



GORE® GR

SHEET GASKETING

Technical bulletin – EN 13555 tests: P_{QR} (Creep relaxation)

Product: GORE® GR sheet gasketing
Test dates: November 2005 – February 2006
Test institute: Fachhochschule Münster
Test procedures: Creep relaxation test according to EN 13555

TEST OVERVIEW:

P_{QR} corresponds to the ratio between the gasket stress of the seal after the gasket has been compressed and the initial gasket stress during installation, at a predefined temperature.

The ideal P_{QR} value is 1. The closer the test value is to the ideal value, the lower the loss of gasket stress of the seal.

P_{QR} is measured at different temperatures, initial gasket stress, seal thickness values and flange rigidity values (in this case: 500 kN/mm).

The seal initially is exposed to the predefined gasket stress, then the temperature is increased and maintained for four hours. The residual gasket stress is then measured.

The surface pressure drops during the heat-up and exposure phases. By far the greatest proportion of the gasket stress loss takes place during heat-up.



TEST RESULTS:

Material	Initial gasket stress [MPa]	Thickness [mm]	Temperature [°C]	P _{QR} [1]
GORE® GR	30	1.6	20	0.95
GORE® GR	30	1.6	150	0.85
GORE® GR	30	1.6	230	0.77
GORE® GR	30	3.2	20	0.89
GORE® GR	30	3.2	150	0.74
GORE® GR	30	3.2	230	0.65
GORE® GR	30	6.4	20	0.82
GORE® GR	30	6.4	150	0.53
GORE® GR	30	6.4	230	0.48

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