3 - Application elements for case 140

Id	V	Application Element	Value	Req
@3658	*	Start_order	#1	S
@3659	*	External_order to Start_order (<inverse role>)	<not_present>	M
@3662	*	Work_item to Start_order (<inverse role>)	<not_present>	M
@4097	*	Work_order	#1,#1	M
@4098	*	Work_order.applicable_standard	#3,#3	M
@4099	*	Work_order.approval	#57,#57	M

Table 3 - Application elements for case 140 (concluded)

Id	V	Application Element	Value	Req
@4100	*	Work_order.completion_date_and_time	#15,#15	M
@4101	*	Work_order.order_date_and_time	#19,#19	M
@4102	*	Work_order.preliminary_review_date_and_time	#23,#23	M
@4103	*	Work_order.priority	#1,'Feasibility study and line-up'	S
@4104	*	Work_order.production_volume	#28,#28	S
@4105	*	Work_order.start_date_and_time	#30,#30	S
@4106	*	Work_order.work_description	#2,'Feasibility Study and line-up'	S
@4107	*	Work_order.work_order_number	#1,'WO678'	S
@4109		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4112		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4115		Work_order_responsibility to Work_order (<inverse role>)	<not_present>	M
@4118	*	Work_request to Work_order (Results from)	@4281	M
@1313	*	Internal_order	#37	M
@1314	*	Internal_order.authorized_hours	#44,'Charge 250 hours to 2004.290	M
@1315	*	Internal_order.charge_number	#44,'Charge 250 hours to 2004.290	M
@1316	*	Internal_order.source_department	#38,'AVD Company	M
@3714		Start_request	#36	M

Id	V	Application Element	Value	Req
@3715		Start_request.request_description	#36,'Feasibility Study and line-up'	S
@3716		Start_request.request_justification	#36,'start'	S
@4281		Work_request	#36	M
@4282		Work_request.date_and_time_of_request	#51,#51	S
@4283		Work_request.requestor	#54,#54	S
@4284		Work_request.work_request_identification	#36	S
@4285	*	Work_request to Work_order (<Results in >)	@4097	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.3.2 Postprocessor

Test purposes covered:

aim930, aim7, aim8, aim828, aim829, aim832, aim348, aim349, aim369, aim49, aim59, aim50, aim51, aim224, aim54, aim56, aim58, aim541, aim543, aim545, aim548, aim551, aim554, aim818, aim819, aim821, aim463, aim464, aim472, aim18, aim19, aim22, aim33, aim1033, aim836, aim837, aim841, aim500, aim501, aim503, aim2, aim3, aim345, aim341, aim286, aim850, aim851, aim857, aim557, aim793, aim794, aim796, aim727, aim728, aim730, aim15, aim10, aim12

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.4 Test case 150

Test case summary:

Test case 150 is designed to test the ability to define a Work_request which is of type Change_request, a Work_order of type Change_order with target implementation type as External_order, generated from the Work_request.

6.4.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 4 - Application elements for case 150

Id	V	Application Element	Value	Req
@2780	*	Position_orientation_representation	#34	S
@117	*	Change_order	#1	M
@118	*	Change_order.change_design_location	#1,'Change operational line-up; design to split and pierce part'	S
@119	*	Change_order.implementor	#4,#4	S
@120		Change_order to Work_item (<role description>)	<not_present>	M
@123		Change_order to Work_item (<role description>)	<not_present>	M
@978	*	External_order	#49	M
@979	*	External_order.contractual_requirement	#50,'Meet Requirement #42'	S
@980	*	External_order.purchase_order_number	#50,'Contract5398'	S
@981	*	External_order.purchasing_agent	#54,#54	S
@982	*	External_order.supplier_identification	#57,#57	S
@983		External_order to Start_order (<role description>)	<not_present>	M
@4097		Work_order	#1,#1	M
@4098		Work_order.applicable_standard	#8,#8	M
@4099		Work_order.approval	#69,#69	M

Id	V	Application Element	Value	Req
@4100		Work_order.completion_date_and_time	#20,#20	M
@4101		Work_order.order_date_and_time	#25,#25	M
@4102		Work_order.preliminary_review_date_date_and_time	#28,#28	M
@4103		Work_order.priority	#1,'Change operational line-up; design to split and pierce part'	S
@4104		Work_order.production_volume	#38,#38	S
@4105		Work_order.start_date_and_time	#41,#41	S
@4106		Work_order.work_description	#2,'Change operational line-up; design to split and pierce part'	S

Table 4 - Application elements for case 150 (concluded)

Id	V	Application Element	Value	Req
@4107		Work_order.work_order_number	#1,'56319843'	S
@4109		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4112		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4115	*	Work_order_responsibility to Work_order (is carried out by)	@4227	M
@4118		Work_request to Work_order (<inverse role>)	<not_present>	M
@4227	*	Work_order_responsibility	#47	M
@4228	*	Work_order_responsibility.role	#48,#48	S
@4229	*	Work_order_responsibility to Work_order (is responsible for)	@4097	M
@4281		Work_request	#7	M
@4282		Work_request.date_and_time_of_request	#63,#63	S
@4283		Work_request.requestor	#66,#66	S
@4284		Work_request.work_request_identification	#7,'3R28'	S
@4285		Work_request to Work_order (<role description>)	<not_present>	M
@175		Change_request	#7	M

@176		Change_request.probelm_change_description	#7,'Change operational line-up; design to split and pierce part	M
@177		Change_request.recommended_solution	#2,#2	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.4.2 Postprocessor

Test purposes covered:

aim244, aim7, aim8, aim836, aim837, aim839, aim500, aim501, aim503, aim1033, aim828, aim832, aim829, aim348, aim349, aim369, aim49, aim59, aim50 aim51, aim224, aim54, aim56, aim58, aim818, aim819, aim821, aim311, aim10, aim11, aim727, aim728, aim731, aim730, aim463, aim464, aim472, aim341, aim18, aim19, aim22, aim33, aim801, aim802, aim805, aim287, aim288, aim850, aim851, aim854, aim541, aim542, aim543, aim544, aim545, aim548, aim551, aim554, aim557, aim345, aim2, aim15

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.5 Test case 160

Test case summary:

Test case 160 is designed to test the ability to define an Item of type Part, its Item_version with production type Made_in_house, Item_defintion which is of type Designed_item and Part_definition whose life cycle stage is Final_part_definition.

6.5.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 5 - Application elements for case 160

Id	V	Application Elements	Value	Req
@ 1419	*	Item	#5	M
@ 1420	*	Item.item_description	#5,'Gutter-Component Lid Side Right & Left'	S
@ 1421	*	Item.item_name	#5,'Gutter-Component Lid Side Right & Left'	S
@ 1422	*	Item.item_number	#5,'88776655'	S
@ 1425	*	Item to Item_classification (is classified by)	@ 1478.1,@ 1478.2,@ 1478.3	M
@ 1428	*	Item to Item_version (is versioned by)	@ 1724.1,@ 1724.2,@ 1724.3	M

Table 5 - Application elements for case 160 (continued)

Id	V	Application Element	Value	Req
@ 1478.1	*	Item_classification	#15	M
@ 1479	*	Item_classification.classification_description	#15,'Gutter-Component Lid Side Right & Left'	S
@ 1480	*	Item_classification.classification_identification	#15,'part'	S
@ 1481	*	Item_classification.classification_name	#15,'part'	S
@ 1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M

Table 5 - Application elements for case 160 (continued)

Id	V	Application Element	Value	Req
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489	*	Item to Item_classification (classifies)	@1419	M
@1478.2		Item_classification	#18	M
@1479		Item_classification.classification_description	#18,'Gutter-Component Lid Side Right & Left'	S
@1480		Item_classification.classification_identification	#18,'part definition'	S
@1481		Item_classification.classification_name	#18,'part definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1478.3		Item_classification	#19	M
@1479		Item_classification.classification_description	#19,'Gutter-Component Lid Side Right & Left'	S
@1480		Item_classification.classification_identification	#19,'internal'	S
@1481		Item_classification.classification_name	#19,'internal'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@2202	*	Part	#5	S
@382	*	Designed_item	#11	M
@383	*	Designed_item.creation_date_and_time	#20,#20	S
@384	*	Designed_item.data_exchange_history	(#41,#41, #41,#41)	S
@385	*	Designed_item.data_ownership	#24,#24	S
@386	*	Designed_item.designer	#29,#29	S
@387	*	Designed_item.generating_system_information	#31,'CAD System'	S

Table 5 - Application elements for case 160 (continued)

Id	V	Application Element	Value	Req
@388	*	Designed_item.media_requirements	#32,#32	S
@1204	*	Final_part_definition	#11	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@2252	*	Part_definition	#11	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1724	*	Item_version	#13	M
@1725	*	Item_version.approval	#42,#42	M

Table 5 - Application elements for case 160 (concluded)

Id	V	Application Element	Value	Req
@1726	*	Item_version.approval_status	#44,#44	M
@1727	*	Item_version.description	#4,'Gutter-Component Lid Side Right & Left'	S
@1728	*	Item_version.item_version_identification	#4,'5'	S
@1729	*	Item_version.revision_date_and_time	#20,#20	S
@1731	*	Item_version to Item_definition (is defined by)	@1597	M
@1734	*	Item to Item_version (versions)	@1419	M
@1835	*	Made_in_house	#13	M
@1597	*	Item_definition	#11	M
@1598	*	Item_definition.approval	#33,#33	M
@1599	*	Item_definition.approval_status	#35,#35	M
@1600	*	Item_definition.definition_description	#11,'Increase the width of Gutter	M
@1601	*	Item_definition.procurement_information	#36,#36	M
@1602	*	Item_definition.proprietary_security_usage_information	#38,#38	M

@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616	*	Item_definition to Item_version (<role description>)	@1724	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.5.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim818, aim819, aim825, aim224, aim311, aim599, aim600, aim622, aim623, aim625, aim603, aim605, aim844, aim845, aim849, aim555, aim541, aim543, aim545, aim548, aim551, aim554, aim556, aim500, aim501, aim850, aim851, aim855, aim557, aim348, aim349, aim793, aim794, aim798, aim49, aim59, aim836, aim837, aim842, aim503, aim858, aim859, aim862, aim765, aim766, aim767, aim614, aim615

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.6 Test case 170

Test case summary:

Test case 170 is designed to test the ability to define an Item of type Die, its Item_version with production type Made_in_house, Item_definition which is of type Designed_item and Die_definition.

6.6.1 PreprocessorTest purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:**Table 6 - Application elements for case 170**

Id	V	Application Elements	Value	Req
@1419		Item	#1	M

Table 6 - Application elements for case 170 (continued)

Id	V	Application Elements	Value	Req
@1420		Item.item_description	#1,'Draw Die'	S
@1421		Item.item_name	#1,'Double Draw Die Rt & Lt'	S
@1422		Item.item_number	#1,'9555884'	S
@1425		Item to Item_classification (is classified by)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1478.1		Item_classification	#5	M
@1479		Item_classification.classification_description	#5,'Draw die to make sheet metal parts'	S
@1480		Item_classification.classification_identification	#5,'Die'	S
@1481		Item_classification.classification_name	#5,'Die'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M

Table 6 - Application elements for case 170 (continued)

Id	V	Application Elements	Value	Req
@1478.2		Item_classification	#26	M
@1479		Item_classification.classification_description	#26,'definition of draw die to make sheet metal part'	S
@1480		Item_classification.classification_identification	#26,'die definition'	S
@1481		Item_classification.classification_name	#26,'die definition'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1478.3		Item_classification	#37	M
@1479		Item_classification.classification_description	#37,'The die is a designed die'	S
@1480		Item_classification.classification_identification	#37,'internal'	S
@1481		Item_classification.classification_name	#37,'internal'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@382.1		Designed_item	#10	M
@383		Designed_item.creation_date_and_time	#38,#38	S
@384		Designed_item.data_exchange_history	(#50,#50, #50,#50)	S
@385		Designed_item.data_ownership	#41,#41	S
@386		Designed_item.designer	#46,#46	S
@387		Designed_item.generating_system_information	#46,'Graphics System'	S
@388		Designed_item.media_requirement	#24,#24	S
@538	*	Die_definition	#22	M
@539	*	Die_definition.die_function_description	#22,'Double Draw Die'	S
@540	*	Die_definition.die_layout_specification_reference	#27,#27S''	

Table 6 - Application elements for case 170 (continued)

Id	V	Application Elements	Value	Req
@541	*	Die_definition.die_structure_specification_reference	#30,#30S"	
@542	*	Die_definition.die_weight	#22,'Double Draw Die'	S
@543	*	Die_definition.pattern_casting_specification	#33,#33S"	
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@1724		Item_version	#6	M
@1725		Item_version.approval	#51,#51	S
@1726		Item_version.approval_status	#53,#53	S
@1727		Item_version.description	#6,'Double Draw Die'	S
@1728		Item_version.item_version_identification	#6,'1'	S
@1729		Item_version.revision_date_and_time	#38,#38	S
@1732		Item_version to Item_definition (is defined by)	@1597	M
@1734		Item to Item_version (versions)	@1419	M
@488	*	Die	#1	M

Table 6 - Application elements for case 170 (concluded)

Id	V	Application Elements	Value	Req
@1835		Made_in_house	#6	M
@1597		Item_definition	#10	M
@1598		Item_definition.approval	#13,#13	M
@1599		Item_definition.approval_status	#15,#15	M
@1600		Item_definition.definition_description	#10,'Double Draw Die Rt & Lt'	M
@1601		Item_definition.procurement_information	#16,#16	M
@1602		Item_definition.proprietary_security_usage_information	#19,#19	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M

Table 6 - Application elements for case 170 (concluded)

Id	V	Application Elements	Value	Req
@1613		Item_definition to Shape_definition (<role de- scription>)	<not_present>	M
@1616	*	Item_definition to Item_version (<role de- scription>)	@1724	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.6.2 PostprocessorTest purposes covered:

aim589, aim598, aim590, aim46, aim622, aim623, aim625, aim818, aim819, aim825, aim224, aim311, aim599, aim600, aim603, aim605, aim793, aim794, aim798, aim49, aim59, aim836, aim837, aim842, aim500, aim501, aim503, aim858, aim859, aim862, aim765, aim766, aim614, aim615, aim348, aim349, aim828, aim829, aim834, aim844, aim845, aim849, aim555, aim556, aim541, aim543, aim545, aim548, aim551, aim554, aim850, aim851, aim855, aim767

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.7 Test Case 180Test case summary:

Test case 180 is designed to test the ability to define an Item of type Die, its Item_version with production type Purchased, Item_definition which is of type External_item_reference and Die_definition.

6.7.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 7 - Application elements for case 180

Id	V	Application Element	Value	Req
@488		Die	#1	S
@1419		Item	#1	M
@1420		Item.item_description	#1,'Cutoff Rectangular blanks one at a time'	S
@1421		Item.item_name	#1,'Decoiler Shear'	S
@1422		Item.item_number	#1,'B37-2854'	S

Table 7 - Application elements for case 180 (continued)

Id	V	Application Elements	Value	Req
@1425		Item to Item_classification (is classified by)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1478.1		Item_classification	#5	M
@1479		Item_classification.classification_description	#5,'Dies to cutoff rectangular blanks'	S
@1480		Item_classification.classification_identification	#5,'die'	S
@1481		Item_classification.classification_name	#5,'die'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M

Table 7 - Application elements for case 180 (continued)

Id	V	Application Elements	Value	Req
@1478.2		Item_classification	#30	M
@1479		Item_classification.classification_description	#30,"	S
@1480		Item_classification.classification_identification	#30,'die definition'	S
@1481		Item_classification.classification_name	#30,'die definition'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1478.3		Item_classification	#32	M
@1479		Item_classification.classification_description	#32,"	S
@1480		Item_classification.classification_identification	#32,'external'	S
@1481		Item_classification.classification_name	#32,'external'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@538		Die_definition	#36	M
@539		Die_definition.die_function_description	#36,'Die Reference Manual'	S
@540		Die_definition.die_layout_specification_reference	#37,#37	S
@541		Die_definition.die_structure_specification_reference	#40,#40	S
@542		Die_definition.die_weight	#36,'Die to cutoff rectangular blanks one at time'	S
@543		Die_definition.pattern_casting_specification	#43,#43	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M

Table 7 - Application elements for case 180 (continued)

Id	V	Application Elements	Value	Req
@925	*	External_item_reference	#26	M
@926	*	External_item_reference.manual_reference_ - description	#26,#26	S
@927	*	External_item_reference.name	#1,'Decoiler Shear'	S
@928	*	External_item_reference.needed_ - modifications	#18,'Decoiler Shear'	S
@1724.1		Item_version	#6	M
@1725		Item_version.approval	#23,#23	S
@1726		Item_version.approval_status	#25,#25	S
@1727		Item_version.description	#6,'Decoiler Shear'	S
@1728		Item_version.item_version_identification	#6,'2'	S
@1729		Item_version.revision_date_and_time	#7,#7	S
@1732		Item_version to Item_definition (is defined by)	<not_present>	M
@1734		Item to Item_version (versions)	@1419	M
@3034	*	Purchased	#6	M

Table 7 - Application elements for case 180 (concluded)

Id	V	Application Elements	Value	Req
@3035	*	Purchased.purchase_requirements	#11,#11	M
@1597		Item_definition	#18	M
@1598		Item_definition.approval	#46,#46	M
@1599		Item_definition.approval_status	#48,#48	M
@1600		Item_definition.definition_description	#18,'Decoiler Shear'	M
@1601		Item_definition.procurement_information	#14,#14	M
@1602		Item_definition.proprietary_security_usage_ - information	#33,#33	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_ - relationship (<role description>)	<not_present>	M
@1610		Item_definition to Item_definition_ - relationship (<role description>)	<not_present>	M

Table 7 - Application elements for case 180 (concluded)

Id	V	Application Elements	Value	Req
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616	*	Item_definition to Item_version (<role description>)	@1724	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.7.2 PostprocessorTest purposes covered:

aim589, aim590, aim598, aim46, aim622, aim623, aim625, aim818, aim819, aim825, aim224, aim311, aim603, aim604, aim801, aim802, aim806, aim287, aim288, aim836, aim837, aim842, aim500, aim501, aim503, aim599, aim600, aim614, aim615, aim616, aim348, aim349, aim793, aim794, aim799, aim49, aim59, aim858, aim862, aim859, aim765, aim766, aim828, aim829, aim834

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.8 Test case 190Test case summary:

Test case 190 is designed to test the ability to define an Item of type Die, its Item_version with

production type Purchased, Item_definition which is of type Designed_item, Die_definition, Shape_definition which is of type Die_shape_definition, its Representation_element which in this case is Wireframe_representation.

