Ingress Protection Testing

Plummer Block bearing housing, with Labtecta PB sealing technology

AESSEAL Australia PTY LTD.

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 – Testing.

The results of the tests, calibrations and measurements included in this report are traceable to national standards.

NATA Accredited Laboratory Number: 2681.

Simtars
Safety in mines testing and research station

Report Information

Title: IP66 Testing of a Plummer Block bearing housing with Labtecta sealing technology.

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Test Date: 10th to 28th February 2025

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Accredited to ISO/IEC 17025

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1.0 Introduction

At the request of AESSEAL Australia Pty Ltd, Ingress Protection (IP) testing was conducted at Simtars Redbank facility on 10th -28th February 2025. The aim of testing was to determine an IP66 Rating against the applicable criteria specified in AS 60529:2004[1]. IEC 60529.

2.0 Description of Apparatus

A CBC Standard 'Plummer Block' bearing housing, approximately 220 mm diameter x 210 mm wide, with Labtecta PB sealing technology was submitted by AESSEAL Australia Pty Ltd, for IP testing to determine an IP66 rating. The cast iron 'Plummer Block' bearing housing and Labtecta PB sealing, secures and seals a drive shaft to internal roller bearings located in the bearing housing, sealing the lubricated bearings inside the bearing housing.

The 'Plummer Block' bearing housing sample was first numeral 6 tested for 8 hrs with not more than -2kPa vacuum applied to the housing and tested with bearings in a stationary position for 8 hours, then inspected. It was then tested with the bearings revolving for an 8hr duration, then inspected for ingress. The powered test was carried out with the shaft rotating the bearings at approximately 150 rpm, driven by an electric motor. On completion of each test, static or revolving. The sample was opened for inspection of dust and water ingress.

3.0 Test Specification

The equipment mentioned above was assessed and tested in static mode and with the bearings in a revolving mode, for IP66 compliance against the appropriate clauses specified in AS 60529-2004.

4.0 Results

The Plummer Block bearing housing with Labtecta PB sealing sample provided by AESSEAL Australia, complies with the relevant requirements of AS 60529:2004 and achieved a degree of protection of IP66.

5.0 Conditions

All sealing washers, O-rings, gaskets and sealing compound must be assembled and maintained in accordance with the manufacturer's specifications to maintain the IP66 rating.

6.0 Additional Information

This test report is valid only for the sample tested by Simtars, as shown in the photographs below.

[1] Australian Standard 60529:2004 – Degrees of protection provided by enclosures (IP Code)

Photograph 1: In dust chamber after first numeral 6 test

Photograph 2: Positioned for Second numeral 6 test

Photograph 3: During second numeral 6 test

Photograph 4: After dust and water tests the bearing hosing was opened for visual inspection. No ingress was noted

7.0 Actual Plummer Block bearing housing submitted for testing

Photo of test sample taken after testing