TC 188

International Standard 4566

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

Shipbuilding — Inboard-engined pleasure craft — Propeller shaft ends and bosses

Construction navale — Moteurs intérieurs pour navires de plaisance — Extrémités d'arbres porte-hélices et moyeux d'hélices

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Price based on 4 pages

Shipbuilding — Inboard-engined pleasure craft — Propeller shaft ends and bosses

1 Scope and field of application

This International Standard specifies the dimensions for interchangeability of propeller bosses and propeller shaft ends in the shaft diameter range of 20 to 160 mm with a taper of 1 : 10[1], intended for installation on inboard-engined pleasure craft.

2 References

ISO/R 773, *Rectangular or square parallel keys and their corresponding keyways (Dimensions in millimetres).*

ISO 1947, *System of cone tolerances for conical workpieces from C = 1 : 3 to 1 : 500 and lengths from 6 to 630 mm.*

3 Definitions

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

3.1 nominal diameter : Diameter of the large end of the shaft end taper, which is the same as the diameter of the cylindrical shaft, ignoring tolerances.

3.2 taper : The conical portion of the shaft end designed to transmit the full propeller shaft torque to the propeller, while allowing for disassembly.

4 Dimensions

The dimensions shall be those shown in the figure and table. The "reference dimensions" indicated in the table shall be considered nominal dimensions for guidance only.

Configurations shown in the figure not specified by dimensions in the table are not essential to interchangeability and are therefore left to the discretion of the manufacturer.

Nominal diameters without brackets shall be preferred; those in brackets are a second choice.

Thread diameters without brackets shall similarly be preferred; those in brackets are alternatives.

5 Construction details

Details indicated in the figure are not intended to restrict design; nor are they to scale. Types and methods of construction or machining of the key, the keyway and their corner radii, the thread undercut and the thread end, or of other optional details (i.e. safety pin hole, centring point, etc.) are left open for individual methods to comply with the configuration of the coupling and/or particular needs.

Length of the thread G shall be equal to thread diameter T. The part of the thread engaged by the propeller nut shall be not less than 80 % of the thread length G.

6 Tolerances

6.1 Shaft end taper small diameter, A

The tolerances shall be as given in the table. The tolerance deviations are calculated from the nominal diameter.

6.2 Boss taper large diameter, B

The tolerances shall be as given in the table.

1) A future International Standard will cover propellers and shaft ends machined to a taper of 1 : 16.

6.3 Cone angle

The tolerances shall be cone diameter tolerances as in ISO 1947 with tolerance ranges equal to the diameter tolerance ranges specified in 6.1 and 6.2 for diameters A and B respectively.

6.4 Key and keyway

The tolerances shall be those given for normal keys in ISO/R 773.

6.5 Boss length, L

The tolerance shall be ± 0,5 mm.

7 Threads

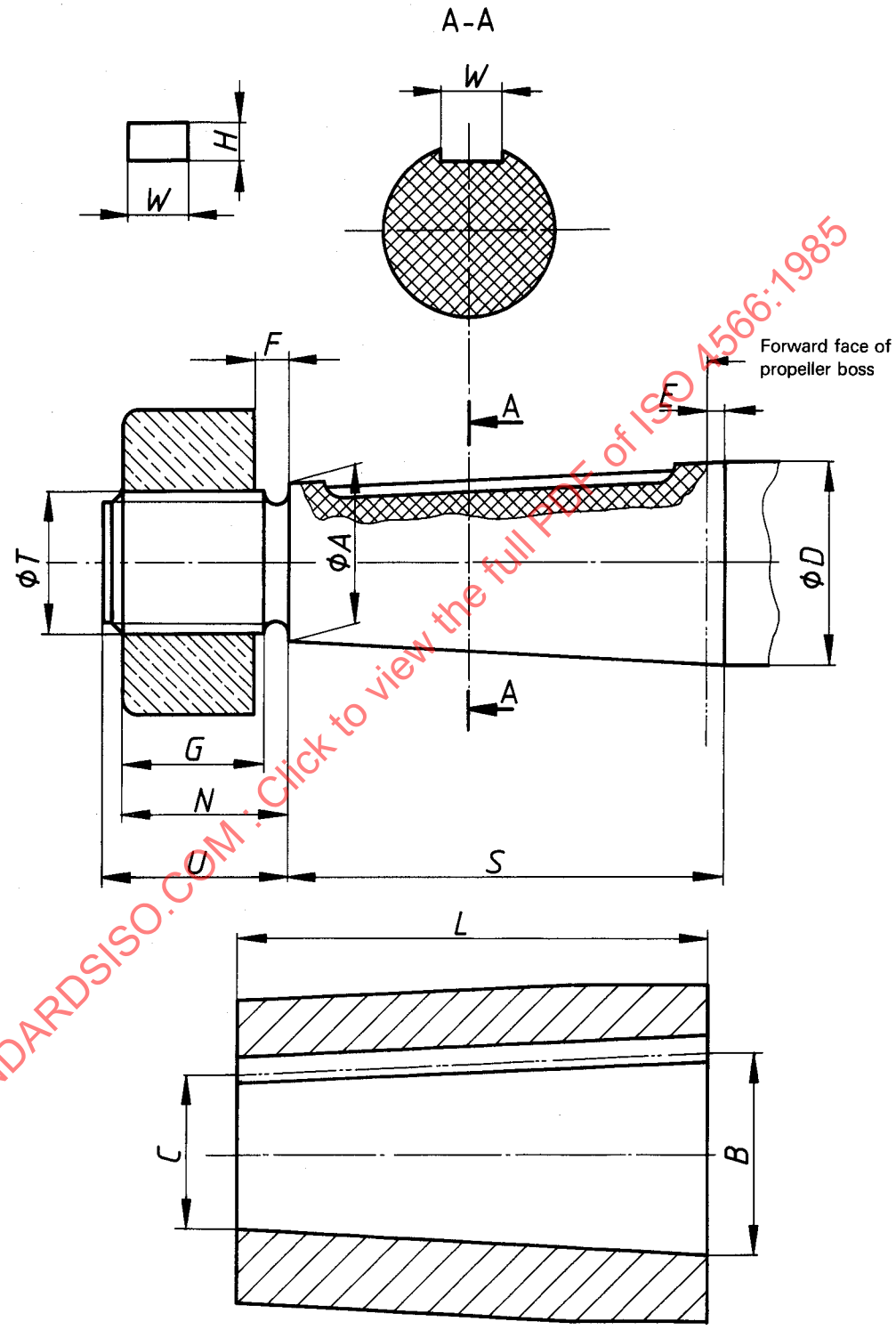
Threads shall be M fine.

8 Designation

Both shafts and propeller bosses constructed in accordance with these requirements shall be designated by a reference to this International Standard, and the nominal diameter.

Example :

Propeller boss ISO 4566-35



NOTE — G (thread length) = T
Part of thread engaged by nut 0,8 G.
See clause 5.

Figure