6.8.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 8 - Application elements for case 190

Id	V	Application Element	Value	Req
@488		Die	#1	S
@1419		Item	#1	M
@1420		Item.item_description	#1,'Solid Cube'	S
@1421		Item.item_name	#1,'Cube A'	S
@1422		Item.item_number	#1,'12345'	S
@1425		Item to Item_classification (is classified by)	@1478.1,@1478.2,@1478.3	M

Table 8 - Application elements for case 190 (continued)

Id	V	Application Element	Value	Req
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1478.1		Item_classification	#5	M
@1479		Item_classification.classification_description	#5,"	S
@1480		Item_classification.classification_identification	#5,'die'	S
@1481		Item_classification.classification_name	#5,'die'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M

Table 8 - Application elements for case 190 (continued)

Id	V	Application Element	Value	Req
@1478.2		Item_classification	#26	M
@1479		Item_classification.classification_description	#26,'die definition'	S
@1480		Item_classification.classification_identification	#26,'die definition'	S
@1481		Item_classification.classification_name	#26,'die definition'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1478.3		Item_classification	#37	M
@1479		Item_classification.classification_description	#37,"	S
@1480		Item_classification.classification_identification	#37,'internal'	S
@1481		Item_classification.classification_name	#37,'internal'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@382		Designed_item	#14	M
@383		Designed_item.creation_date_and_time	#38,#38	S
@384		Designed_item.data_exchange_history	(#41,#41, #41,#41)	S
@385		Designed_item.data_ownership	#42,#42	S
@386		Designed_item.designer	#48,#48	S
@387		Designed_item.generating_system_information	#64,#64	S
@388		Designed_item.generating_system_information	#51,#51	S
@538		Die_definition	#22	M
@539		Die_definition.die_function_description	#14,'Design of a Cube'	S
@540		Die_definition.die_layout_specification_reference	(#27,#27)	S

Table 8 - Application elements for case 190 (continued)

Id	V	Application Element	Value	Req
@541		Die_definition.die_structure_specification_ref- erence	(#30,#30)	S
@542		Die_definition.die_weight	#14,'Design of a Cube'	S
@543		Die_definition.pattern_casting_specification	(#33,#33)	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role de- scription>)	<not_present>	M
@1724		Item_version	#6	M
@1725		Item_version.approval	#52,#52	S
@1726		Item_version.approval_status	#54,#54	S
@1727		Item_version.description	#6,'Cube'	S
@1728		Item_version.item_version_identification	#6,'S-1'	S
@1729		Item_version.revision_date_and_time	#38,#38	S
@1732		Item_version to Item_definition (is defined by)	@1597M	
@1734		Item to Item_version (versions)	@1419	M
@2780. 1		Position_orientation_representation	#60	S
@2780. 2		Position_orientation_representation	#61	S
@3135	*	Representation_element	#9221	S
@3136	*	Representation_element to Shape_definition (represents)	@3244	M
@3979	*	Wireframe_representation	#9200	S
@3244	*	Shape_definition	#9220	M
@3245	*	Shape_definition.shape_description	#9220,'Shape of the cube'	S
@3246		Shape_definition to Shape_definition_ -relationship (<role description>)	<not_present>	M
@3249		Shape_definition to Shape_definition_ -relationship (<role description>)	<not_present>	M
@3252		Feature to Shape_definition (<inverse role>)	<not_present>	M
@3255	*	Item_definition to Shape_definition (<inverse role>)	@1597	M

Table 8 - Application elements for case 190 (continued)

Id	V	Application Element	Value	Req
@3258		Assembly_component_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3261		Input_item_die_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3264		Mating_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3267	*	Representation_element to Shape_definition (is represented by)	@3135	M
@3270		Coincidence_defaults to Shape_definition (<inverse role>)	<not_present>	M
@3034		Purchased	#6	M
@3035		Purchased.purchase_requirement	#11,#11	S
@653	*	Die_shape_definition	#9220	M
@1597		Item_definition	#14	M
@1598		Item_definition.approval	#55,#55	M
@1599		Item_definition.approval_status	#57,#57	M
@1600		Item_definition.definition_description	#14,'Design of cube A	M
@1601		Item_definition.procurement_information	#16,#16	M
@1602		Item_definition.proprietary_security_usage_information	#19,#19	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M

Table 8 - Application elements for case 190 (concluded)

Id	V	Application Element	Value	Req
@1607		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1613		Item_definition to Shape_definition (has shape characterized by)	@3244	M
@1616	*	Item_definition to Item_version (is defined by)	@1724	M

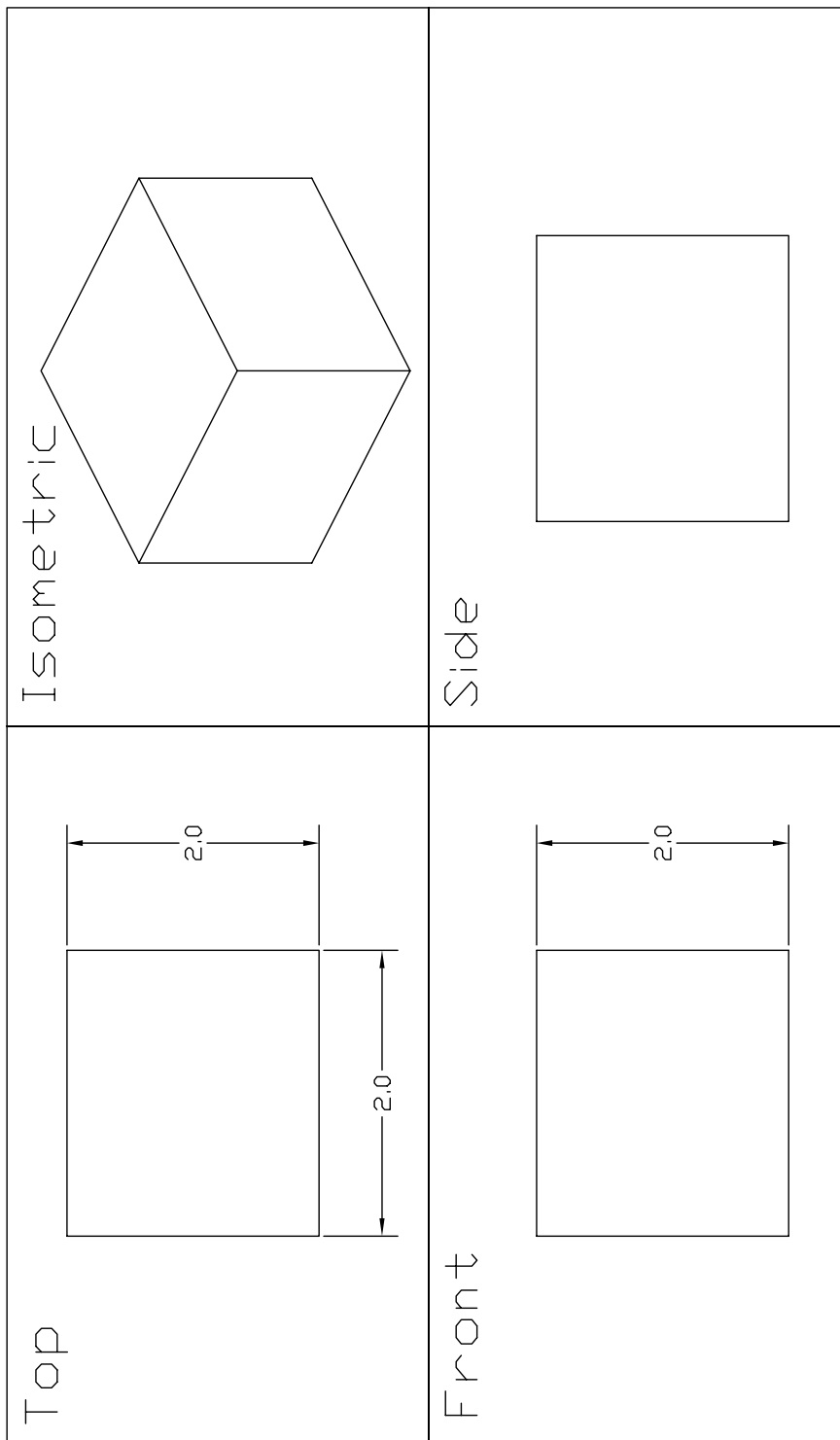
Figure 1 is a pictorial depiction, using common draughting conventions and terminology, of the shape represented in this test case. The non-geometric elements (annotations etc.) in the figure are present to aid understanding and do not form a part of the shape intended for instantiation. All linear dimensions

are in mm.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.



Notes: All units are in inches Part #12345 Cube Solid CAD Filename: Shape1b.dwg	Revisions: S-1	Drawing: CubeA.dhc
		Date: 7-18-93
		Name: Chad Brandenburg
CDI Contract Design, Inc.		

Figure 1 - Cube A

6.8.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim818, aim819, aim825, aim224, aim311, aim603, aim604, aim801, aim802, aim806, aim287, aim288, aim836, aim837, aim842, aim500, aim501, aim503, aim599, aim600, aim614, aim615, aim616, aim348, aim349, aim793, aim794, aim799, aim49, aim59, aim858, aim859, aim862, aim765, aim766, aim828, aim829, aim834, aim443, aim571, aim880, aim917, aim921, aim986, aim988, aim225, aim226, aim583, aim584, aim390, aim392, aim394, aim396, aim414, aim415, aim411, aim412, aim778, aim609, aim610, aim630, aim631, aim844, aim845, aim849, aim500, aim501, aim541, aim542, aim544, aim548, aim551, aim554, aim555, aim556, aim850, aim851, aim855, aim557,

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.9 Test case 200

Test case summary:

Test case 200 is designed to test the ability to define an Item of type Die, its Item_version with production type Purchased, Item_definition which is of type Designed_item, Die_definition, Shape_definition which is of type Die_shape_definition, its Representation_element which in this case is Surface_-representation.

6.9.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 9 - Application elements for case 200

Id	V	Application Element	Value	Req
@488		Die	#1	S
@1419		Item	#1	M
@1420		Item.item_description	#1,'Solid Cone'	S
@1421		Item.item_name	#1,'Cone A'	S
@1422		Item.item_number	#1,'12345'	S
@1425		Item to Item_classification (is classified by)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1478.1		Item_classification	#5	M
@1479		Item_classification.classification_description	#5,"	S
@1480		Item_classification.classification_identification	#5,'die'	S
@1481		Item_classification.classification_name	#5,'die'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1478.2		Item_classification	#7	M
@1479		Item_classification.classification_description	#7,"	S
@1480		Item_classification.classification_identification	#7,'die definition'	S
@1481		Item_classification.classification_name	#7,'die definition'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1478.3		Item_classification	#8	M
@1479		Item_classification.classification_description	#8,"	S

Table 9 - Application elements for case 200 (continued)

Id	V	Application Element	Value	Req
@1480		Item_classification.classification_identification	#8,'internal'	S
@1481		Item_classification.classification_name	#8,'internal'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@382		Designed_item	#21	M
@383		Designed_item.creation_date_and_time	#42,#42	S
@384		Designed_item.data_exchange_history	(#45,#45, #45,#45)	S
@385		Designed_item.data_ownership	#47,#47	S
@386		Designed_item.designer	#52,#52	S
@387		Designed_item.generating_system_information	#63,#63	S
@388		Designed_item.media_requirements	#55,#55	S
@538.1		Die_definition	#29	M
@539		Die_definition.die_function_description	#29,'Cone used for positioning'	S
@540		Die_definition.die_layout_specification_reference	(#32,#32, #38,#38, #39,#39)	S
@541		Die_definition.die_structure_specification_reference	(#32,#32, #38,#38, #39,#39)	S
@542		Die_definition.die_weight	#29,'Cone used for positioning'	S
@543		Die_definition.pattern_casting_specification	(#32,#32, #38,#38, #39,#39)	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@1724		Item_version	#10	M
@1725		Item_version.approval	#60,#60	S
@1726		Item_version.approval_status	#62,#62	S
@1727		Item_version.description	#10,'Cone'	S
@1728		Item_version.item_version_identification	#10,'S-1'	S
@1729		Item_version.revision_date_and_time	#42,#42	S

Table 9 - Application elements for case 200 (continued)

Id	V	Application Element	Value	Req
@1732		Item_version to Item_definition (is defined by)	@1597	M
@1734		Item to Item_version (versions)	@1419	M
@3135		Representation_element	#9231	S
@3136		Representation_element to Shape_definition (represents)	@3244	M
@3766	*	Surface_representation	#9160	S
@3767	*	Surface_representation.surface_direction	#9160,#9160	S
@3768	*	Surface_representation.surface_thickness	#9160,#9160	S
@3244		Shape_definition	#9180	M
@3245		Shape_definition.shape_description	#9160,'Shape of a Cone'	S
@3246		Shape_definition to Shape_definition_relationship (<role description>)	<not_present>	M
@3249		Shape_definition to Shape_definition_relationship (<role description>)	<not_present>	M
@3252		Feature to Shape_definition (<inverse role>)	<not_present>	M
@3255		Item_definition to Shape_definition (<inverse role>)	@1597	M
@3258		Assembly_component_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3261		Input_item_die_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3264		Mating_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3267		Representation_element to Shape_definition (<inverse role>)	<not_present>	M
@3270		Coincidence_defaults to Shape_definition (<inverse role>)	<not_present>	M
@3034		Purchased	#10	M
@3035		Purchased.purchase_requirements	#15,#15	M
@653		Die_shape_definition	#9180	M

Table 9 - Application elements for case 200 (concluded)

Id	V	Application Element	Value	Req
@1597		Item_definition	#21	M
@1598		Item_definition.approval	#18,#18	M
@1599		Item_definition.approval_status	#20,#20	M
@1600		Item_definition.definition_description	#21,'Cone A	M
@1601		Item_definition.procurement_information	#23,#23	M
@1602		Item_definition.proprietary_security_usage_information	#26,#26	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1613		Item_definition to Shape_definition (has shape characterized by)	@3244	M
@1616	*	Item_definition to Item_version (is defined by)	@1724	M

Figure 2 is a pictorial depiction, using common draughting conventions and terminology, of the shape represented in this test case. The non-geometric elements (annotations etc.) in the figure are present to aid understanding and do not form a part of the shape intended for instantiation. All linear dimensions are in mm.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

The following specific verdict criteria apply:

VC1: The model realized by IUT generally corresponds in shape to the model represented in figure 2

VC2: This model contains a circle or circular arc of radius 0.81

VC3: The largest linear (not angular) dimension associated with this model is 2.344

VC4: Assuming this model is a solid, it has 2 distinct faces

VC5: The smallest angular dimension associated with this model is 40.0 degrees

6.9.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim818, aim819, aim825, aim224, aim311, aim603, aim604, aim801, aim802, aim806, aim287, aim288, aim836, aim837, aim842, aim500, aim501, aim503, aim599, aim600, aim614, aim616, aim348, aim349, aim793, aim794, aim799, aim49, aim59, aim858, aim862, aim859, aim765, aim766, aim828, aim829, aim834, aim767, aim844, aim845, aim849, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim850, aim851, aim855, aim557, aim341, aim443, aim880, aim892, aim921, aim917, aim433, aim439, aim571, aim561, aim568, aim289, aim986, aim225, aim226, aim346, aim70, aim71, aim279, aim560, aim302, aim303, aim306, aim527, aim528, aim532, aim263, aim215, aim266, aim268, aim245, aim247, aim972, aim973, aim975, aim977, aim979, aim981, aim398, aim400, aim403, aim396, aim414, aim408, aim409, aim778, aim609, aim610, aim630, aim632, aim316, aim317, aim338, aim339, aim779, aim781, aim463, aim342

