

Metallic materials — Manufacturing schedule, inspection schedule, inspection and test report — Definition, general principles, preparation and approval

The European Standard EN 2078:2001 has the status of a
British Standard

ICS 49.025

National foreword

This British Standard is the official English language version of EN 2078:2001. It supersedes BS EN 2078:1993 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/61, Inspection and testing requirements for aerospace metallic materials, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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This British Standard, having been prepared under the direction of the Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 09 January 2002

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 5, and a back cover.

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Amendments issued since publication

Amd. No.	Date	Comments

English version

**Aerospace series - Metallic materials - Manufacturing schedule,
inspection schedule, inspection and test report - Definition,
general principles, preparation and approval**

Série aérospatiale - Matériaux métalliques - Fiche de fabrication, fiche d'essais, rapport de contrôle et d'essais - Définition, principes généraux, préparation et approbation

Luft- und Raumfahrt - Metallische Werkstoffe - Fertigungsplan, Prüfanweisung, Abnahmeprüfzeugnis - Definition, allgemeine Grundsätze, Aufstellung und Genehmigung

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Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

This European Standard supersedes EN 2078:1993.

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

This standard is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

1 Scope

This standard defines the manufacturing schedule, inspection schedule and inspection and test report for EN aerospace metallic semi-finished products. It also specifies the general principles, preparation and approval of these documents.

It shall be used with the relevant semi-finished product definition documents (level 3) defined in EN 4258.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 2000	Aerospace series - Quality assurance - EN aerospace products - Approval of the quality system of manufacturers
EN 3042	Aerospace series - Quality assurance - EN aerospace products - Qualification procedures
EN 4258	Aerospace series - Metallic materials - General organization of standardization - Links between types of EN standards and their use
EN 4259	Aerospace series - Metallic materials - Definition of general terms ¹⁾
EN 10204	Metallic products - Types of inspection documents

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 Design Authority

See EN 4259.

1) Published as AECMA Prestandard at the date of publication of this standard

3.2 Manufacturing schedule

Document specifying the actual procedures to be followed in the manufacture of an EN aerospace metallic semi-finished product.

NOTE The manufacturing schedule is the response of the manufacturer to orders placed by any purchaser.

3.3 Inspection schedule

Document specifying additional inspection and/or testing requirements to those of the applicable EN aerospace standard for that semi-finished product.

3.4 Inspection and test report

Document giving the results of all inspection and testing carried out on the semi-finished product in accordance with the applicable EN aerospace semi-finished product standard and any additional requirements specified on the drawing, order or inspection schedule.

4 Manufacturing schedule

4.1 General principles

The preparation of a manufacturing schedule is a mandatory requirement for semi-finished products qualification in accordance with EN 3042.

The preparation of the manufacturing schedule is under the responsibility of the manufacturer. This document is his property.

On written request, the purchaser is entitled to collaborate in the drafting.

The manufacturing schedule is used as the reference document for semi-finished product qualification, under the confidentiality conditions defined in EN 2000.

4.2 Preparation

The manufacturing schedule shall describe the manufacturing stages (including inspection and testing procedures) for the semi-finished product to be manufactured, from the acquisition of raw materials through to the storage/delivery of the manufactured semi-finished product.

4.3 Approval

4.3.1 Initial approval

The manufacturing schedule shall be approved by the manufacturer in accordance with the internal procedures defined in his quality assurance system, as required by EN 2000.

Where the manufacturing schedule has been defined in collaboration with the purchaser on written request and/or has been verified by means of pre-production parts, it shall, additionally, be approved by the Design Authority of the purchaser.

NOTE In special cases, the manufacturing schedule can be sealed on purchaser's written instructions.

4.3.2 Monitoring of subsequent changes

Changes which may significantly affect the quality of the semi-finished product shall be submitted for the written approval of the purchaser. After this approval, the manufacturer shall inform the Qualification Authority of the agreed changes. The Qualification Authority may record these changes (as an addition to the semi-finished product qualification file) or call for supplementary tests or for a new qualification.

Where the manufacturing schedule is sealed, any change shall be submitted for the purchaser's written approval prior to implementation.

5 Inspection schedule

5.1 General principles

The inspection schedule is used in the case of semi-finished products the characteristics of which cannot be completely specified by EN aerospace standards, typically forgings and castings.

The preparation of the inspection schedule is under the responsibility of the purchaser. The inspection schedule is implemented by the manufacturer but remains the purchaser's property.

5.2 Preparation

The inspection schedule shall specify additional requirements for inspection and testing not defined in the standards appearing on the order. It shall be linked to the reference of the semi-finished product drawings.

5.3 Approval

The inspection schedule shall be approved in accordance with the internal procedures defined in the purchaser's quality assurance system, as required by EN 2000.

6 Inspection and test report

6.1 General principles

An inspection and test report shall be provided with each semi-finished product delivery.

The preparation of the inspection and test report is under the responsibility of the manufacturer. This report supports the inspection document (see EN 10204) required on the order.

6.2 Preparation

The inspection and test report shall give the results of the release inspection and/or testing in accordance with the relevant standards and, where relevant, purchaser's additional instructions as stated in the order, drawing and inspection schedule.

6.3 Approval

The inspection and test report shall be approved in accordance with internal procedures defined in the manufacturer's quality assurance system as required by EN 2000.

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