TECHNICAL REPORT

ISO/TR 4378-6

First edition 2012-02-01

Plain bearings — Terms, definitions, classification and symbols —

Part 6:

Abbreviated terms

Paliers lisses — Termes, définitions, classification et symboles — Partie 6: Termes abrégés



Reference number ISO/TR 4378-6:2012(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 4378-6 was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Subcommittee SC 6, *Terms and common items*.

ISO 4378 consists of the following parts, under the general title *Plain bearings* — *Terms, definitions, classification and symbols*:

- Part 1: Design, bearing materials and their properties
- Part 2: Friction and wear
- Part 3: Lubrication
- Part 4: Basic symbols
- Part 5: Application of symbols
- Part 6: Abbreviated terms [Technical Report]

Introduction

As there is a large number of multiple designations in the domain of plain bearings, there is a considerable risk of error in the interpretation of standards and technical literature. This uncertainty leads to the continuous addition of supplementary designations, which only serves to increase the confusion.

This part of ISO 4378 is an attempt to elaborate a uniform basic system of abbreviated terms.

Plain bearings — Terms, definitions, classification and symbols —

Part 6:

Abbreviated terms

1 Scope

This part of ISO 4378 gives the commonly used abbreviated terms related to plain bearings with their original terms.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4378-1, Plain bearings — Terms, definitions, classification and symbols — Part 1: Design, bearing materials and their properties

ISO 4378-2, Plain bearings — Terms, definitions, classification and symbols — Part 2: Friction and wear

ISO 4378-3, Plain bearings — Terms, definitions, classification and symbols — Part 3: Lubrication

ISO 4378-4, Plain bearings — Terms, definitions, classification and symbols — Part 4: Basic symbols

ISO 4378-5, Plain bearings — Terms, definitions, classification and symbols — Part 5: Application of symbols

3 Abbreviated terms

For the purposes of this document, the terms, definitions and symbols given in ISO 4378-1, ISO 4378-2, ISO 4378-3, ISO 4378-4 and ISO 4378-5 apply.

Each abbreviated term is a shortened form of a word or phrase relating to plain bearings. Usually, but not always, it consists of a letter or group of letters taken from the word or phrase.

The following listing is not necessarily complete. It may be enlarged, if necessary. The abbreviated terms are arranged in Roman alphabetical order.

AAS Atomic absorption spectroscopy

AE Acoustic emission

AES Auger electron spectroscopy

ATF Automatic transmission fluid

AW Anti-wear

BEM Boundary element method

BS Back scattering

CCS Cold cranking simulator

CFD Computational fluid dynamics

CIP Constrained interpolation profile

CA Centre-line average

CMA Cylindrical mirror analyser

CRT Cathode ray tube

CRV Cone resistance value

Chemical vapour deposition CVD

DDP Dialkyldithiophosphate

DL **Directed lubrication**

DLC Diamond-like carbon

DSC Differential scanning calorimetry

DTGA Differential thermo-gravimetric analysis

EDX,EDXA Energy dispersive X-ray analysis

EDTA Ethylene diamine tetraacetic acid

EELS Electron energy loss spectroscopy

EHD, EHL Elasto-hydrodynamic lubrication

ΕM Electron microprobe

ΕP Extreme pressure

Electron probe micro analysis **EPMA**

ESCA Electron spectroscopy for chemical analysis

Finite difference method FDM

FEM Finite element method

FFM Friction force microscope

FIM Field ion microscopy

FL Flooded lubrication

FMEA Failure mode and effects analysis

FTA Fault tree analysis

Fourier transform infrared spectroscopy FT-IR

FVM Finite volume method

G Cast

GS Sand

GC Continuous casting

Permanent mould GM

GΖ Centrifugal casting HL Hydrodynamic lubrication

HRTEM High-resolution transmission electron microscope

ICP Inductively coupled plasma spectrometry

IR Infrared absorption spectrometry

ISS Ion scattering spectroscopy

LBP Load between pads

LEED Low-energy electron diffraction

LIF Laser induced fluorescence

LOP Load on pad

MD Metal dithiophosphate

MFR Melt mass-flow rate

MHD Magneto-hydrodynamic

MOC Mutual overlap coefficient

MOP, MOFP Maximum oil film pressure

MOFT Minimum oil film thickness

NMR Nuclear magnetic resonance

NRRO Non-repeatable run out

Ρ Sintered

PΑ Polyamide

PAI Polyamide-imide

PAO Poly-α-olefin

PBT Polybutylene terephthalate

PCTFE Polychlorotrifluoroethylene

PΕ Polyethylene

PFAE Perfluoroalkylpolyethers

PEEK Polyetheretherketone

PET Polyethylene terephthalate

Ы Polyimide

PMOFP Peak maximum oil film pressure

POFP Peak oil film pressure

PP Pourpoint, polypropylene

PPS Polyphenylene sulfide

PTFE Polytetrafluoroethylene

PU Polyurethane

PVPV value, PV factor

PVA Peak-to-valley average, polyvinyl alcohol

PVC Polyvinyl chloride

PVD Physical vapour deposition

PVDF Polyvinylidene fluoride

RF Radio frequency

RHEED Reflection high energy electron diffraction

RRO Repeatable run-out

RT Room temperature

SAM Scanning auger microscopy

SEM Scanning electron microscopy

SFA Surface forces apparatus

SIMS Secondary ion mass spectrometry

SOAP Spectrometric oil analysis program

SPC Statistical process control

SPM Scanning probe microscope

STM scanning tunnelling microscope

TAN Total acid number

Total base number **TBN**

TCP Tricresyl phosphate

TEHD,TEHL Thermo-elasto-hydrodynamic lubrication

TEM Transmission electron microscope

THD,THL Thermo-hydrodynamic lubrication

TLC Thin-layer chromatography

TML Total mass loss

ToF-SIMS Time-of-flight secondary ion mass spectrometry

TPJB Tilting pad journal bearing

TPTB Tilting pad thrust bearing

V١ Viscosity index

XAS X-ray absorption spectroscopy

XPS X-ray photoelectron spectroscopy

ZDDP, ZnDTP Zinc dialkyldithiophosphate

Bibliography

- [1] ISO 4383, Plain bearings — Multilayer materials for thin-walled plain bearings
- [2] ISO 6281, Plain bearings — Testing under conditions of hydrodynamic and mixed lubrication in test rigs
- [3] ISO 12128, Plain bearings — Lubrication holes, grooves and pockets — Dimensions, types, designation and their application to bearing bushes
- KAJDAS, C., HARVEY, S.S.K., WILUSZ, E., Encyclopaedia of Tribology. Tribology series 15, Elsevier [4] Science, 1990
- Japanese Society of Tribologists, Tribology dictionary technology. Yokendo, 1995 [5]

---,,,---,,,,,-------,,,-,,-,,-,,-

ICS 01.040.21; 21.100.10

Price based on 6 pages