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

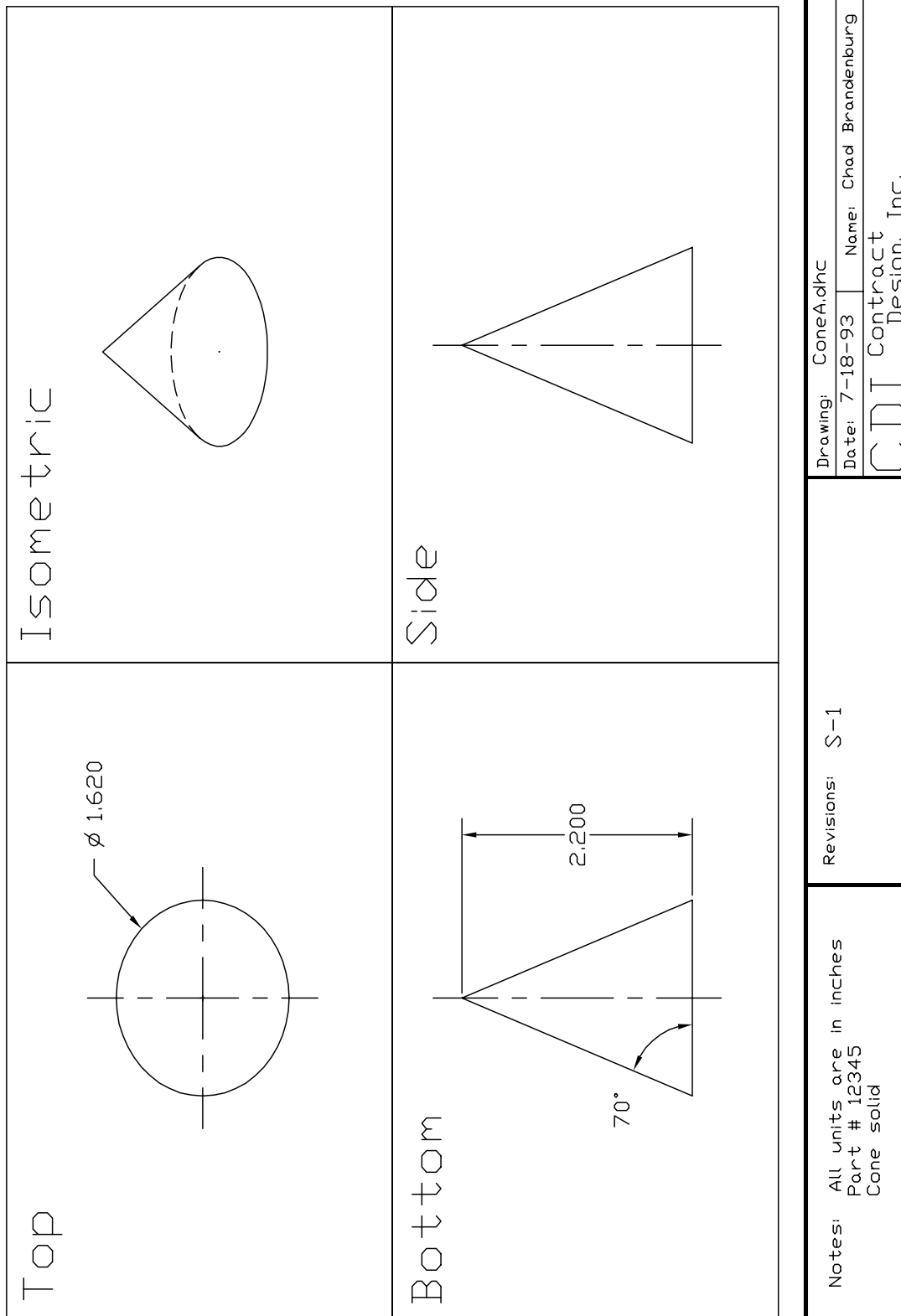


Figure 2 - Cone A (single)

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.10 Test case 210

Test case summary:

Test case 210 is designed to test the ability to define an Item of type Part, its Item_version with production type Made_in_house, Item_definition which is of type Designed_item, Part_definition whose life cycle stage is Final_part_definition, Shape_definition which is of type Part_shape_definition, its Representation_element which in this case is Surface_representation.

6.10.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 10 - Application elements for case 210

Id	V	Application Element	Value	Req
@1035		Feature	#9506	M
@1037		Feature.feature_name	#9506,'Widget'	S
@1038		Feature to Feature_property (<role description>)	<not_present>	M
@1042		Feature to Shape_definition (<role description>)	@3244.2	M
@1044		Item_definition to Feature (<inverse role>)	<not_present>	M
@1419		Item	#5	M
@1420		Item.item_description	#5,'Block with channel'	S
@1421		Item.item_name	#5,'WidgetA'	S
@1422		Item.item_number	#5,'11116'	S

Table 10 - Application elements for case 210 (continued)

Id	V	Application Element	Value	Req
@1425		Item to Item_classification (<role description>)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (<role description>)	@1724.1,@1724.2	M
@1478.1		Item_classification	#15	M
@1479		Item_classification.classification_description	#15,"	S
@1480		Item_classification.classification_identification	#15,'part'	S
@1481		Item_classification.classification_name	#15,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@1478.2		Item_classification	#18	M
@1479		Item_classification.classification_description	#18,"	S
@1480		Item_classification.classification_identification	#18,'part definition'	S
@1481		Item_classification.classification_name	#18,'part definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@1478.3		Item_classification	#19	M
@1479		Item_classification.classification_description	#19,"	S
@1480		Item_classification.classification_identification	#19,'internal'	S
@1481		Item_classification.classification_name	#19,'internal'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@2202		Part	#5	S
@382.1		Designed_item	#11	M
@383		Designed_item.creation_date_and_time	#20,#20	S

Table 10 - Application elements for case 210 (continued)

Id	V	Application Element	Value	Req
@384		Designed_item.data_exchange_history	(#41,#41, #41,#41)	S
@385		Designed_item.data_ownership	#24,#24	S
@386		Designed_item.designer	#29,#29	S
@382.2		Designed_item	#45	M
@387		Designed_item.generating_system_information	#31,'SuperSystem'	S
@388		Designed_item.media_requirements	#32,#32	S
@925		External_item_reference	#45	M
@926		External_item_reference.manual_reference_description	#45	S
@927		External_item_reference.name	#5,'WidgetA'	S
@928		External_item_reference.needed_modifications	#45,'generating system information'	S
@1204.1		Final_part_definition	#11	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1204.2		Final_part_definition	#45	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1366.1		In_process_part_definition	#11	S
@1367		In_process_part_definition to Process_operation (<role description>)	<not_present>	M
@1366.2		In_process_part_definition	#45	S
@2252.1		Part_definition	#11	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@2252.2		Part_definition	#45	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1667		Item_definition_relationship	#41	M

Table 10 - Application elements for case 210 (continued)

Id	V	Application Element	Value	Req
@1668		Item_definition_relationship.relationship_description	#41,'none'	S
@1669		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1672		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1724.1		Item_version	#13	M
@1725		Item_version.approval	#42,#42	S
@1726		Item_version.approval_status	#44,#44	S
@1727		Item_version.description	#13,'Block with channel'	S
@1728		Item_version.item_version_identification	#13,'11116-1'	S
@1729		Item_version.revision_date_and_time	#20,#20	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@1724.2		Item_version	#16	M
@1727		Item_version.description	#16,'Organization TBL'	S
@1728		Item_version.item_version_identification	#16,'9854'	S
@1730		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@706	*	Dimensional_representation	#9510	S
@707		Dimensional_representation to Dimension_tolerance_range (<role description>)	<not_present>	M
@710		Dimensional_representation to Dimension_tolerance_range (<role description>)	<not_present>	M
@825	*	Distance_dimension	#9507	S
@1785	*	Linear_distance_dimension	#9507,#9507	S
@2780.1	*	Position_orientation_representation	#9481	S
@2780.2	*	Position_orientation_representation	#9501	S
@2780.3	*	Position_orientation_representation	#9510	S
@3135.1	*	Representation_element	#9481	S

Table 10 - Application elements for case 210 (continued)

Id	V	Application Element	Value	Req
@3136		Representation_element to Shape_definition (<role description>)	<not_present>	M
@3135.2		Representation_element	#9501	S
@3137		Representation_element to Shape_definition (<role description>)	@3244.1	M
@3135.3		Representation_element	#9510	S
@3136		Representation_element to Shape_definition (<role description>)	<not_present>	M
@3766		Surface_representation	#9481,#9481	S
@3244.1		Shape_definition	#9500,#9500	M
@3245		Shape_definition.shape_description	#9500,'Shape of Block with Channel'	S
@3247		Shape_definition to Shape_definition_-relationship (<role description>)	@3322	M
@3250		Shape_definition to Shape_definition_-relationship (<role description>)	@3322	M
@3252		Feature to Shape_definition (<inverse role>)	<not_present>	M
@3255		Item_definition to Shape_definition (<inverse role>)	<not_present>	M
@3258		Assembly_component_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3261		Input_item_die_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3264		Mating_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3268		Representation_element to Shape_definition (<inverse role>)	@3135.2	M
@3270		Coincidence_defaults to Shape_definition (<inverse role>)	<not_present>	M
@3244.2		Shape_definition	#9506,#9506	M
@3245		Shape_definition.shape_description	#9506,'Shape of widget'	S
@3247		Shape_definition to Shape_definition_-relationship (<role description>)	@3322	M
@3250		Shape_definition to Shape_definition_-relationship (<role description>)	@3322	M

Table 10 - Application elements for case 210 (concluded)

Id	V	Application Element	Value	Req
@3253		Feature to Shape_definition (<inverse role>)	@1035	M
@3255		Item_definition to Shape_definition (<inverse role>)	<not_present>	M
@3258		Assembly_component_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3261		Input_item_die_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3264		Mating_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3267		Representation_element to Shape_definition (<inverse role>)	<not_present>	M
@3270		Coincidence_defaults to Shape_definition (<inverse role>)	<not_present>	M
@3322		Shape_definition_relationship	#9507	M
@3323		Shape_definition_relationship.relationship_description	#9507,'Location'	S
@3326		Shape_definition to Shape_definition_relationship (<inverse role>)	@3244.1,@3244.1,@3244.2,@3244.2	M
@3329		Shape_definition to Shape_definition_relationship (<inverse role>)	@3244.1,@3244.1,@3244.2,@3244.2	M
@227		Coincidence_defaults	#9471	M
@228		Coincidence_defaults.position	#9043,#9043	S
@230		Coincidence_defaults to Shape_definition (<role description>)	<not_present>	M

Figure 3 is a pictorial depiction, using common draughting conventions and terminology, of the shape represented in this test case. The non-geometric elements (annotations etc.) in the figure are present to aid understanding and do not form a part of the shape intended for instantiation. All linear dimensions are in mm.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

The following specific verdict criteria apply:

VC1: The model realized by the IUT generally correspond in shape to the model represented in figure 3.

VC2: The part represented by the model can be built from a standard metal stock of square cross-section with side: 200mm

VC3: This model have 8 distinct faces.

VC4: The area of the largest face in this model is 400.0 sq mm

6.10.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim818, aim819, aim825, aim224, aim311, aim599, aim600, aim622, aim624, aim625, aim603, aim605, aim844, aim845, aim849, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim500, aim501, aim850, aim851, aim855, aim557, aim348, aim349, aim793, aim794, aim799, aim49, aim59, aim836, aim837, aim842, aim503, aim858, aim859, aim862, aim765, aim766, aim767, aim614, aim615, aim443, aim880, aim892, aim917, aim921, aim986, aim988, aim346, aim225, aim226, aim1036, aim1032, aim445, aim70, aim71, aim560, aim357, aim358, aim509, aim510, aim360, aim362, aim377, aim378, aim37, aim38, aim40, aim496, aim498, aim863, aim865, aim867, aim396, aim414, aim416, aim456, aim457, aim609, aim610, aim630, aim632, aim316, aim317, aim778, aim779, aim338, aim339, aim463, aim342

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

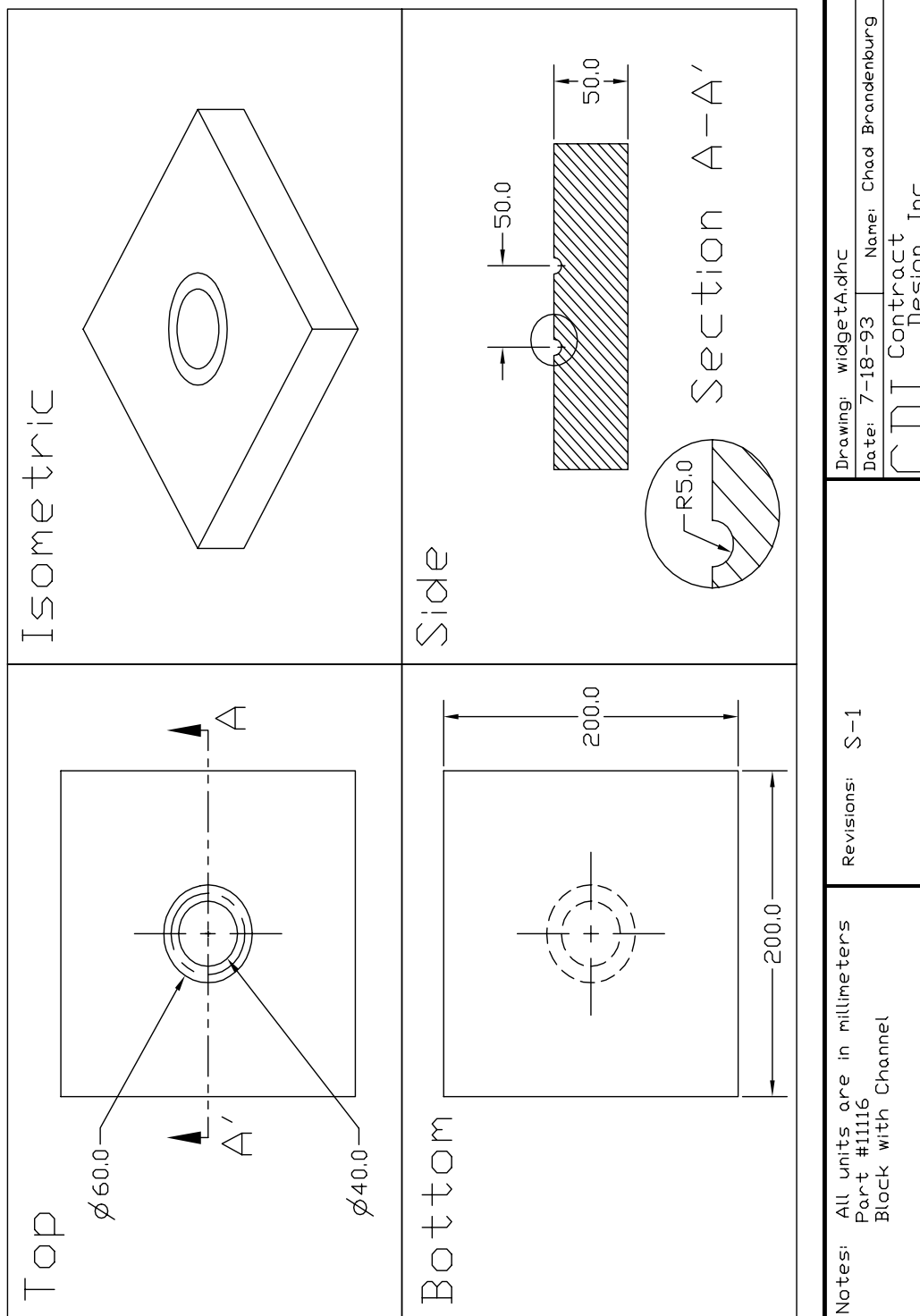


Figure 3 - Widget A (single)

6.11 Test case 220

Test case summary:

Test case 220 is designed to test the ability to define an Item of type Part, its Item_version with production type Made_in_house, Item_definition which is of type Designed_item, Part_definition whose life cycle stage is Final_part_definition, Shape_definition which is of type Part_shape_definition, its Representation_element which in this case is Solid_representation.

6.11.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 11 - Application elements for case 220

Id	V	Application Elements	Value	Req
@1419		Item	#5	M
@1420		Item.item_description	#5,'Flat Ring Gasket'	S
@1421		Item.item_name	#5,'Flat Ring Gasket'	S
@1422		Item.item_number	#5,'11116'	S
@1425		Item to Item_classification (<role description>)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (<role description>)	@1724.1,@1724.2,@1724.3	M
@1478.1		Item_classification	#15	M
@1479		Item_classification.classification_description	#15,"	S
@1480		Item_classification.classification_identification	#15,'part'	S
@1481		Item_classification.classification_name	#15,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M

Table 11 - Application elements for case 220 (continued)

Id	V	Application Elements	Value	Req
@1489		Item to Item_classification (<inverse role>)	@1419	M
@1478.2		Item_classification	#18	M
@1479		Item_classification.classification_description	#18,"	S
@1480		Item_classification.classification_identification	#18,'part definition'	S
@1481		Item_classification.classification_name	#18,'part definition'	S
@1482		Item_classification to Item_classification - relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification - relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@1478.3		Item_classification	#19	M
@1479		Item_classification.classification_description	#19,"	S
@1480		Item_classification.classification_identification	#19,'internal'	S
@1481		Item_classification.classification_name	#19,'internal'	S
@1482		Item_classification to Item_classification - relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification - relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@2202		Part	#5	S
@382.1		Designed_item	#11	M
@383		Designed_item.creation_date_and_time	#20,#20	S
@384		Designed_item.data_exchange_history	(#41,#41, #41,#41)	S
@385		Designed_item.data_ownership	#24,#24	S
@386		Designed_item.designer	#29,#29	S
@382.2		Designed_item	#45	M
@387		Designed_item.generating_system_information	#31,'SuperSystem'	S
@388		Designed_item.media_requirements	#32,#32	S
@925		External_item_reference	#45	M
@926		External_item_reference.manual_reference_description	#45	S
@927		External_item_reference.name	#5,'Flat Ring Gasket'	S

Table 11 - Application elements for case 220 (continued)

Id	V	Application Elements	Value	Req
@928		External_item_reference.needed_modifications	#45, 'generating system information'	S
@1204.1		Final_part_definition	#11	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1204.2		Final_part_definition	#45	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1366.1		In_process_part_definition	#11	S
@1367		In_process_part_definition to Process_operation (<role description>)	<not_present>	M
@1366.2		In_process_part_definition	#45	S
@1367		In_process_part_definition to Process_operation (<role description>)	<not_present>	M
@2252.1		Part_definition	#11	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@2252.2		Part_definition	#45	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1667		Item_definition_relationship	#41	M
@1668		Item_definition_relationship.relationship_description	#41, 'none'	S
@1669		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1672		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1724.1		Item_version	#4	M
@1727		Item_version.description	#4, 'Flat Ring Gasket'	S
@1728		Item_version.item_version_identification	#4, 'S-1'	S

