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Plain bearings — Lubrication characteristics of crosshead pin bearings for low-speed marine diesel engines

Paliers lisses — Caractéristiques de lubrification des paliers de crosse pour moteurs diesels marins à vitesse faible

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Foreword

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The committee responsible for this document is ISO/TC 123, *Plain bearings*, Subcommittee SC 7, *Special types of plain bearings*.

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Introduction

For crosshead pin bearings, with which a shaft oscillates when a load is applied mainly in a downward direction, it is difficult to generate an appropriate lubricating film; therefore, they are subject to unfavourable lubricating conditions. For better lubrication of crosshead pin bearings, which have a high rate of damage, two types of bearing structures are mainly used as oil supply methods for sliding surfaces at present. The characteristics of those bearings are compared and the concept of design approaches is standardized.

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Plain bearings — Lubrication characteristics of crosshead pin bearings for low-speed marine diesel engines

1 Scope

This Technical Report specifies lubrication characteristics of grooves and pockets on crosshead pin bearings for low-speed marine diesel engines.

It is applicable to the design of axial oil groove and pocket types as an oil supply method.

2 Crosshead pin bearing and its symbols

The crosshead pin bearing and changes in specific load and angular velocity during one cycle are schematically illustrated in Figures 1 and 2. Table 1 shows the symbols and their descriptions.

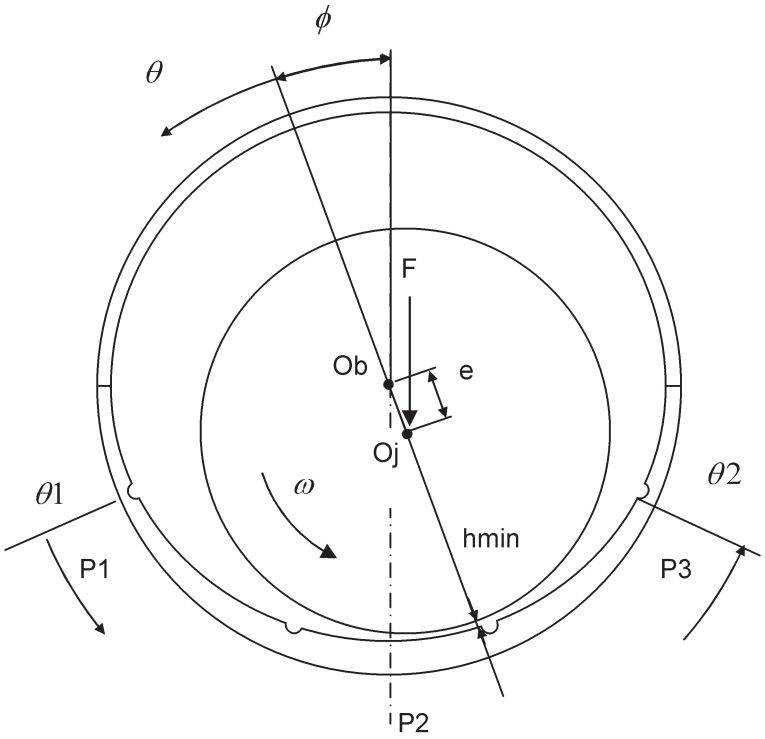


Figure 1 — Crosshead pin bearing

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