

INTERNATIONAL STANDARD



3962

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

Materials and equipment for petroleum and natural gas industries — Tool joints for steel drill pipe for oil or natural gas wells

Matériel et équipement pour les industries du pétrole et du gaz naturel — Raccords de tiges de forage en acier pour puits de pétrole ou de gaz naturel

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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 3962 was developed by Technical Committee ISO/TC 67, *Materials and equipment for petroleum and natural gas industries*, and was circulated to the member bodies in March 1976.

It has been approved by the member bodies of the following countries :

Austria	Germany	Romania
Belgium	Hungary	Spain
Brazil	Iran	Turkey
Canada	Italy	United Kingdom
Chile	Japan	Yugoslavia
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The member body of the following country expressed disapproval of the document on technical grounds :

U.S.A.

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Materials and equipment for petroleum and natural gas industries — Tool joints for steel drill pipe for oil or natural gas wells

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the characteristics of tool joints for steel drill pipe in conformity with ISO 2644 for use in oil or natural gas wells. It covers only those tool joints that are connected to the drill pipes by butt welding. It does not deal with tool joints connected to the drill pipes by shrink-on threads.

2 DEFINITIONS

For the purposes of this International Standard, the following definitions apply.

2.1 tool joint : The two components, one with a male (pin) thread and the other with a female (box) thread attached to the drill pipe by welding.

2.2 rotary shouldered connection : The pin and box which are threaded and machined with shoulders to mate with each other.

3 DATA TO BE GIVEN BY THE PURCHASER

The purchase order (tool joints only, drill pipes with tool joints) shall list the following elements which are necessary for the precise specification of tool joints.

3.1 Nominal size and style (according to table 1 or 6).

3.2 Taper shoulder or square shoulder (figure 1).

3.3 Tool joints with hard facing (see 5.1.2).

3.4 Anti-galling treatment of threaded rotary shouldered connections (see 5.1.3).

3.5 Optional markings by agreement between purchaser and manufacturer.

3.5.1 Useful length between shoulders, rounded off to the nearest 5 mm (applicable by the enterprise carrying out the welding work).

3.6 When ordering tool joints only, it is necessary to specify the size, style, weight and grade of drill pipe to which the tool joints are to be attached.

4 DESIGNATION

A tool joint manufactured according to this International Standard shall be designated by

- its size in millimetres;
- the style of the connection;
- a reference to this International Standard.

Example : Tool joint, NC 38 (88,9 IF), according to ISO 3962.

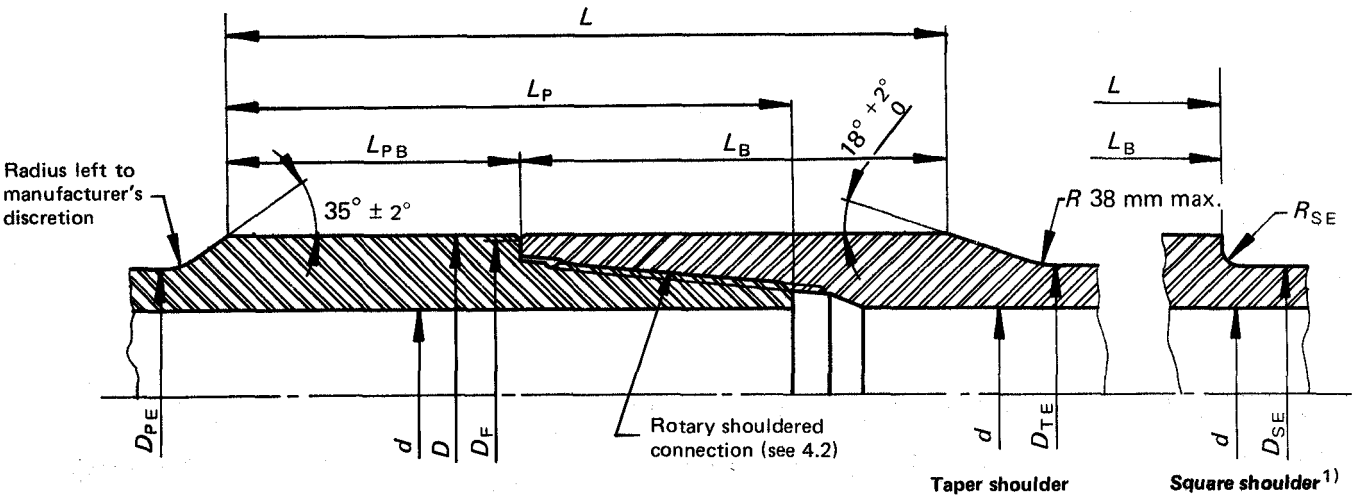


FIGURE 1 — Tool joint — Taper shoulder and square shoulder (see table 1)

Notes to table 1.

- 1) The tool joint designation (column 1) indicates the dimension and style of the applicable connection.
- 2) E.U. : external upset
I.U. : internal upset
I.E.U. : external and internal upset.
- 3) Masses per unit length, threads and tool joints (column 3) are indicated for identification in the order.
- 4) Neck diameters (D_{PE} and D_{TE}) and internal diameters (d) of tool joints before welding are at the manufacturer's option. Table 1 indicates finished dimensions after final machining of the assembly.
- 5) The inside diameter (column 6) does not apply to the box, the diameter of which is left to the manufacturer's discretion.
- 6) No torsion ratio (i.e. ratio of the pin torsion to the box torsion) below 0,80 is indicated.
In some cases, tool joints with noticeably smaller torsion values may be suitable.
- 7) The length of the male thread is reduced to 88,9 mm (reduction by 12,7 mm) to take account of the internal diameter of 76,2 mm.
- 8) "Old" connection.
- * Standard inside or outside diameter.

1) To be defined on the order between purchaser and manufacturer.