Table 11 - Application elements for case 220 (continued)

Id	V	Application Elements	Value	Req
@1729		Item_version.revision_date_and_time	#20,#20	S
@1731		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@1724.2		Item_version	#13	M
@1725		Item_version.approval	#42,#42	S
@1726		Item_version.approval_status	#44,#44	S
@1727		Item_version.description	#13,'Flat Ring Gasket'	S
@1728		Item_version.item_version_identification	#13,'11116-1'	S
@1731		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@1724.3		Item_version	#16	M
@1727		Item_version.description	#16,'Organization TBL'	S
@1728		Item_version.item_version_identification	#16,'9854'	S
@1730		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@2780		Position_orientation_representation	#9240	S
@3135		Representation_element	#9240	S
@3136		Representation_element to Shape_definition (<role description>)	<not_present>	M
@3549	*	Solid_representation	#9240,#9240	M
@3550	*	Solid_representation.B_rep	#9240	S
@3244		Shape_definition	#9260,#9260	M
@3245		Shape_definition.shape_description	#9260,'Shape of Flat Ring Gasket'	S
@3246		Shape_definition to Shape_definition_relationship (<role description>)	<not_present>	M

Table 11 - Application elements for case 220 (concluded)

Id	V	Application Elements	Value	Req
@3249		Shape_definition to Shape_definition_-relationship (<role description>)	<not_present>	M
@3252		Feature to Shape_definition (<inverse role>)	<not_present>	M
@3255		Item_definition to Shape_definition (<inverse role>)	<not_present>	M
@3258		Assembly_component_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3261		Input_item_die_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3264		Mating_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3267		Representation_element to Shape_definition (<inverse role>)	<not_present>	M
@3270		Coincidence_defaults to Shape_definition (<inverse role>)	<not_present>	M
@227		Coincidence_defaults	#9230	M
@228		Coincidence_defaults.position	#9043,#9043	S
@230		Coincidence_defaults to Shape_definition (<role description>)	<not_present>	M

Figure 4 is a pictorial depiction, using common draughting conventions and terminology, of the shape represented in this test case. The non-geometric elements (annotations etc.) in the figure are present to aid understanding and do not form a part of the shape intended for instantiation. All linear dimensions are in mm.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

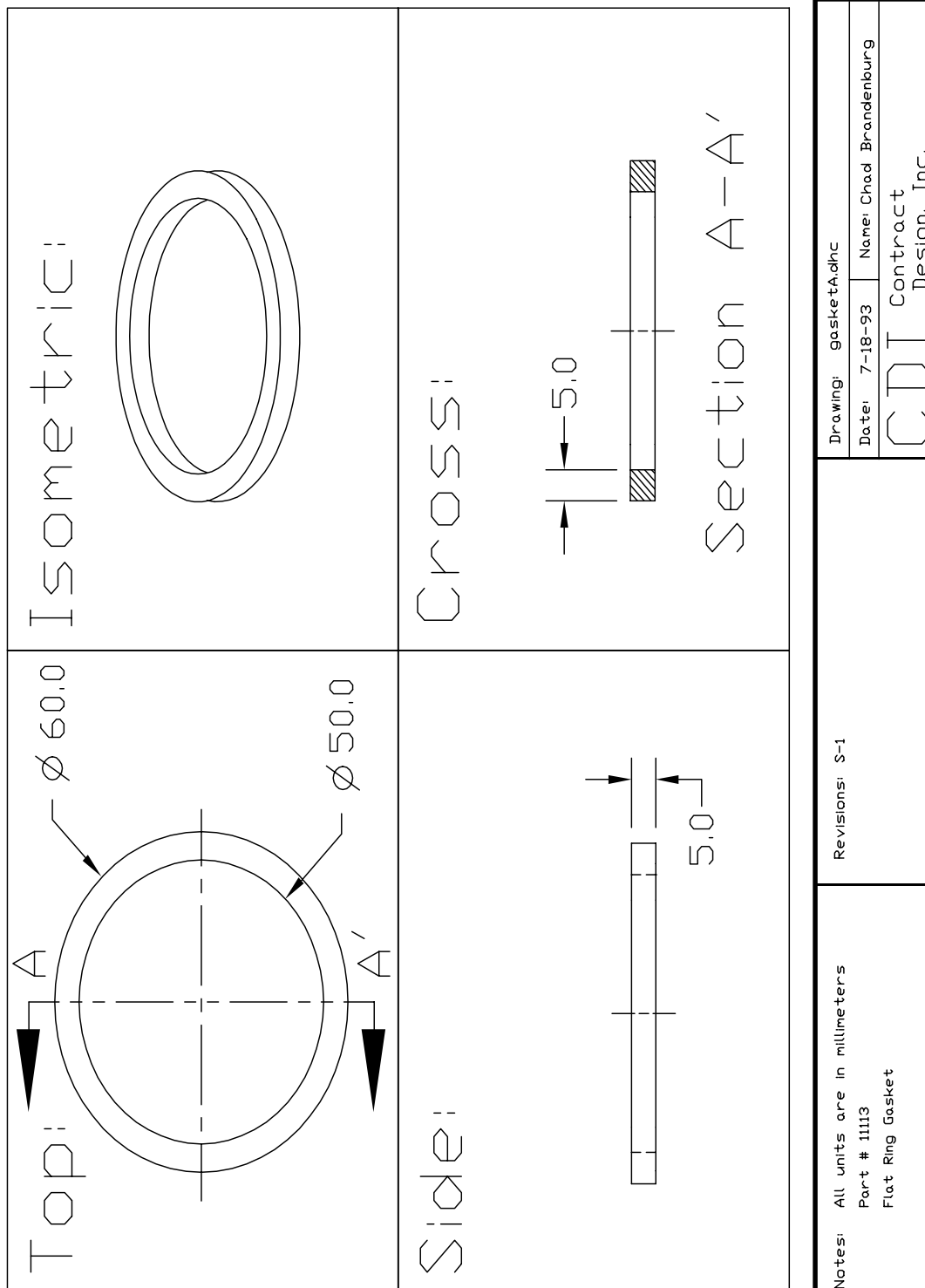


Figure 4 - Gasket A

The following specific verdict criteria apply:

VC1: The model realized by the IUT generally correspond in shape to the model represented in figure 4.

VC2: The radius of the central hole of the gasket is 25.0 mm

VC3: The thickness of the gasket is 5.0 mm

VC4: The outer diameter of the gasket is 60.0 mm

6.11.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim818, aim819, aim825, aim224, aim311, aim599, aim600, aim622, aim624, aim625, aim603, aim605, aim844, aim845, aim849, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim500, aim501, aim850, aim851, aim855, aim557, aim348, aim349, aim793, aim794, aim799, aim49, aim59, aim836, aim837, aim842, aim503, aim858, aim859, aim862, aim765, aim766, aim767, aim614, aim615, aim443, aim880, aim892, aim986, aim988, aim346, aim225, aim226, aim70, aim71, aim560, aim245, aim247, aim1036, aim357, aim358, aim509, aim510, aim360, aim361, aim377, aim379, aim37, aim39, aim41, aim308, aim248, aim250, aim455, aim396, aim397, aim414, aim415, aim34, aim35, aim778, aim609, aim341, aim610

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.12 Test case 230

Test case summary:

Test case 230 is designed to test the ability to define an Item of type Part, its Item_version with production type Made_in_house, Item_definition which is of type Designed_item, Part_definition whose life cycle stage is Final_part_definition, Shape_definition which is of type Part_shape_definition, its Representation_element which in this case is Solid_representation.

6.12.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2 (V), identify the Application Element purposes covered by this test case.

Input specification:**Table 12 - Application elements for case 230**

Id	V	Application Element	Value	Req
@1419		Item	#5	M
@1420		Item.item_description	#5,'Ring Gasket-Flat with Holes'	S
@1421		Item.item_name	#5,'gasketB'	S
@1422		Item.item_number	#5,'12345'	S
@1425		Item to Item_classification (<role description>)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (<role description>)	@1724.1,@1724.2,@1724.3	M
@1478.1		Item_classification	#15	M
@1479		Item_classification.classification_description	#15,"	S
@1480		Item_classification.classification_identification	#15,'part'	S
@1481		Item_classification.classification_name	#15,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@1478.2		Item_classification	#18	M
@1479		Item_classification.classification_description	#18,"	S
@1480		Item_classification.classification_identification	#18,'part definition'	S
@1481		Item_classification.classification_name	#18,'part definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M

Table 12 - Application elements for case 230 (continued)

Id	V	Application Element	Value	Req
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@1478.3		Item_classification	#19	M
@1479		Item_classification.classification_description	#19,"	S
@1480		Item_classification.classification_identification	#19,'internal'	S
@1481		Item_classification.classification_name	#19,'internal'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419	M
@2202		Part	#5	S
@382.1		Designed_item	#11	M
@383		Designed_item.creation_date_and_time	#20,#20	S
@384		Designed_item.data_exchange_history	(#41,#41, #41,#41)	S
@385		Designed_item.data_ownership	#24,#24	S
@386		Designed_item.designer	#29,#29	S
@382.2		Designed_item	#45	M
@387		Designed_item.generating_system_information	#31,'SuperSystem'	S
@388		Designed_item.media_requirements	#32,#32	S
@925		External_item_reference	#45	M
@926		External_item_reference.manual_reference_description	#45	S
@927		External_item_reference.name	#5,'gasketB'	S
@928		External_item_reference.needed_modifications	#45,'generating system information'	S
@1204.1		Final_part_definition	#11	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1204.2		Final_part_definition	#45	S

Table 12 - Application elements for case 230 (continued)

Id	V	Application Element	Value	Re q
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1366.1		In_process_part_definition	#11	S
@1367		In_process_part_definition to Process_operation (<role description>)	<not_present>	M
@1366.2		In_process_part_definition	#45	S
@1367		In_process_part_definition to Process_operation (<role description>)	<not_present>	M
@2252.1		Part_definition	#11	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@2252.2		Part_definition	#45	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1667		Item_definition_relationship	#41	M
@1668		Item_definition_relationship.relationship_description	#41,'none'	S
@1669		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1672		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1724.1		Item_version	#4	M
@1727		Item_version.description	#4,'Ring Gasket-Flat with Holes'	S
@1728		Item_version.item_version_identification	#4,'S-1'	S
@1729		Item_version.revision_date_and_time	#20,#20	S
@1731		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@1724.2		Item_version	#13	M
@1725		Item_version.approval	#42,#42	S
@1726		Item_version.approval_status	#44,#44	S
@1727		Item_version.description	#13,'Ring Gasket-Flat with Holes'	S
@1728		Item_version.item_version_identification	#13,'11113-1'	S

Table 12 - Application elements for case 230 (continued)

Id	V	Application Element	Value	Req
@1731		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@1724.3		Item_version	#16	M
@1727		Item_version.description	#16,'Kate & Company'	S
@1728		Item_version.item_version_identification	#16,'9004'	S
@1730		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@2780		Position_orientation_representation	#9370	S
@3135		Representation_element	#9370	S
@3136		Representation_element to Shape_definition (<role description>)	<not_present>	M
@3549		Solid_representation	#9370,#9370	M
@3550		Solid_representation.B_rep	#9370	S
@3244		Shape_definition	#9390,#9390	M
@3245		Shape_definition.shape_description	#9390,'Shape of Flat Ring Gasket with Holes '	S
@3246		Shape_definition to Shape_definition_relationship (<role description>)	<not_present>	M
@3249		Shape_definition to Shape_definition_relationship (<role description>)	<not_present>	M
@3252		Feature to Shape_definition (<inverse role>)	<not_present>	M
@3255		Item_definition to Shape_definition (<inverse role>)	<not_present>	M
@3258		Assembly_component_relationship to Shape_definition (<inverse role>)	<not_present>	M

Table 12 - Application elements for case 230 (concluded)

Id	V	Application Element	Value	Req
@3261		Input_item_die_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3264		Mating_relationship to Shape_definition (<inverse role>)	<not_present>	M
@3267		Representation_element to Shape_definition (<inverse role>)	<not_present>	M
@3270		Coincidence_defaults to Shape_definition (<inverse role>)	<not_present>	M
@227		Coincidence_defaults	#9360	M
@228		Coincidence_defaults.position	#9043,#9043	S
@230		Coincidence_defaults to Shape_definition (<role description>)	<not_present>	M

Verdict criteria:

Figure 5 is a pictorial depiction, using common draughting conventions and terminology, of the shape represented in this test case. The non-geometric elements (annotations etc.) in the figure are present to aid understanding and do not form a part of the shape intended for instantiation. All linear dimensions are in mm.

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

The following specific verdict criteria apply:

VC1: The model realized by the IUT generally correspond in shape to the model represented in figure 5.

VC1: The radius of the central hole of the gasket is 50.0 mm

VC3: The thickness of the gasket is 5.0 mm

VC4: Excluding the central hole there are 4 holes present on the body

VC5: The 4 holes in the gasket have a conical profile

VC6: At their narrowest points, the diameter of the 4 holes in the gasket are 5.0mm id diameter VC7:

The outer diameter of the gasket is 80.0 mm

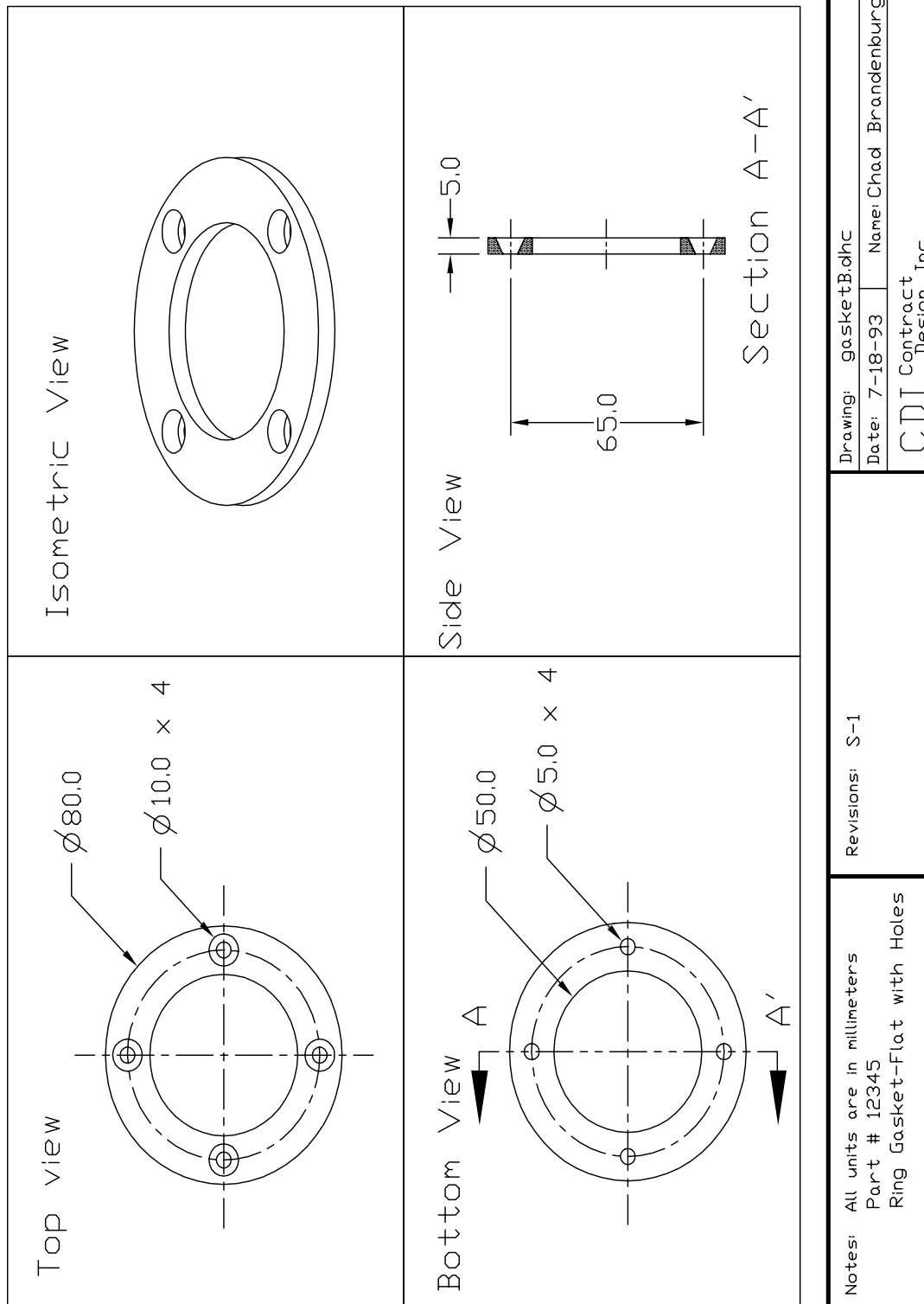


Figure 5 - Gasket B

6.12.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim818, aim819, aim825, aim224, aim311, aim599, aim600, aim622, aim624, aim625, aim603, aim605, aim844, aim845, aim849, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim500, aim501, aim850, aim851, aim855, aim557, aim348, aim349, aim793, aim794, aim799, aim49, aim59, aim836, aim837, aim842, aim503, aim858, aim859, aim862, aim765, aim766, aim767, aim614, aim615, aim986, aim988, aim225, aim226, aim346, aim70, aim71, aim560, aim245, aim247, aim1036, aim360, aim361, aim357, aim358, aim509, aim510, aim377, aim379, aim308, aim37, aim39, aim40, aim248, aim279, aim396, aim397, aim414, aim415, aim34, aim778, aim609, aim610, aim455, aim341

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.13 Test case 250

Test case summary:

Test case 250 is designed to test the ability to define a Part_process_plan and its Process_operation.

