

# ISO 16589-4:2011-04 (E)

## Rotary shaft lip-type seals incorporating thermoplastic sealing elements - Part 4: Performance test procedures

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>2</b>
<b>4</b>	<b>Pre-test procedure .....</b>	<b>2</b>
<b>5</b>	<b>Dynamic normal temperature test .....</b>	<b>2</b>
5.1	Test apparatus .....	2
5.2	Installation .....	4
5.3	Test conditions .....	5
5.4	Test procedure .....	5
5.5	Post-test measurements .....	5
5.6	Recording .....	5
5.7	Acceptance criteria .....	5
<b>6</b>	<b>Dynamic low temperature test .....</b>	<b>5</b>
6.1	General .....	5
6.2	Test apparatus .....	5
6.3	Installation .....	6
6.4	Test procedure .....	6
6.5	Post-test measurements .....	7
6.6	Recording .....	7
6.7	Acceptance criteria .....	7
<b>7</b>	<b>Material testing of the rotary shaft seal components .....</b>	<b>7</b>
7.1	General .....	7
7.2	Metallic components (cases) .....	7
7.3	Non-metallic components .....	7
7.3.1	Thermoplastic sealing elements .....	7
7.3.2	Elastomeric sealing elements -- gaskets, protection lip and sealant .....	7
Annex A (informative) Typical example of seal test report for the dynamic normal temperature test ..		8
Annex B (informative) Typical example of a seal test report for the dynamic low temperature test ...		10
Annex C (informative) Typical example of a material test report (thermoplastic element) .....		12
Annex D (informative) Typical example of a material test report (elastomeric element) .....		13
Bibliography .....		15