ISO 7986:2026-10 (E)

Hydraulic fluid power - Sealing devices - Standard test methods to assess the performance of rod seals used in oil hydraulic reciprocating applications

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Letter symbols 1

5 Test installation 2
5.1 General 2
5.2 Mechanical details 7
5.2.1 Test rig rod 7
5.2.2 Test rig stroke 7
5.2.3 Test seal housing dimensions 7
5.2.4 Leakage collection and drain 8

6 Test parameters 10
6.1 Test environment 10
6.2 Test fluid 11
6.3 Test fluid temperature 11
6.4 Test housing rod bearings 11
6.5 Test fluid pressure 11
6.6 Speed of linear actuator 11
6.7 Pressure and stroke cycle for dynamic test 11

7 Assembly of seals 13

8 Methods of measurement and measuring apparatus 13
8.1 Seal leakage 13
8.2 Seal friction 13
8.2.1 Load cell 13
8.2.2 Determination of dynamic seal friction 14
8.2.3 Procedure for determining breakout friction 14
8.3 Pressure measurement 15
8.3.1 Pressure gauge 15
8.3.2 Pressure transducer 15
8.4 Surface roughness 15
8.5 Temperature measurement 15

9 Calibration 16

10 Test procedure 16
10.1 Test programme 16
10.2 Repeat series 17

11 Presentation of results 17

12 Identification statement (reference to this document) 17

Annex A (normative) Seal and seal housing dimension data forms 18

Annex B (normative) Test results 20

Annex C (normative) Seal performance report 21

Bibliography 24