6.13.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 13 - Application elements for case 250

Id	V	Application Elements	Value	Re q
@2421	*	Part_process_plan	#1	M
@2422	*	Part_process_plan.approval	#6,#6	S
@2423	*	Part_process_plan.approval_status	#5,#5	S
@2424	*	Part_process_plan.creation_date_and_time	(#7,#7, #29,#29)	S
@2425	*	Part_process_plan.data_ownership	#10,#10	S
@2426	*	Part_process_plan.generating_system_in- information	#15,#15	S
@2427	*	Part_process_plan.part_process_version_in- identification	#18,'Version 2'	S
@2428	*	Part_process_plan.plan_status	#4,'1'	S
@2429	*	Part_process_plan.planner	#21,#21	S
@2430	*	Part_process_plan.production_rate	#23,#23	S
@2431	*	Part_process_plan.proprietary_security_usage_in- information	#26,#26	S
@2432	*	Part_process_plan.review_date_and_time	#29,#29	S
@2433	*	Part_process_plan.version_description	#18,'Version 2'	S
@2434		Part_process_plan to Part_process_plan (<role description>)	<not_present>	M
@2437		Part_process_plan to Part_process_plan_in- version_relationship (<role description>)	<not_present>	M
@2440		Part_process_plan to Part_process_plan_in- version_relationship (<role description>)	<not_present>	M
@2443		Part_process_plan to Plant_constraint (<role de- scription>)	<not_present>	M
@2446	*	Part_process_plan to Process_operation (defines a series of)	@2897	M
@2449		Final_part_definition to Part_process_plan (<inverse role>)	<not_present>	M
@2452		Part_process_plan to Part_process_plan (<inverse role>)	<not_present>	M
@2455		Part_process_plan_template to Part_process_in- plan (<inverse role>)	<not_present>	M
@2897	*	Process_operation	#32	M

Table 13 - Application elements for case 250 (concluded)

Id	V	Application Elements	Value	Req
@2898	*	Process_operation.operation_description	#32,'Cutoff rough blanks'	S
@2899	*	Process_operation.operation_sequence_number	#35,'1'	S
@2900	*	Process_operation.reference_specifications	#36,#36	S
@2901	*	Process_operation.required_shut_height	#39,#39	S
@2902	*	Process_operation.required_stamping_force	#39,#39	S
@2903	*	Process_operation.scrap_percentage	#40,#40	S
@2904	*	Process_operation.units_per_operation	#48,#48	S
@2905		Process_operation to Process_operation (<role description>)	<not_present>	M
@2908		Process_operation to Scrap_definition (<role description>)	<not_present>	M
@2911		Process_operation to Scrap_definition (<role description>)	<not_present>	M
@2914		Die_definition to Process_operation (<inverse role>)	<not_present>	M
@2917		In_process_part_definition to Process_operation (<inverse role>)	<not_present>	M
@2920	*	Part_process_plan to Process_operation (<inverse role>)	@2421	M
@2923		Press_definition to Process_operation (<inverse role>)	<not_present>	M
@2926		Process_operation to Process_operation (<inverse role>)	<not_present>	M
@2780		Position_orientation_representation	#45	S

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.13.2 Postprocessor

Test purposes covered:

aim585, aim7, aim8, aim49, aim59, aim793, aim794, aim797, aim818, aim822, aim224, aim311, aim844, aim845, aim848, aim555, aim556, aim541, aim542, aim500, aim501, aim828, aim829, aim348, aim349, aim16, aim463, aim464, aim286, aim341, aim858, aim859, aim861, aim765, aim766, aim607, aim768, aim10, aim12, aim15, aim727, aim729, aim731, aim730, aim737, aim739, aim741, aim18, aim19, aim23

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.14 Test case 260

Test case summary:

Test case 260 is designed to test the ability to define two Part_process_plans and relationship between them using Part_process_plan_version_relationship

6.14.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 14 - Application elements for case 260

Id	V	Application Elements	Value	Req
@2421.1		Part_process_plan	#1	M
@2422		Part_process_plan.approval	#6,#6	S
@2423		Part_process_plan.approval_status	#5,#5	S
@2424		Part_process_plan.creation_date_and_time	(#7,#7, #29,#29, #86,#86)	S
@2425		Part_process_plan.data_ownership	#10,#10	S
@2426		Part_process_plan.generating_system_information	#15,#15	S
@2427		Part_process_plan.part_process_version_identification	#18,#18	S
@2428		Part_process_plan.plan_status	#4,'1'	S
@2429		Part_process_plan.planner	#21,#21	S
@2430		Part_process_plan.production_rate	#23,#23	S
@2431		Part_process_plan.proprietary_security_usage_information	#26,#26	S
@2432		Part_process_plan.review_date_and_time	(#7,#7, #29,#29, #86,#86)	S
@2434		Part_process_plan to Part_process_plan (<role description>)	<not_present>	M
@2437	*	Part_process_plan to Part_process_plan_version_relationship (is previous part_process_plan in)	@2560	M
@2440		Part_process_plan to Part_process_plan_version_relationship (<role description>)	(<no_present>)	M
@2443		Part_process_plan to Plant_constraint (<role description>)	<not_present>	M
@2446		Part_process_plan to Process_operation (<role description>)	<not_present>	M
@2449		Final_part_definition to Part_process_plan (<inverse role>)	<not_present>	M
@2452		Part_process_plan to Part_process_plan (<inverse role>)	<not_present>	M

Table 14 - Application elements for case 260 (continued)

Id	V	Application Elements	Value	Req
@2455		Part_process_plan_template to Part_process_plan (<inverse role>)	<not_present>	M
@2421.2		Part_process_plan	#70	M
@2422		Part_process_plan.approval	#74,#74	S
@2423		Part_process_plan.approval_status	#73,#73	S
@2424		Part_process_plan.creation_date_and_time	#75,#75	S
@2425		Part_process_plan.data_ownership	#78,#78	S
@2426		Part_process_plan.generating_system_information	#79,#79	S
@2427		Part_process_plan.part_process_version_identification	#80,'version 2'	S
@2428		Part_process_plan.plan_status	#72,'1'	S
@2429		Part_process_plan.planner	#83,#83	S
@2430		Part_process_plan.production_rate	#84,#84	S
@2431		Part_process_plan.proprietary_security_usage_information	#85,#85	S
@2432		Part_process_plan.review_date_and_time	#75,#75	S
@2434		Part_process_plan to Part_process_plan (<role description>)	<not_present>	M
@2437	*	Part_process_plan to Part_process_plan_version_relationship (is next part_process_plan in)	@2560	M
@2440		Part_process_plan to Part_process_plan_version_relationship (<role description>)	<not_present>	M
@2443		Part_process_plan to Plant_constraint (<role description>)	<not_present>	M
@2446		Part_process_plan to Process_operation (<role description>)	<not_present>	M
@2449		Final_part_definition to Part_process_plan (<inverse role>)	<not_present>	M
@2452		Part_process_plan to Part_process_plan (<inverse role>)	<not_present>	M
@2455		Part_process_plan_template to Part_process_plan (<inverse role>)	<not_present>	M
@2560	*	Part_process_plan_version_relationship	#99	M

Table 14 - Application elements for case 260 (continued)

Id	V	Application Elements	Value	Req
@2561	*	Part_process_plan_version_relationship.revision_reason	#99,'Process Plan B is based upon Process Plan A'	S
@2562	*	Part_process_plan to Part_process_plan_version_relationship (<inverse role>)	@2421.1	M
@2565	*	Part_process_plan to Part_process_plan_version_relationship (<inverse role>)	@2421.2	M
@2897		Process_operation	#32	M
@2898		Process_operation.operation_description	#32,'Cutoff rough blanks'	S
@2899		Process_operation.operation_sequence_number	#35,'1'	S
@2900		Process_operation.reference_specification	#36,#36	S
@2901		Process_operation.required_shut_height	#39,#39	S
@2902		Process_operation.required_stamping_force	#39,#39	S
@2903		Process_operation.scrap_percentage	#48,#48	S
@2904		Process_operation.units_per_operation	#40,#40	S
@2905		Process_operation to Process_operation (<role description>)	<not_present>	M
@2908		Process_operation to Scrap_definition (<role description>)	<not_present>	M
@2911		Process_operation to Scrap_definition (<role description>)	<not_present>	M
@2914		Die_definition to Process_operation (<inverse role>)	<not_present>	M
@2917		In_process_part_definition to Process_operation (<inverse role>)	<not_present>	M
@2920		Part_process_plan to Process_operation (<inverse role>)	@2421.1	M
@2923		Press_definition to Process_operation (<inverse role>)	<not_present>	M
@2926		Process_operation to Process_operation (<inverse role>)	<not_present>	M
@2780.1		Position_orientation_representation	#45	S
@2780.2		Position_orientation_representation	#90	S
@2780.3		Position_orientation_representation	#94	S

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.14.2 Postprocessor

Test purposes covered:

aim585, aim7, aim8, aim49, aim59, aim793, aim794, aim797, aim818, aim822, aim224, aim311, aim844, aim845, aim848, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim500, aim501, aim828, aim829, aim833, aim348, aim349, aim16, aim463, aim464, aim286, aim341, aim858, aim859, aim861, aim765, aim766, aim607, aim768, aim10, aim12, aim15, aim727, aim729, aim731, aim730, aim737, aim739, aim741, aim18, aim19, aim23

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.15 Test case 270

Test case summary:

Test case 270 is designed to test the ability to define a Part_process_plan with one Process_operation, A Press_definition used for Process_operation, A Die_definition_constraint which is a Press_definition and a Plant_constraint that constrains a Part_process_plan.

6.15.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2 (V), identify the Application Element purposes covered by this test case.

Input specification:

Table 15 - Application elements for case 270

Id	V	Application Elements	Value	Req
@488		Die	#82	S
@1419		Item	#82	M
@1420		Item.item_description	#82,'Double Draw Die Right & Left'	S
@1421		Item.item_name	#82,'Double Draw Die Right & Left'	S
@1422		Item.item_number	#82,'4092056'	S
@1424		Item to Item_classification (is classified by)	@1478	M
@1427		Item to Item_version (is versioned by)	@1724	M
@1478		Item_classification	#87	M
@1479		Item_classification.classification_description	#87,"	S
@1480		Item_classification.classification_identification	#87,'die'	S
@1481		Item_classification.classification_name	#87,'die'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419	M
@1724		Item_version	#81	M
@1725		Item_version.approval	#91	M

Table 15 - Application elements for case 270 (continued)

Id	V	Application Elements	Value	Req
@1726		Item_version.approval_status	#93	M
@1727		Item_version.description	#81,'Double Draw Die Right & Left'	S
@1728		Item_version.item_version_identification	#81,'1'	S
@1728		Item_version.review_date_and_time	#94,#94	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419	M
@2421		Part_process_plan	#1	M
@2422		Part_process_plan.approval	#6,#6	S
@2423		Part_process_plan.approval_status	#5,#5	S
@2424		Part_process_plan.creation_date_and_time	(#7,#7, #29,#29)	S
@2425		Part_process_plan.data_ownership	#10,#10	S
@2426		Part_process_plan.generating_system_information	#15,#15	S
@2427		Part_process_plan.part_process_version_identification	#18,'version 2'	S
@2428		Part_process_plan.plan_status	#4,'1'	S
@2429		Part_process_plan.planner	#21,#21	S
@2431		Part_process_plan.proprietary_security_usage_information	#26,#26	S
@2432		Part_process_plan.review_date_and_time	#29,#29	S
@2433		Part_process_plan.version_description	#18,'version 2')	S
@2434		Part_process_plan to Part_process_plan (<role description>)	<not_present>	M
@2437		Part_process_plan to Part_process_plan_version_relationship (<role description>)	<not_present>	M
@2440		Part_process_plan to Part_process_plan_version_relationship (<role description>)	<not_present>	M
@2443		Part_process_plan to Plant_constraint (is constrained by)	@2723	M
@2446		Part_process_plan to Process_operation (defines a series of)	@2897	M

Table 15 - Application elements for case 270 (continued)

Id	V	Application Elements	Value	Req
@2449		Final_part_definition to Part_process_plan (<inverse role>)	<not_present>	M
@2452		Part_process_plan to Part_process_plan (<inverse role>)	<not_present>	M
@2455		Part_process_plan_template to Part_process_plan (<inverse role>)	<not_present>	M
@2723	*	Plant_constraint	#39	M
@2724	*	Plant_constraint.constraint_description	#39,'required shut height 59'	S
@2725	*	Plant_constraint.constraint_type	(#55,'press force', #58,'press line', #59,'press location', #60,'shut height')	S
@2726	*	Plant_constraint.constraint_value	#72,#72	S
@2727	*	Plant_constraint.plant_identification	#75,#75	S
@2728	*	Part_process_plan to Plant_constraint (constraints)	@2421	M
@2830	*	Press_definition	#68	M
@2831	*	Press_definition.automation_equipment	#53,#53	M
@2832	*	Press_definition.press_force	#98,#98	M
@2833	*	Press_definition.press_identification	#56,'SU4-1000-130-96'	M
@2834	*	Press_definition.press_line	#58,#58	M
@2835	*	Press_definition.press_location	#59,#59	M
@2836	*	Press_definition.press_size	#102,#102	M
@2837	*	Press_definition.press_specification_reference	#61,#61	M
@2838	*	Press_definition.press_type	#56,'Transfer press D-7'	M
@2840	*	Press_definition to Press_definition (<role description>)	<not_present>	M
@2843	*	Press_definition to Process_operation (defines a press used for)	@2897	M
@2846	*	Press_definition to Press_definition (<inverse role>)	<not_present>	M
@599	*	Die_definition_constraint	#74	M
@600	*	Die_definition_constraint.constraint_description	#90,'Die weights can not exceed 10 tons due to crane capacity'	M

Table 15 - Application elements for case 270 (continued)

Id	V	Application Elements	Value	Req
@602	*	Die_definition to Die_definition_constraint(<inverse role>)	@538	M
@2897		Process_operation	#32	M
@2898		Process_operation.operation_description	#32,'Cutoff rough blanks'	S
@2899		Process_operation.operation_sequence_number	#35,'1'	S
@2900		Process_operation.reference_specification	#36,#36	S
@2901		Process_operation.required_shut_height	#39,#39	S
@2902		Process_operation.required_stamping_forces	#39,#39	S
@2903		Process_operation.scrap_percentage	#40,#40	S
@2904		Process_operation.units_per_operation	#48,#48	S
@2905		Process_operation to Process_operation (<role description>)	<not_present>	M
@2908		Process_operation to Scrap_definition (<role description>)	<not_present>	M
@2911		Process_operation to Scrap_definition (<role description>)	<not_present>	M
@2914	*	Die_definition to Process_operation (requires as tool the die defined by)	@538	M
@2917		In_process_part_definition to Process_operation (<inverse role>)	<not_present>	M
@2920		Part_process_plan to Process_operation (<inverse role>)	<not_present>	M
@2923		Press_definition to Process_operation (<inverse role>)	<not_present>	M
@2926		Process_operation to Process_operation (<inverse role>)	<not_present>	M
@2780.1		Position_orientation_representation	#45	S
@2780.2		Position_orientation_representation	#71	S
@538		Die_definition	#104	S

Table 15 - Application elements for case 270 (concluded)

Id	V	Application Elements	Value	Req
@539		Die_definition.die_function_description	#80,'Double Draw Die Rt & Lt'	S
@540		Die_definition.die_layout_specification_reference	#105,#105	M
@541		Die_definition.die_structure_specification_reference	#108,#108	M
@542		Die_definition.die_weight	#80,'Double Draw Die Rt & Lt'	M
@541		Die_definition.pattern_casting_specification	#113,#113	M
@545	*	Die_definition to Die_definition_constraint (is constrained by)	@599	M
@545	*	Die_definition to Process_operation (defines tool for)	@2897	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria).

The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

Test purposes covered:

aim585, aim7, aim8, aim49, aim59, aim793, aim794, aim797, aim818, aim819, aim822, aim224, aim311, aim844, aim845, aim848, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim500, aim501, aim828, aim829, aim833, aim348, aim349, aim16, aim463, aim464, aim465, aim487, aim286, aim341, aim858, aim859, aim861, aim765, aim766, aim607, aim768, aim10, aim12, aim15, aim727, aim729, aim731, aim730, aim737, aim739, aim741, aim18, aim19, aim23, aim746, aim749, aim751, aim586, aim587, aim599, aim600, aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim608, aim793, aim49, aim59, aim794, aim799, aim825, aim603, aim605, aim614, aim616, aim828, aim829, aim834, aim348, aim349, aim341, aim880, aim889, aim904, aim882, aim912

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

6.15.2 Postprocessor

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.16 Test case 280

Test case summary:

Test case 280 is designed to test the ability to define Item_definition_relationship which is of type Make_similar_to_relationship between two Items which are of type Part.

