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INTERNATIONAL STANDARD 1341

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION·МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ·ORGANISATION INTERNATIONALE DE NORMALISATION

Straight bevel gears — Information to be given to the manufacturer by the purchaser in order to obtain the gear required

Engrenages coniques — Indications à fournir au tailleur d'engrenages par le client pour obtenir la denture désirée

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Price based on 2 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 60 has reviewed ISO Recommendation R 1341 and found it technically suitable for transformation. International Standard ISO 1341 therefore replaces ISO Recommendation R 1341-1971 to which it is technically identical.

ISO Recommendation R 1341 was approved by the Member Bodies of the following countries :

Australia	India	Spain
Austria	Israel	Sweden
Belgium	Italy	Switzerland
Chile	Japan	Thailand
Czechoslovakia	Korea, Rep. of	Turkey
Egypt, Arab Rep. of	Netherlands	United Kingdom
Finland	New Zealand	U.S.S.R.
France	Paraguay	Yugoslavia
Germany	Poland	
Greece	South Africa, Rep. of	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

Hungary

The Member Body of the following country disapproved the transformation of ISO/R 1341 into an International Standard :

Germany

Printed in Switzerland

Straight bevel gears — Information to be given to the manufacturer by the purchaser in order to obtain the gear required

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the information which should be stated on all straight bevel gear drawings. For each particular case they should be completed by such information as may be necessary or useful.

2 REFERENCES

ISO/R 468, *Surface roughness.*

ISO 677, *Basic rack of straight bevel gears for general engineering and heavy engineering.*

ISO 1302, *Technical drawings — Method of indicating surface texture on drawings.*

ISO 2203, *Technical drawings — Conventional representation of gears.*

ISO . . ., *Conical gears — ISO system of accuracy.*[1]

3 GENERAL DIMENSIONS AND CHARACTERISTICS TO BE INDICATED ON THE DRAWING

— Tip diameter and tolerance

— Facewidth

— Tip angle

— Angle of the back cone (and, if applicable, inner cone)

— Bore diameter and tolerance (or diameter and tolerance for the part of the shaft used for the setting on the cutting machine)

— Locating face(s)

— Distance to the locating face :

a : from the pitch cone apex (locating distance) and tolerance

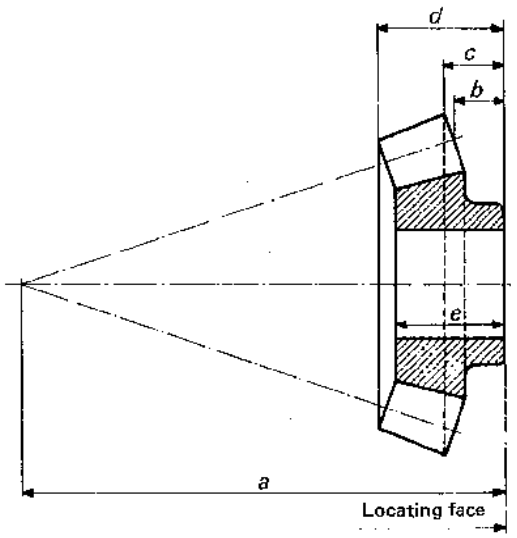
b : from the pitch circle

c : from the tip circle of the tip cone (tip distance) and tolerance

d : from the tip circle of the inner cone

e : from the inner face

— Surface finish of the tooth flank surfaces and, if applicable, of the root surface and of the fillets[2]



1) In preparation.

2) Specifications concerning surface texture and the symbols used should be in accordance with ISO/R 468 and ISO 1302.

4 INFORMATION TO BE GIVEN IN A TABLE

The following information should preferably be given in the upper right-hand corner of the drawing :

– Module of diametral pitch

– Number of teeth (for a sector : total number of teeth of the gear from which the sector is taken)

– Basic rack (give the number of the corresponding national standard or the pressure angle of 20°. If the basic rack differs from the standard rack, its characteristics should be specified, preferably by a figure)

– Reference diameter

– Reference cone angle

– Cone distance

– Addendum modification coefficient (to be expressed in unit module)

– Root angle or dedendum angle

– Tooth thickness : basic value and upper and lower deviations

– All useful information on tolerances (see ISO . . .)

– Shaft angle of the gear pair and tolerance

– Number of teeth and drawing number of the mating gear.

NOTE – The features outlined in clauses 3 and 4 are those which are considered essential. Any other useful information should be given to the gear manufacturer for the manufacture and inspection of the teeth as required by the particular form and characteristics of the gear.

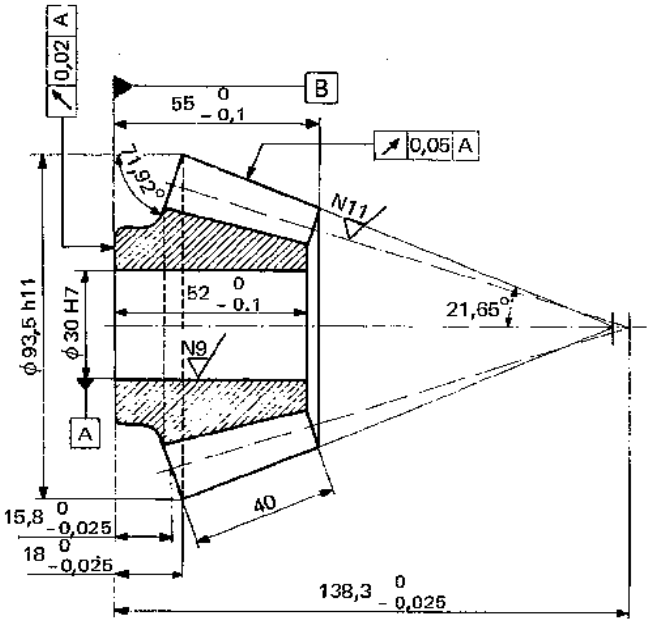
In particular :

a) the necessity of ensuring firm location of the body of the gear on the cutting machine will require that the support and clamping faces (which should be perpendicular to the axis) and their permissible axial run-out should be indicated;

b) for shafted pinions and wheels the bores of which will not be used as reference for centring, it is necessary to specify the maximum radial run-out of the surface which serves as datum for checking the centring before commencement of cutting.

5 EXAMPLE

Dimensions in millimetres



B : locating face

Characteristics of the teeth	
Module	5
Number of teeth	16
Basic rack	ISO 677 – 20°
Reference diameter	80 mm
Reference cone angle	18,08° or 18°4'48"
Cone distance	128,87 mm
Addendum modification coefficient	0,42
Root angle	16,38° or 16°22'48"
Tooth thickness : Constant chord/Addendum	$8{,}54^{-0{,}05}_{-0{,}08}$ /5,95 mm
Quality class[1]	
Shaft angle	90°
Mating gear	$z = 49$ drawing No. 54321
2)	
2)	

1) According to ISO . . . , or to a corresponding national standard.

2) Complementary information which may be necessary or useful.