INTERNATIONAL STANDARD ISO 2402

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

Shell reamers with taper bore (taper bore 1 : 30 (included)) with slot drive and arbors for shell reamers

First edition — 1972-12-01

UDC 621.951.7

Ref. No. ISO 2402-1972 (E)

Descriptors : tools, reamers, taper, dimensions.

Price based on 5 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.

International Standard ISO 2402 was drawn up by Technical Committee ISO/TC 29, *Small tools.*

It was approved in September 1971 by the Member Bodies of the following countries :

Australia
Austria
Belgium
Egypt, Arab Rep. of
France
Hungary
India
Ireland
Israel
Italy
Japan
Korea, Rep. of
Netherlands
Poland
Romania
South Africa, Rep. of
Sweden
Thailand
United Kingdom
U.S.S.R.

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Switzerland
U.S.A.

Printed in Switzerland

Shell reamers with taper bore (taper bore 1 : 30 (included)) with slot drive and arbors for shell reamers

1 SCOPE AND FIELD OF APPLICATION

This International Standard deals with

- shell reamers with taper bore, taper 1 : 30 (included) with slot drive (Tables 1 and 2);
- the corresponding arbors for shell reamers (Tables 3 and 4).

It gives dimensions

- for shell reamers with outside diameters above 19,9 mm (0.783 5 in) up to and including 101,6 mm (4 in) having taper bores with large end diameters d_1 from 10 mm (0.393 7 in) to 50 mm (1.968 5 in) and for the corresponding arbors;
- for shell reamer slots and arbor tenons (Tables 5 and 6), in order to ensure interchangeability of shell reamers and corresponding arbors, and details of a method of checking the taper elements.

It supplements ISO/R 236 and ISO/R 521.

2 REFERENCES

ISO/R 236, *Hand reamers and long fluted machine reamers, Morse taper shank.*

ISO/R 240, *Interchangeability dimensions for milling cutters and cutter arbors or cutter mandrels - Metric series and inch series.*

ISO/R 521, *Machine chucking reamers with parallel shanks or Morse taper shanks.*

ISO/R 522, *Special tolerances for reamers.*

3 GENERAL DIMENSIONS AND FITTING DIMENSIONS

The dimensions are given both in millimetres and in inches, the latter being direct conversions of the metric values, conveniently rounded.

The range of outside diameters does not correspond exactly to the ranges already established in ISO/R 236 and ISO/R 521.

The departures from these established ranges are necessary in order to maintain a relationship between the bore and the outside diameter which gives a wall thickness always sufficient to ensure the strength of the reamer.

A study was made of the possibility of adopting the dimensions given in ISO/R 240, but they were regarded as unsuitable for the present application. Since any deviation from correct size on the mating tapered elements would result in considerable movement on the arbor, it is necessary to provide longer slots and tenons in order to ensure adequate length of contact.