6.16.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input Specification:

Table 16 - Application elements for case 280

Id	V	Application Elements	Value	R e q
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Outer Panel for Hood'	S
@1421		Item.item_name	#1,'Panel- Hood Outer'	S
@1422		Item.item_number	#1,'1996003'	S
@1425		Item to Item_classification (<is classified by>)	@1478.1,@1478.3,@1478.4	M

Table 16 - Application elements for case 280 (continued)

Id	V	Application Elements	Value	R e q
@1428		Item to Item_version (<is versioned by>)	@1724.1	M
@1419.2		Item	#30	M
@1420		Item.item_description	#30,'Outer Panel for Hood'	S
@1421		Item.item_name	#30,'Panel- Hood Outer'	S
@1422		Item.item_number	#30,'1997004'	S
@1425		Item to Item_classification (<is classified by>)	@1478.2,@1478.3,@1478.4	M
@1428		Item to Item_version (<is versioned by>)	@1724.2	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'part'	S
@1481		Item_classification.classification_name	#6,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<classifies>)	@1419.1	M
@1478.2		Item_classification	#32	M
@1479		Item_classification.classification_description	#32,"	S
@1480		Item_classification.classification_identification	#32,'part'	S
@1481		Item_classification.classification_name	#32,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<classifies>)	@1419.2	M
@1478.3		Item_classification	#39	M
@1479		Item_classification.classification_description	#39,"	S
@1480		Item_classification.classification_identification	#39,'part definition'	S
@1481		Item_classification.classification_name	#39,'part definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M

Table 16 - Application elements for case 280 (continued)

Id	V	Application Elements	Value	R e q
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<classifies>)	@1419.1,@1419.2	M
@1478.4		Item_classification	#41	M
@1479		Item_classification.classification_description	#41,"	S
@1480		Item_classification.classification_identification	#41,'internal'	S
@1481		Item_classification.classification_name	#41,'internal'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<classifies>)	@1419.1,@1419.2	M
@2202.1		Part	#1	S
@2202.2		Part	#30	S
@382.1		Designed_item	#14	M
@383		Designed_item.creation_date_and_time	#42,#42	S
@384		Designed_item.data_exchange_history	(#45,#45, #45,#45)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#56,#56	S
@388		Designed_item.media_requirements	#55,#55	S
@382.2		Designed_item	#36	M
@383		Designed_item.creation_date_and_time	#58,#58	S
@384		Designed_item.data_exchange_history	(#60,#60, #60,#60)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#57,#57	S
@388		Designed_item.media_requirements	#55,#55	S
@1204.1		Final_part_definition	#14	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M

Table 16 - Application elements for case 280 (continued)

Id	V	Application Elements	Value	R e q
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1204.2		Final_part_definition	#36	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@2252.1		Part_definition	#14	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@2252.2		Part_definition	#36	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1667	*	Item_definition_relationship	#37	M
@1668	*	Item_definition_relationship.relationship_description	#37,'Part 1997004 is designed similar to Part 1996003'	S
@1669	*	Item_definition to Item_definition_relationship (<inverse role>)	@1597.1	M
@1672	*	Item_definition to Item_definition_relationship (<inverse role>)	@1597.2	M
@1885	*	Make_similar_to_relationship	#37	S
@1724.1		Item_version	#4	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#4,'Outer Panel for Hood'	S
@1728		Item_version.item_version_identification	#4,'2'	S
@1729		Item_version.revision_date_and_time	#10,#10	S
@1732		Item_version to Item_definition (is defined by)	1597.1	M
@1734		Item to Item_version (<versions>)	@1419.1	M
@1724.2		Item_version	#31	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#31,'Outer Panel for Hood'	S

Table 16 - Application elements for case 280 (continued)

Id	V	Application Elements	Value	R e q
@1728		Item_version.item_version_identification	#31,'2'	S
@1729		Item_version.revision_date_and_time	#61,#61	S
@1732		Item_version to Item_definition (is defined by)	1597.2	M
@1734		Item to Item_version (<versions>)	@1419.2	M
@1597.1		Item_definition	#14	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#76,'Design of Outer Panel hood'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	@1667	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M
@1597.2		Item_definition	#36	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#76,'Design of Outer Panel hood'	M
@1601		Item_definition.procurement_information	#19,#19	M

Table 16 - Application elements for case 280 (concluded)

Id	V	Application Elements	Value	R e q
@1602		Item_definition.proprietary_security_usage_-information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	@1667	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M
@3449	*	Similarity_relationship	#37	S

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.16.2 PostprocessorTest purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim793, aim795, aim799, aim49, aim59, aim818, aim819, aim825, aim224, aim311, aim603, aim605, aim599, aim600, aim836, aim838, aim842, aim500, aim501, aim503, aim858, aim860, aim862, aim765, aim766, aim608, aim767, aim844, aim846, aim849, aim555, aim556, aim541, aim543, aim545, aim548, aim551, aim554, aim557, aim348, aim349, aim614

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.17 Test case 290

Test case summary:

Test case 290 is designed to test the ability to define Item_definition_relationship which is of type Symmetrical_Item_relationship between two Items which are of type Part.

6.17.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ingnoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 17 - Application elements for case 290

Id	V	Application Elements	Value	R e q
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Outer Panel for For Right Hand Door'	S
@1421		Item.item_name	#1,'Outer Panel Door Right'	S
@1422		Item.item_number	#1,'330010'	S
@1425		Item to Item_classification (is classified by)	@1478.1,@1478.3,@1478.4	M
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1419.2		Item	#30	M
@1420		Item.item_description	#30,'Outer Panel for Left Hand Door'	S
@1421		Item.item_name	#30,'Outer Panel- Door Left'	S

Table 17 - Application elements for case 290 (continued)

Id	V	Application Elements	Value	R e q
@1422		Item.item_number	#30,'330009'	S
@1425		Item to Item_classification (is classified by)	@1478.2,@1478.3,@1478.4	M
@1428		Item to Item_version (is versioned by)	@1724.3,@1724.4	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'part'	S
@1481		Item_classification.classification_name	#6,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419.1	M
@1478.2		Item_classification	#32	M
@1479		Item_classification.classification_description	#32,"	S
@1480		Item_classification.classification_identification	#32,'part'	S
@1481		Item_classification.classification_name	#32,'part'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419.2	M
@1478.3		Item_classification	#39	M
@1479		Item_classification.classification_description	#39,"	S
@1480		Item_classification.classification_identification	#39,'part definition'	S
@1481		Item_classification.classification_name	#39,'part definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<inverse role>)	@1419.1,@1419.2	M
@1478.4		Item_classification	#41	M
@1479		Item_classification.classification_description	#41,"	S

Table 17 - Application elements for case 290 (continued)

Id	V	Application Elements	Value	R e q
@1480		Item_classification.classification_identification	#41,'internal'	S
@1481		Item_classification.classification_name	#41,'internal'	S
@1482		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<inverse role>)	@1419.1,@1419.2	M
@2202.1		Part	#1	S
@2202.2		Part	#30	S
@382.1		Designed_item	#14	M
@383		Designed_item.creation_date_and_time	#42,#42	S
@384		Designed_item.data_exchange_history	(#45,#45, #45,#45)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#56,#56	S
@388		Designed_item.media_requirements	#55,#55	S
@382.2		Designed_item	#36	M
@383		Designed_item.creation_date_and_time	#58,#58	S
@384		Designed_item.data_exchange_history	(#60,#60, #60,#60)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#57,#57	S
@388		Designed_item.media_requirements	#55,#55	S
@1204.1		Final_part_definition	#14	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@1204.2		Final_part_definition	#36	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M

Table 17 - Application elements for case 290 (continued)

Id	V	Application Elements	Value	Req
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@2252.1		Part_definition	#14	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@2252.2		Part_definition	#36	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1667.1		Item_definition_relationship	#37	M
@1668		Item_definition_relationship.relationship_description	#37,'Part 330010 is designed symmetrical to Part 330009'	S
@1669		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@1672		Item_definition to Item_definition_relationship (<inverse role>)	<not_present>	M
@3818	*	Symmetrical_item_relationship	#37	S
@1724.1		Item_version	#4	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#4,'Outer Panel for Right Hand Door'	S
@1728		Item_version.item_version_identification	#4,'2'	S
@1729		Item_version.revision_date_and_time	#42,#42	S
@1732		Item_version to Item_definition (is defined by)	<not_present>	M
@1734		Item to Item_version (versions)	@1419.1	M
@1724.3		Item_version	#31	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#31,'Outer Panel for Left Hand Door'	S
@1728		Item_version.item_version_identification	#31,'2'	S
@1729		Item_version.revision_date_and_time	#61,#61	S

Table 17 - Application elements for case 290 (continued)

Id	V	Application Elements	Value	R e q
@1732		Item_version to Item_definition (is defined by)	<not_present>	M
@1734		Item to Item_version (versions)	@1419.2	M
@1597.1		Item_definition	#14	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#76,'Design of Outer Panel for Right Hand Door'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	@1667	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M
@1597.2		Item_definition	#36	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#76,'Design of Design of Outer Panel for Left Hand Door'	M
@1601		Item_definition.procurement_information	#19,#19	M

Table 17 - Application elements for case 290 (concluded)

Id	V	Application Elements	Value	R e q
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	@1667	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.17.2 PostprocessorTest purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim793, aim795, aim799, aim49, aim59, aim818, aim819, aim825, aim224, aim311, aim603, aim605, aim599, aim600, aim836, aim838, aim842, aim500, aim501, aim503, aim858, aim860, aim862, aim765, aim766, aim608, aim767, aim844, aim846, aim849, aim555, aim556, aim541, aim543, aim545, aim548, aim551, aim554, aim557, aim348, aim349, aim614

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.18 Test case 300

Test case summary:

Test case 300 is designed to test the ability to define Item_definition_relationship which is of type Assembly_component_relationship between two Items which are of type Die.

6.18.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 18 - Application elements for case 300

Id	V	Application Elements	Value	R e q
@488.1		Die	#1	S
@488.2		Die	#70	S
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Lower Shoe for Lower Assembly'	S
@1421		Item.item_name	#1,'Lower Shoe'	S
@1422		Item.item_number	#1,'4545008'	S
@1425		Item to Item_classification (<is classified by>)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (<is versioned by>)	@1724.1,@1724.2	M
@1419.2		Item	#70	M

Table 18 - Application elements for case 300 (continued)

Id	V	Application Elements	Value	R e q
@1420		Item.item_description	#70,'Lower Assembly of a Draw Die'	S
@1421		Item.item_name	#70,'Lower Assembly'	S
@1422		Item.item_number	#70,'3232009'	S
@1425		Item to Item_classification (<is classified by>)	@1478.4,@1478.2,@1478.3	M
@1428		Item to Item_version (<is versioned by>)	@1724.3,@1724.4	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'die'	S
@1481		Item_classification.classification_name	#6,'die'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<classifies>)	@1419.1	M
@1478.2		Item_classification	#39	M
@1479		Item_classification.classification_description	#39,"	S
@1480		Item_classification.classification_identification	#39,'die definition'	S
@1481		Item_classification.classification_name	#39,'die definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<classifies>)	@1419.1,@1419.2	M
@1478.3		Item_classification	#41	M
@1479		Item_classification.classification_description	#41,"	S
@1480		Item_classification.classification_identification	#41,'internal'	S
@1481		Item_classification.classification_name	#41,'internal'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<classifies>)	@1419.1,@1419.2	M

Table 18 - Application elements for case 300 (continued)

Id	V	Application Elements	Value	R e q
@1478.4		Item_classification	#72	M
@1479		Item_classification.classification_description	#72,"	S
@1480		Item_classification.classification_identification	#72,'die'	S
@1481		Item_classification.classification_name	#72,'die'	S
@1482		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<classifies>)	@1419.2	M
@382.1		Designed_item	#14	M
@383		Designed_item.creation_date_and_time	#42,#42	S
@384		Designed_item.data_exchange_history	(#45,#45, #45,#45)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#56,#56	S
@388		Designed_item.media_requirement	#55,#55	S
@382.2		Designed_item	#76	M
@383		Designed_item.creation_date_and_time	#82,#82	S
@384		Designed_item.data_exchange_history	(#84,#84, #84,#84)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#77,#77	S
@388		Designed_item.media_requirement	#55,#55	S
@538.1		Die_definition	#56	M
@539		Die_definition.die_function_description	#56,'Die definition of lower shoe'	S
@540		Die_definition.die_layout_specification_ reference	#57,#57	S
@541		Die_definition.die_structure_specification_ reference	#60,#60	S
@542		Die_definition.die_weight	#56,'generatin system information'	S

Table 18 - Application elements for case 300 (continued)

Id	V	Application Elements	Value	R e q
@543		Die_definition.die_pattern_casting_specification	#63,#63	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@538.2		Die_definition	#77	M
@539		Die_definition.die_function_description	#77,'Die definition of lower assembly'	S
@540		Die_definition.die_layout_specification_- reference	#85,#85	S
@541		Die_definition.die_structure_specification_- reference	#86,#86	S
@542		Die_definition.die_weight	#77,'Die definition of lower assembly'	S
@543		Die_definition.die_pattern_casting_specification	#87,#87	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@57	*	Assembly_component_relationship	#78	M
@58	*	A s s e m b l y _ c o m p o n e n t _ - relationship.component_quantity	#79,#79	S
@59		Assembly_component_relationship to Assembly_component_relationship (<role description>)	<not_present>	M
@62		Assembly_component_relationship to Shape_- definition (<role description>)	<not_present>	M
@65		Assembly_component_relationship to Assembly_component_relationship (<inverse role>)	<not_present>	M
@1724.1		Item_version	#4	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S

Table 18 - Application elements for case 300 (continued)

Id	V	Application Elements	Value	R e q
@1727		Item_version.description	#4,'Lower Shoe for Lower Assembly'	S
@1728		Item_version.item_version_identification	#4,'2'	S
@1729		Item_version.revision_date_and_time	#42,#42	S
@1732		Item_version to Item_definition (<defined by>)	@1597	M
@1734		Item to Item_version (<versions>)	@1419.1	M
@1724.2		Item_version	#71	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#71,'Lower Assembly of a Draw Die'	S
@1728		Item_version.item_version_identification	#71,'2'	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.2	M
@1597.1		Item_definition	#14	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#14,'Lower Shoe for Lower Assembly'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.1	M

Table 18 - Application elements for case 300 (concluded)

Id	V	Application Elements	Value	R e q
@1597.2		Item_definition	#76	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#76,'Design of Lower Assembly of a Draw Die'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M
@1667		Item_definition_relationship	#88	M
@1668		Item_definition_relationship.relationship_description	#88,'assembly component'	M
@1670		Item_definition to Item_definition_relationship (<inverse role>)	@1597.1	M "
@1673		Item_definition to Item_definition_relationship (<inverse role>)	@1597.2	M "

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.18.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim793, aim795, aim799, aim49, aim59, aim818, aim819, aim825, aim224, aim311, aim603, aim605, aim599, aim600, aim836, aim838, aim842, aim500, aim501, aim503, aim858, aim860, aim862, aim765, aim766, aim608, aim767, aim844, aim846, aim849, aim555, aim556, aim541, aim542, aim544, aim548, aim551, aim554, aim557, aim851, aim855, aim614, aim348, aim349, aim828, aim829, aim834, aim634, aim636, aim473, aim474, aim341, aim286

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.19 Test case 310

Test case summary:

Test case 310 is designed to test the ability to define Item_definition_relationship which is of type Mating_relationship between two Items which are of type Die.

6.19.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 19 - Application elements for case 310

Id	V	Application Elements	Value	R e q
@488.1		Die	#1	S
@488.2		Die	#70	S
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Lower Shoe for Lower Assembly'	S
@1421		Item.item_name	#1,'Lower Shoe'	S
@1422		Item.item_number	#1,'4545008'	S
@1425		Item to Item_classification (<is classified by>)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (<is versioned by>)	@1724.1,@1724.2	M
@1419.2		Item	#70	M
@1420		Item.item_description	#70,'Binder Ring'	S
@1421		Item.item_name	#70,'Binder Ring'	S
@1422		Item.item_number	#70,'3232009'	S
@1425		Item to Item_classification (<is classified by>)	@1478.4,@1478.2,@1478.3	M
@1428		Item to Item_version (<is versioned by>)	@1724.3,@1724.4	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'die'	S
@1481		Item_classification.classification_name	#6,'die'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<classifies>)	@1419.1	M
@1478.2		Item_classification	#39	M

Table 19 - Application elements for case 310 (continued)

Id	V	Application Elements	Value	R e q
@1479		Item_classification.classification_description	#39,"	S
@1480		Item_classification.classification_identification	#39,'die definition'	S
@1481		Item_classification.classification_name	#39,'die definition'	S
@1482		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<classifies>)	@1419.1,@1419.2	M
@1478.3		Item_classification	#41	M
@1479		Item_classification.classification_description	#41,"	S
@1480		Item_classification.classification_identification	#41,'internal'	S
@1481		Item_classification.classification_name	#41,'internal'	S
@1482		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1490		Item to Item_classification (<classifies>)	@1419.1,@1419.2	M
@1478.4		Item_classification	#72	M
@1479		Item_classification.classification_description	#72,"	S
@1480		Item_classification.classification_identification	#72,'die'	S
@1481		Item_classification.classification_name	#72,'die'	S
@1482		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<classifies>)	@1419.2	M
@382.1		Designed_item	#14	M
@383		Designed_item.creation_date_and_time	#42,#42	S
@384		Designed_item.data_exchange_history	(#45,#45, #45,#45)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S

Table 19 - Application elements for case 310 (continued)

Id	V	Application Elements	Value	R e q
@387		Designed_item.generating_system_information	#56,#56	S
@388		Designed_item.media_requirement	#55,#55	S
@382.2		Designed_item	#76	M
@383		Designed_item.creation_date_and_time	#82,#82	S
@384		Designed_item.data_exchange_history	(#84,#84, #84,#84)	S
@385		Designed_item.data_ownership	#46,#46	S
@386		Designed_item.designer	#51,#51	S
@387		Designed_item.generating_system_information	#77,#77	S
@388		Designed_item.media_requirement	#55,#55	S
@538.1		Die_definition	#56	M
@539		Die_definition.die_function_description	#56,'Die definition of lower shoe'	S
@540		Die_definition.die_layout_specification_- reference	#57,#57	S
@541		Die_definition.die_structure_specification_- reference	#60,#60	S
@542		Die_definition.die_weight	#56,'generatin system information'	S
@543		Die_definition.die_pattern_casting_specification	#63,#63	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@538.2		Die_definition	#77	M
@539		Die_definition.die_function_description	#77,'Die definition of Binder Ring'	S
@540		Die_definition.die_layout_specification_- reference	#85,#85	S
@541		Die_definition.die_structure_specification_- reference	#86,#86	S
@542		Die_definition.die_weight	#77,'Die definition of Binder Ring'	S
@543		Die_definition.die_pattern_casting_specification	#87,#87	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M

