

ISO 6621-5:2020-01 (E)

Internal combustion engines - Piston rings - Part 5: Quality requirements

Contents		Page
Foreword	.....	iv
Introduction	.....	v
1 Scope	.....	1
2 Normative references	.....	1
3 Terms and definitions	.....	1
4 Visible defects	.....	2
4.1 General	.....	2
4.2 Pores, cavities and sand inclusions	.....	2
4.3 Scratches, indentations, depressions and cracks	.....	2
4.3.1 Scratches	.....	2
4.3.2 Indentations, depressions	.....	3
4.3.3 Cracks	.....	3
4.4 Edges	.....	3
4.4.1 Edge configuration	.....	3
4.4.2 Chipping and similar defects on peripheral edges and peripheral edges at the gap	.....	4
4.4.3 Chipping and defects on non-peripheral edges	.....	8
4.4.4 Chipping and defects on inside gap corners	.....	8
4.5 Other characteristics subject to visual inspection only	.....	9
4.5.1 Discolouring or staining of surface	.....	9
4.5.2 Casting skin and deposits on inside surface	.....	9
4.5.3 Chipping on uncoated surfaces	.....	9
4.5.4 Chromium plated peripheral surface	.....	9
4.5.5 Spray coatings	.....	9
4.5.6 Nitrided surfaces	.....	9
4.5.7 Pin Holes in PVD coated piston ring surface	.....	10
5 Loss of tangential force under temperature effects	.....	10
6 Raised material caused by marking of rings	.....	10
7 Machining of periphery and sides — Unintentional deviation from ideal profile and flatness	.....	11
7.1 General	.....	11
7.2 Permissible deviations for peripheral surface profile	.....	11
7.2.1 Straight faced rings according to ISO 6622 (all parts) and ISO 6624 (all parts)	.....	11
7.2.2 Straight faced rings without IW/IF according to ISO 6622 (all parts), ISO 6624-1 and ISO 6624-3	.....	11
7.2.3 Straight faced rings with IW/IF according to ISO 6622 (all parts), ISO 6624-1 and ISO 6624-3 and straight faced rings according to ISO 6624-2 and ISO 6624-4	.....	11
7.2.4 S, G, D and DV type oil control rings according to ISO 6625	.....	11
7.2.5 SF type, coil spring loaded oil control rings according to ISO 6626, ISO 6626-2, and ISO 6626-3	.....	11
7.3 Permissible side face unevenness	.....	11
7.4 Permissible helix	.....	12
Bibliography	.....	13