Table 19 - Application elements for case 310 (continued)

Id	V	Application Elements	Value	R e q
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@1724.1		Item_version	#4	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#4,'Lower Shoe for Lower Assembly'	S
@1728		Item_version.item_version_identification	#4,'2'	S
@1729		Item_version.revision_date_and_time	#42,#42	S
@1732		Item_version to Item_definition (<defined by>)	@1597	M
@1734		Item to Item_version (<versions>)	@1419.1	M
@1724.2		Item_version	#71	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#71,'Binder Ring of a Draw Die'	S
@1728		Item_version.item_version_identification	#71,'2'	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.2	M
@1597.1		Item_definition	#14	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#14,'Lower Shoe for Lower Assembly'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M

Table 19 - Application elements for case 310 (continued)

Id	V	Application Elements	Value	R e q
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.1	M
@1597.2		Item_definition	#76	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#76,'Design of Binder Ring of a Draw Die'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M
@1667		Item_definition_relationship	#88	M
@1668		Item_definition_relationship.relationship_description	#88,'Binder Ring is tightly bolted to the Lower Shoe'	M
@1670		Item_definition to Item_definition_relationship (<inverse role>)	@1597.1	M

Table 19 - Application elements for case 310 (concluded)

Id	V	Application Elements	Value	R e q
@1673		Item_definition to Item_definition_relationship <inverse role>	@1597.2	M
@2149	*	Mating_relationship	#88	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.19.2 PostprocessorTest purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim793, aim795, aim799, aim49, aim59, aim818, aim819, aim825, aim224, aim311, aim603, aim605, aim599, aim600, aim836, aim838, aim842, aim500, aim501, aim503, aim858, aim860, aim862, aim765, aim766, aim608, aim767, aim844, aim846, aim849, aim555, aim556, aim541, aim543, aim545, aim548, aim551, aim554, aim557, aim850, aim851, aim855, aim348, aim349, aim614, aim828, aim829, aim834

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.20 Test case 320

Test case summary:

Test case 320 is designed to test the ability to define Item_definition_relationship which is of type Specified_material_relationship between two Items where one item is Part and other item is Material.

6.20.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1 (ignoring the part beyond the decimal point, if any), whose rows are non-blank in column 2 (V), identify the Application Element purposes covered by this test case.

Input specification:

Table 20 - Application elements for case 320

Id	V	Application Elements	Value	Req
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Outer Panel for Hood'	S
@1421		Item.item_name	#1,'Panel- Hood Outer'	S
@1422		Item.item_number	#1,'1996003'	S
@1424		Item to Item_classification (is classified by)	@1478.1	M
@1428		Item to Item_version (is versioned by)	@1724.1	M
@1419.2		Item	#63	M
@1420		Item.item_description	#63,'Steel'	S
@1421		Item.item_name	#63,'AFG6201-M'	S
@1422		Item.item_number	#63,'mtr35'	S

Table 20 - Application elements for case 320 (continued)

Id	V	Application Elements	Value	R e q
@1425		Item to Item_classification (is classified by)	@1478.2,@1478.3	M
@1428		Item to Item_version (is versioned by)	@1724.3,@1724.4	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'part'	S
@1481		Item_classification.classification_name	#6,'part'	S
@1482		Item_classification to Item_classification_- relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_- relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419.1	M
@1478.2		Item_classification	#66	M
@1479		Item_classification.classification_description	#66,"	S
@1480		Item_classification.classification_identification	#66,'material'	S
@1481		Item_classification.classification_name	#66,'material'	S
@1482		Item_classification to Item_classification_- relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_- relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (classifies)	@1419.2	M
@1478.3		Item_classification	#80	M
@1479		Item_classification.classification_description	#80,"	S
@1480		Item_classification.classification_identification	#80,'external'	S
@1481		Item_classification.classification_name	#80,'external'	S
@1482		Item_classification to Item_classification_- relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_- relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419.2	M
@1991	*	Material	#63	S
@2202		Part	#1	S

Table 20 - Application elements for case 320 (continued)

Id	V	Application Elements	Value	R e q
@925		External_item_reference	#76	M
@926		External_item_reference.manual_reference_ description	(#76, #76)	S
@927		External_item_reference.name	#63,'AFG6201-M'	S
@928		External_item_reference.needed_modifications	#76,'External Item Reference'	S
@1204		Final_part_definition	#14	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@2041	*	Material_definition	#76	M
@2042	*	Material_definition.material_description	#76,'External Item Reference'	S
@2043	*	Material_definition.material_specification	#82,'doc-11'	S
@2044		Part_definition to Material_definition (<inverse role>)	<not_present>	M
@2252.1		Part_definition	#14	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1667		Item_definition_relationship	#84	M
@1668		Item_definition_relationship.relationship_ description	#84,'Specified Material Relationship'	S
@1669		Item_definition to Item_definition_relationship (<inverse role>)	@1597.1	M
@1672		Item_definition to Item_definition_relationship (<inverse role>)	@1597.2	M
@3601	*	Specified_material_relationship	#84	M
@3602	*	Specified_material_relationship.material_ quantity	#85,#85	S
@3603		Specified_material_relationship to Specified_ material_relationship (<role description>)	<not_present>	M
@3606		Specified_material_relationship to Specified_ material_relationship (<inverse role>)	<not_present>	M

Table 20 - Application elements for case 320 (continued)

Id	V	Application Elements	Value	R e q
@1724.1		Item_version	#4	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#4,'Outer Panel for Hood'	S
@1728		Item_version.item_version_identification	#4,'2'	S
@1729		Item_version.revision_date_and_time	#10,#10	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.1	M
@1724.2		Item_version	#67	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#67,'Raw steel'	S
@1728		Item_version.item_version_identification	#67,'1.2'	S
@1729		Item_version.revision_date_and_time	#69,#69	S
@1731		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.2	M
@1597.1		Item_definition	#14	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#14,'Design of Outer Panel hood'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	@1667	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M

Table 20 - Application elements for case 320 (concluded)

Id	V	Application Elements	Value	R e q
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M
@1597.2		Item_definition	#71	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#71,'Definition of raw steel used to make outer panel'	M
@1601		Item_definition.procurement_information	#73,#73	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	@1667	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.2	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.20.2 Postprocessor**Test purposes covered:**

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim793, aim795, aim799, aim49, aim59, aim818, aim819, aim825, aim224, aim311, aim603, aim605, aim599, aim600, aim836, aim838, aim842, aim500, aim501, aim503, aim858, aim860, aim862, aim765, aim766, aim767, aim844, aim846, aim849,

aim555, aim556, aim541, aim543, aim545, aim548, aim551, aim554, aim557, aim850, aim851, aim855, aim348, aim349, aim452, aim614, aim473, aim474, aim341, aim287

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.21 Test case 330

Test case summary:

Test case 330 is designed to test the ability to define Item_definition_relationship which is of type Input_item_die_relationship between two Items where one item is Die and other item is Part.

6.21.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 21 - Application elements for case 330

Id	V	Application Elements	Value	R e q
@488		Die	#70	S
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Outer Panel for Hood'	S
@1421		Item.item_name	#1,'Panel- Hood Outer'	S
@1422		Item.item_number	#1,'1996003'	S
@1424		Item to Item_classification (is classified by)	@1478.1	M
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1419.2		Item	#70	M
@1420		Item.item_description	#70,'Trim Die'	S
@1421		Item.item_name	#70,'Trim Die'	S
@1422		Item.item_number	#70,'4545008'	S
@1424		Item to Item_classification (is classified by)	@1478.2	M
@1428		Item to Item_version (is versioned by)	@1724.3,@1724.4	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'part'	S
@1481		Item_classification.classification_name	#6,'part'	S
@1482		Item_classification to Item_classification_ - relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ - relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419.1	M
@1478.2		Item_classification	#75	M

Table 21 - Application elements for case 330 (continued)

Id	V	Application Elements	Value	R e q
@1479		Item_classification.classification_description	#75,"	S
@1480		Item_classification.classification_identification	#75,'die'	S
@1481		Item_classification.classification_name	#75,'die'	S
@1482		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_ relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (<inverse role>)	@1419.2	M
@2202		Part	#1	S
@538		Die_definition	#79	M
@539		Die_definition.die_function_description	#79,'Die Definition of Trim Die'	S
@540		Die_definition.die_layout_specification_ reference	#80,#80	S
@541		Die_definition.die_structure_specification_ reference	#83,#83	S
@542		Die_definition.die_weight	#79,'Die Definition of Trim Die'	S
@543		Die_definition.die_pattern_casting_specification	#86,#86	S
@544		Die_definition to Die_definition_constraint (<role description>)	<not_present>	M
@547		Die_definition to Process_operation (<role description>)	<not_present>	M
@1204.1		Final_part_definition	#14	S
@1205		Final_part_definition to Part_on_product (<role description>)	<not_present>	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@2252.1		Part_definition	#14	S
@2253	*	Part_definition to Material_definition (<role description>)	<not_present>	M
@1260	*	Input_item_die_relationship	#89	S

Table 21 - Application elements for case 330 (continued)

Id	V	Application Elements	Value	R e q
@1261		Input_item_die_relationship to Shape_definition (<role description>)	<not_present>	M
@1667		Item_definition_relationship	#89	M
@1668		Item_definition_relationship.relationship_ description	#89,'Outer panel for hood is trimmed by the Trim Die'	S
@1669		Item_definition to Item_definition_relationship (<inverse role>)	@1597.1	M
@1672		Item_definition to Item_definition_relationship (<inverse role>)	@1597.2	M
@1724.1		Item_version	#4	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#4,'Outer Panel for Hood'	S
@1728		Item_version.item_version_identification	#4,'2'	S
@1729		Item_version.revision_date_and_time	#10,#10	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.1	M
@1724.2		Item_version	#73	M
@1725		Item_version.approval	#7,#7	S
@1726		Item_version.approval_status	#9,#9	S
@1727		Item_version.description	#73,'Trim Die'	S
@1728		Item_version.item_version_identification	#73,'2'	S
@1729		Item_version.revision_date_and_time	#61,#61	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.2	M
@1597.1		Item_definition	#14	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M

Table 21 - Application elements for case 330 (concluded)

Id	V	Application Elements	Value	R e q
@1600		Item_definition.definition_description	#14,'Design of Outer Panel hood'	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	@1667	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.1	M
@1597.2		Item_definition	#77	M
@1598		Item_definition.approval	#16,#16	M
@1599		Item_definition.approval_status	#18,#18	M
@1600		Item_definition.definition_description	#77,"	M
@1601		Item_definition.procurement_information	#19,#19	M
@1602		Item_definition.proprietary_security_usage_information	#22,#22	M
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<is first in>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<is second in>)	@1667	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616		Item_version to Item_definition (<inverse role>)	@1724.1	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.21.2 Postprocessor

Test purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim793, aim795, aim799, aim49, aim59, aim818, aim819, aim825, aim224, aim311, aim603, aim605, aim599, aim600, aim836, aim838, aim842, aim500, aim501, aim503, aim858, aim860, aim862, aim765, aim766, aim767, aim844, aim846, aim849, aim555, aim556, aim541, aim543, aim545, aim548, aim551, aim554, aim557, aim850, aim851, aim855, aim614, aim348, aim349, aim423, aim828, aim829, aim834, aim423

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.22 Test case 340

Test case summary:

Test case 340 is designed to test the ability to define Item_classification_relationship where two items are Parts.

6.22.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 22 - Application elements for case 340

Id	V	Application Elements	Value	R e q
@1419.1		Item	#1	M
@1420		Item.item_description	#1,'Front Door for 98J'	S
@1421		Item.item_name	#1,'Front Door'	S
@1422		Item.item_number	#1,'39390'	S
@1424		Item to Item_classification (is classified by)	@1478.1	M
@1419.2		Item	#5	M
@1420		Item.item_description	#5,'Outer Panel for 98J'	S
@1421		Item.item_name	#5,'Outer Panel'	S
@1422		Item.item_number	#5,'45902'	S
@1424		Item to Item_classification (is classified by)	@1478	M
@1426		Item to Item_version (<role description>)	<not_present>	M
@1478.1		Item_classification	#6	M
@1479		Item_classification.classification_description	#6,"	S
@1480		Item_classification.classification_identification	#6,'part'	S
@1481		Item_classification.classification_name	#6,'part'	S
@1483	*	Item_classification to Item_classification_-relationship (is primary in)	@1540	M
@1486		Item_classification to Item_classification_-relationship (<role description>)	(<not_present>)	M
@1490		Item to Item_classification (<inverse role>)	@1419.1,@1419.2	M
@1478.2		Item_classification	#7	M
@1479		Item_classification.classification_description	#7,"	S
@1480		Item_classification.classification_identification	#7,'part'	S

Table 22 - Application elements for case 340 (concluded)

Id	V	Application Elements	Value	R e q
@1481		Item_classification.classification_name	#7,'part'	S
@1483		Item_classification to Item_classification_- relationship (is primary in)	<not_present>	M
@1486	*	Item_classification to Item_classification_- relationship (is secondary in)	@1540	M
@1490		Item to Item_classification (<inverse role>)	@1419.1,@1419.2	M
@1540	*	Item_classification_relationship	#8	M
@1541	*	Item_classification_relationship.relationship_- description	#7,'Outer panel is used for Front Door on 98J car'	S
@1544	*	Item_classification to Item_classification_- relationship (<inverse role>)	@1478.1	M
@1547	*	Item_classification to Item_classification_- relationship (<inverse role>)	@1478.2	M
@2202.1		Part	#1	S
@2202.2		Part	#5	S

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.22.2 PostprocessorTest purposes covered:

aim589, aim590, aim598, aim46, aim622, aim624, aim625, aim595

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.23 Test case 350Test case summary:

Test case 350 is designed to test the ability to define a Work_item that results from a Work_order which is of type Start_order.

6.23.1 PreprocessorTest purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ingnoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:**Table 23 - Application elements for case 350**

Id	V	Application Elements	Value	R e q
@2780		Position_orientation_representation	#58	S
@3658		Start_order	#1	S
@3659		External_order to Start_order (<inverse role>)	<not_present>	M
@3663	*	Work_item to Start_order (initiates)	@4029	M
@4029	*	Work_item	#62	M
@4031	*	Work_item.approval	(#7,#7, #9,#9, #12,#12)	S
@4032	*	Work_item.completion_date_and_time	(#64,#64)	S
@4033	*	Work_item.order_date_and_time	(#66,#66)	S

Table 23 - Application elements for case 350 (concluded)

Id	V	Application Elements	Value	R e q
@4034	*	Work_item.preliminary_review_date_and_time	(#69,#69)	S
@4036	*	Work_item.start_date_and_time	(#71,#71)	S
@4040	*	Work_item to Start_order (is initiated by)	@3658	M
@4042		Change_order to Work_item (<inverse role>)	<not_present>	M
@4045		Change_order to Work_item (<inverse role>)	<not_present>	M
@4097		Work_order	#1,#1	M
@4099		Work_order.approval	(#7,#7, #9,#9,#12,#12)	S
@4103		Work_order.priority	#1,'Feasibility study and line-up'	S
@4106		Work_order.work_description	#2,'Feasibility Study and line-up'	S
@4107		Work_order.work_order_number	#1,'WO678'	S
@4109		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4112		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4115		Work_order_responsibility to Work_order (<inverse role>)	<not_present>	M
@4118		Work_request to Work_order (results from)	@4281	M
@3714		Start_request	#36	M
@3715		Start_request.request_description	#36,'Feasibility Study and line-up'	S
@3716		Start_request.request_justification	#36,'start'	S
@4281		Work_request	#36	M
@4282		Work_request.date_and_time_of_request	#51,#51	S
@4283		Work_request.requestor	#54,#54	S
@4284		Work_request.work_request_identification	#36	S
@4285		Work_request to Work_order (results in)	<not_present>	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.23.2 Postprocessor

Test purposes covered:

aim930, aim7, aim8, aim828, aim830, aim832, aim348, aim349, aim369, aim49, aim59, aim50, aim224, aim54, aim56, aim58, aim541, aim543, aim545, aim548, aim551, aim554, aim818, aim819, aim821, aim311, aim463, aim464, aim286, aim18, aim19, aim22, aim33, aim1033, aim836, aim837, aim841, aim500, aim501, aim503, aim2, aim3, aim345, aim341, aim850, aim851, aim857, aim541, aim542, aim544, aim548, aim551, aim554, aim557, aim793, aim795, aim796, aim727, aim730, aim728, aim15, aim10, aim12, aim786, aim787, aim789

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.24 Test case 360

Test case summary:

Test case 360 is designed to test the ability to define Work_order_relationship, which is a relationship between two Work_orders of type Start_order.

6.24.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application Element purposes covered by this test case.

Input specification:

Table 24 - Application elements for case 360

Id	V	Application Elements	Value	Req
@3658.1		Start_order	#1	S
@3659		External_order to Start_order (<inverse role>)	<not_present>	M
@3662		Work_item to Start_order (<inverse role>)	<not_present>	M
@3658.2		Start_order	#70	S
@3659		External_order to Start_order (<inverse role>)	<not_present>	M
@3662		Work_item to Start_order (<inverse role>)	<not_present>	M
@4097.1		Work_order	#1,#1	M
@4099		Work_order.approval	(#7,#7, #9,#9, #12,#12)	S
@4103		Work_order.priority	#1,'Plan the production process'	S
@4106		Work_order.work_description	#2,'Plan the production process'	S
@4107		Work_order.work_order_number	#1,'WO678'	S
@4110	*	Work_order to Work_order_relationship (is primary in)	@4170	M
@4112		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4115		Work_order_responsibility to Work_order (<inverse role>)	<not_present>	M
@4118		Work_request to Work_order (Results from)	@4281	M
@4097.2		Work_order	#70,#70	M
@4099		Work_order.approval	(#76,#76, #78,#78, #80,#80)	S
@4103		Work_order.priority	#70,'Design the in-process shapes of the part'	S

Table 24 - Application elements for case 360 (concluded)

Id	V	Application Elements	Value	R e q
@4106		Work_order.work_description	#71,'Design the in-process shapes of the part'	S
@4107		Work_order.work_order_number	#70,'WO700'	S
@4109		Work_order to Work_order_relationship (<role description>)	<not_present>	M
@4113	*	Work_order to Work_order_relationship (is secondary in)	@4170	M
@4115		Work_order_responsibility to Work_order (<inverse role>)	<not_present>	M
@4118		Work_request to Work_order (Results from)	<not_present>	M
@4170	*	Work_order_relationship	#123	M
@4171	*	Work_order_relationship.description	#123,'Production planning and designing the inprocess shapes of the part should be completed simultaneously'	S
@4174	*	Work_order to Work_order_relationship (<inverse role>)	@4097.1	M
@4177	*	Work_order to Work_order_relationship (<inverse role>)	@4097.2	M
@3714		Start_request	#36	M
@3715		Start_request.request_description	#36,'Plan the production process and design the in-process shapes of the part'	S
@3716		Start_request.request_justification	#36,'start'	S
@4281		Work_request	#36	M
@4282		Work_request.date_and_time_of_request	#51,#51	S
@4283		Work_request.requestor	#54,#54	S
@4284		Work_request.work_request_identification	#36	S
@4285		Work_request to Work_order (<role description>)	<not_present>	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.24.2 Postprocessor

Test purposes covered:

aim930, aim7, aim8, aim828, aim829, aim832, aim348, aim349, aim369, aim49, aim59, aim50, aim224, aim54, aim56, aim58, aim541, aim543, aim545, aim548, aim551, aim554, aim818, aim819, aim311, aim821, aim463, aim464, aim286, aim341, aim18, aim19, aim22, aim33, aim1033, aim836, aim837, aim841, aim500, aim501, aim503, aim2, aim3, aim345, aim850, aim851, aim857, aim557, aim793, aim794, aim796, aim727, aim728, aim730, aim15, aim10, aim12, aim1045

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

6.25 Test case 370

Test case summary:

Test case 370 is designed to test the ability to define an Item whose Item_version is Made_in_house, and Item_definition is a Designed_item. It is also designed to test the ability to define Part_on_product, Part_on_product_location, Marketable_assembly and Production_effectivity.

6.25.1 Preprocessor

Test purposes covered:

The following general test purposes are covered: g1, g2 and g3

In the preprocessor input specification table of a test case, the numbers in column 1(ignoring the part beyond the decimal point, if any),whose rows are non-blank in column 2(V), identify the Application

Element purposes covered by this test case.

Input specification:

Table 25 - Application elements for case 370

Id	V	Application Elements	Value	R e q
@1419.1		Item	#5	M
@1420		Item.item_description	#5,'Gutter-Component Lid Side Right & Left'	S
@1421		Item.item_name	#5,'Gutter-Component Lid Side Right & Left'	S
@1422		Item.item_number	#5,'88776655'	S
@1425		Item to Item_classification (is classified by)	@1478.1,@1478.2,@1478.3	M
@1428		Item to Item_version (is versioned by)	@1724.1,@1724.2	M
@1419.2		Item	#55	M
@1420		Item.item_description	#55,'Ferry star'	S
@1421		Item.item_name	#55,'Ferry star'	S
@1422		Item.item_number	#55,'gngmwlei38'	S
@1423		Item to Item_classification (<role description>)	<not_present>	M
@1427		Item to Item_version (<role description>)	@1724.3	M
@1478.1		Item_classification	#15	M
@1479		Item_classification.classification_description	#15,'Gutter-Component Lid Side Right & Left'	S
@1480		Item_classification.classification_identification	#15,'part'	S
@1481		Item_classification.classification_name	#15,'part'	S
@1482		Item_classification to Item_classification_relationship (<role description>)	<not_present>	M

Table 25 - Application elements for case 370 (continued)

Id	V	Application Elements	Value	R e q
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (versions)	@1419.1	M
@1478.2		Item_classification	#18	M
@1479		Item_classification.classification_description	#18,'Gutter-Component Lid Side Right & Left'	S
@1480		Item_classification.classification_identification	#18,'part definition'	S
@1481		Item_classification.classification_name	#18,'part definition'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (versions)	1419.1	M
@1478.3		Item_classification	#19	M
@1479		Item_classification.classification_description	#19,'Gutter-Component Lid Side Right & Left'	S
@1480		Item_classification.classification_identification	#19,'internal'	S
@1481		Item_classification.classification_name	#19,'internal'	S
@1482		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1485		Item_classification to Item_classification_-relationship (<role description>)	<not_present>	M
@1489		Item to Item_classification (versions)	@1419.1	M
@2202		Part	#5	S
@382.1		Designed_item	#11	M
@383		Designed_item.creation_date_and_time	#20,#20	S
@384		Designed_item.data_exchange_history	(#41,#41, #41,#41)	S
@385		Designed_item.data_ownership	#24,#24	S
@386		Designed_item.designer	#29,#29	S
@387	*	Designed_item.generating_system_information	#31,'CAD System'	S
@388	*	Designed_item.media_requirements	#32,#32	S
@1204.1		Final_part_definition	#11	S

Table 25 - Application elements for case 370 (continued)

Id	V	Application Elements	Value	R e q
@1206		Final_part_definition to Part_on_product (<role description>)	@2305	M
@1208		Final_part_definition to Part_process_plan (<role description>)	<not_present>	M
@2252.1		Part_definition	#11	S
@2253		Part_definition to Material_definition (<role description>)	<not_present>	M
@1724.1		Item_version	#13	M
@1725		Item_version.approval	#42,#42	S
@1726		Item_version.approval_status	#44,#44	S
@1727		Item_version.description	#13,'Increased width of Gutter'	S
@1728		Item_version.item_version_identification	#13,'88776655-1'	S
@1729		Item_version.revision_date_and_time	#20,#20	S
@1732		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.1	M
@1724.3		Item_version	#54	M
@1727		Item_version.description	#54,'K car'	S
@1728		Item_version.item_version_identification	#54,'3-5'	S
@1731		Item_version to Item_definition (<role description>)	<not_present>	M
@1734		Item to Item_version (<inverse role>)	@1419.2	M
@1935	*	Marketable_assembly	#46	M
@1936	*	Marketable_assembly.model_identification	#46,'bgr-39'	S
@1937	*	Marketable_assembly.production_year	#49,1999	S
@1938	*	Marketable_assembly.style_identification	#46,'K car'	S
@1939		Marketable_assembly to Part_on_product (is the product for)	<not_present>	M
@2305	*	Part_on_product	#53	S
@2307	*	Part_on_product to Part_on_product_location (is located on)	@2367	M
@2310	*	Part_on_product to Production_effectivity (has)	@2978.1	M

Table 25 - Application elements for case 370 (continued)

Id	V	Application Elements	Value	R e q
@2313	*	Final_part_definition to Part_on_product (<inverse role>)	@1204.1	M
@2315		Marketable_assembly to Part_on_product (<inverse role>)	<not_present>	M
@2367	*	Part_on_product_location	#53,'On the door'	M
@2368	*	Part_on_product_location.intraproduct_location	#53,'On the door'	S
@2370	*	Part_on_product to Part_on_product_location (<inverse role>)	@2305	M
@2978.1	*	Production_effectivity	#58	M
@2979	*	Production_effectivity.date_and_time_effectivity	#58,#58'	S
@2980	*	Production_effectivity.effectivity_identification	#58,'effect-8'	S
@2981	*	Production_effectivity.sequence_effectivity	#68,#68	S
@2983	*	Part_on_product to Production_effectivity (applies to)	@2305	M
@1597	*	Item_definition	#11	M
@1598	*	Item_definition.approval	#33,#33	M
@1599	*	Item_definition.approval_status	#35,#35	M
@1600	*	Item_definition.definition_description	#11,'Increase the width ofGutter	M
@1601	*	Item_definition.procurement_information	#36,#36	M
@1602	*	Item_definition.proprietary_security_usage_information	#38,#38	M

Table 25 - Application elements for case 370 (concluded)

Id	V	Application Elements	Value	R e q
@1604		Item_definition to Feature (<role description>)	<not_present>	M
@1607		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1610		Item_definition to Item_definition_relationship (<role description>)	<not_present>	M
@1613		Item_definition to Shape_definition (<role description>)	<not_present>	M
@1616	*	Item_definition to Item_version (<role description>)	@1724	M

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc2, and gvc3 (and its related derived verdict criteria). The verdict criteria derivable from the application elements with non blank entries in column 2(V) on input specification table apply.

6.25.2 PostprocessorTest purposes covered:

aim589, aim590, aim598, aim46, aim818, aim819, aim825, aim224, aim311, aim599, aim600, aim622, aim624, aim625, aim603, aim844, aim845, aim849, aim555, aim541, aim543, aim545, aim548, aim551, aim554, aim556, aim500, aim501, aim850, aim851, aim855, aim557, aim348, aim349, aim793, aim794, aim798, aim49, aim59, aim836, aim837, aim842, aim503, aim858, aim859, aim862, aim765, aim766, aim767, aim614, aim615, aim596, aim597, aim270, aim271, aim273, aim275, aim60, aim61, aim601, aim313, aim314, aim310, aim446, aim448, aim450, aim290, aim293, aim770, aim772

The following general test purposes are covered: g1, g4 and g5.

The numbers in column 1 (ignoring the part beyond the decimal point, if any) of input specification table, whose rows are non blank in column 2(V), identify the AE test purposes covered in this test case.

Input specification:

See annex C.

Verdict criteria:

The following general verdict criteria apply: gvc1, gvc4, and gvc5.

The verdict criteria derivable from the application elements with non-blank entries in column 2(V) of input specification table above apply.

Annex A

(normative)

Conformance classes

Table A.1 lists the associativity between each test case in this document and the conformance classes of ISO 103-207. A test campaign for a particular conformance class must contain its associated test cases.

Table A.1 Conformance classes and associated test cases

Test Case	Conformance Class													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
case120	X													
case130	X													
case140	X													
case150	X													
case160	X													
case170	X													
case180	X													
case190	X			X										
case200	X													
case210	X				X									
case220	X													
case230	X						X							
case250	X	X												
case260	X	X												
case270	X	X												
case280	X													
case290	X													

**Table A.1 Conformance classes and associated test cases
(concluded)**

Test Case	Conformance Class													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
case300	X													
case310	X													
case320	X													
case330	X													
case340	X													
case350	X													
case360	X													
case370	X													

Annex B
(normative)

Information object registration

To provide for unambiguous identification of an information object in an open system, the object identifier

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is assigned to this part of ISO 10303. The meaning of this value is defined in ISO/IEC 8824-1, and is described in ISO 10303-1.

Annex C

(normative)

Postprocessor input specification file names

The postprocessor input specifications for each test case is supplied electronically on magnetic media (floppy diskette). Table C.1 lists the file names of the postprocessor input specification that is associated with the postprocessor subclause(s) of a test case.

Table C.1 Postprocessor input specification file names

Subclause	Test Case	File name
6.1.2	Test case 120	case120.p21
6.2.2	Test case 130	case130.p21
6.3.2	Test case 140	case140.p21
6.4.2	Test case 150	case150.p21
6.5.2	Test case 160	case160.p21
6.6.2	Test case 170	case170.p21
6.7.2	Test case 180	case180.p21
6.8.2	Test case 190	case190.p21
6.9.2	Test case 200	case200.p21
6.10.2	Test case 210	case210.p21
6.11.2	Test case 220	case220.p21
6.12.2	Test case 230	case230.p21
6.13.2	Test case 250	case250.p21
6.14.2	Test case 260	case260.p21
6.15.2	Test case 270	case270.p21
6.16.2	Test case 280	case280.p21
6.17.2	Test case 290	case290.p21

Table C.1 Postprocessor input specification file names (concluded)

Test Case	Test Case	File name
6.18.2	Test case 300	case300.p21
6.19.2	Test case 310	case310.p21
6.20.2	Test case 320	case320.p21
6.21.2	Test case 330	case330.p21
6.22.2	Test case 340	case340.p21
6.23.2	Test case 350	case350.p21
6.24.2	Test case 360	case360.p21
6.25.2	Test case 370	case370.p21

Annex D

(informative)

Excluded test purposes

D.1 Abstract supertypes

The following test purposes derived from the AIM EXPRESS listing of ISO 10303-207 are excluded from being verdicted in any test since these entities are abstract supertypes which shall only be instantiated as their subtypes.

Action_assignment

Approval_assignment

Contract_assignment

Date_and_time_assignment

Date_assignment

Document_reference

Organization_assignment

Person_and_organization_assignment

Person_assignment

Security_classification_assignment

D.2 Subtype Mandatory Requirement

The following test purposes derived from the AIM EXPRESS listing of ISO 10303-207 are excluded from being verdicted in any test since ISO 10303-207 either places local constraints on these entities which cause them to behave like abstract supertypes, or allows circumstances under which they do so.

Action_method that is an action_method_with_specification_reference

Action_method_relationship that is a serial_action_method

Application_context_element

Action_resource_requirement that is a requirement_for_action_resource

B_spline_curve that is not a Rational_b_spline_curve

B_spline_surface that is not a Rational_b_spline_surface

Boundary_curve that is an outer_boundary_curve

Bounded_curve

Cartesian_transformation_operator

Closed_shell that is an oriented_closed_shell

Composite_curve that is a composite_curve_on_surface

Composite_curve_segment that is a reparametrised_composite_curve_segment

Connected_face_set

Curve that is not a Bounded_curve

Date

Degenerate_pcurve that is an evaluated_degenerate_pcurve

Dimensional_location

Edge

Elementary_surface

Face_bound that is a face_outer_bound

Face_surface that is an advanced_face

Functionally_defined_transformation that is a cartesian_transformation_operator

Geometric_set

Half_space_solid that is a boxed_half_space

Loop

Measure_with_unit that is neither an uncertainty_measure_with_unit nor a measure_representation_item

Named_unit

Open_shell that is an oriented_open_shell

Path

Placement

Product_category that is a product_related_product_category

Product_definition_formation that is a product_definition_formation_with_specified_source

Product_definition_usage

Product_related_product_category that is a product_type

Property_definition_representation that is a shape_definition_representation

Serial_action_method that is a sequential_method

Shape_aspect that is a datum

Shape_representation

Solid_model

Surface

Surface_curve

Swept_surface

Topological_representation_item

Toroidal_surface that is a degenerate_toroidal_surface

Vertex that is a vertex_point

Work_order

D.3 Values restricted by dependent instantiation rules

The following test purposes derived from the AIM EXPRESS listing of ISO 10303-207 are excluded from being verdicted in any test since their direct instantiation is forbidden by local rules within ISO 10303-207.

Action that is neither the assigned_action of an action_assignment, the related_action or relating_action of an action_relationship, a member of the set of usages for an action_resource_type, the definition of an action_property, nor the operation of an action_resource_requirement

Action_request_solution

Application_context that is neither the frame_of_reference of an application_context_element, nor the application of an application_protocol_definition.

Configuration_design

Contract that is neither the assigned_contract of a contract_assignment, a member of the set of items for a sheet_metal_person_assignment, nor a member of the set of items for a sheet_metal_organization_assignment

Date_role that is not the role of a date_assignment

Date_time_role that is not the role of a date_and_time_assignment

Derived_unit that is not the unit_component of a measure_with_unit

Functionally_defined_transformation that is not the transformation_operator of a representation_relationship_with_transformation

Item_defined_transformation that is not the transformation_operator of a representation_relationship_with_transformation

Organization_role that is not the role of an organization_assignment

Person_and_organization_role that is not the role of a person_and_organization_assignment

Person_role that is not the role of a person_assignment

Tolerance_range that is not the range of a plus_minus_tolerance

D.4 Values restricted by geometrical context

The following test purposes derived from the AIM EXPRESS listing of ISO 10303-207 are excluded from being verdicted in any test since ISO 10303-207 deals with 3D designs only, and these entities are only meaningful in 2D design.

Axis1_placement

Axis1_placement with axis

Axis1_placement with axis not present

Axis1_placement_2d

Axis1_placement_2d with ref_direction

Axis1_placement_2d with ref_direction not present

Cartesian_transformation_operator_2d

Cartesian_transformation_operator_2d with axis1

Cartesian_transformation_operator_2d with axis1 not present

Cartesian_transformation_operator_2d with axis2
Cartesian_transformation_operator_2d with axis2 not present
Cartesian_transformation_operator_2d with scale
Cartesian_transformation_operator_2d with scale not present

Circle
Circle with position as Axis2_placement_2d

Ellipse with position as Axis2_placement_2d

Hyperbola with position as Axis2_placement_2d

Offset_curve_2d
Offset_curve_2d with self_intersect = TRUE
Offset_curve_2d with self_intersect = FALSE
Offset_curve_2d with self_intersect = UNKNOWN

Parabola with position as Axis2_placement_2d

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