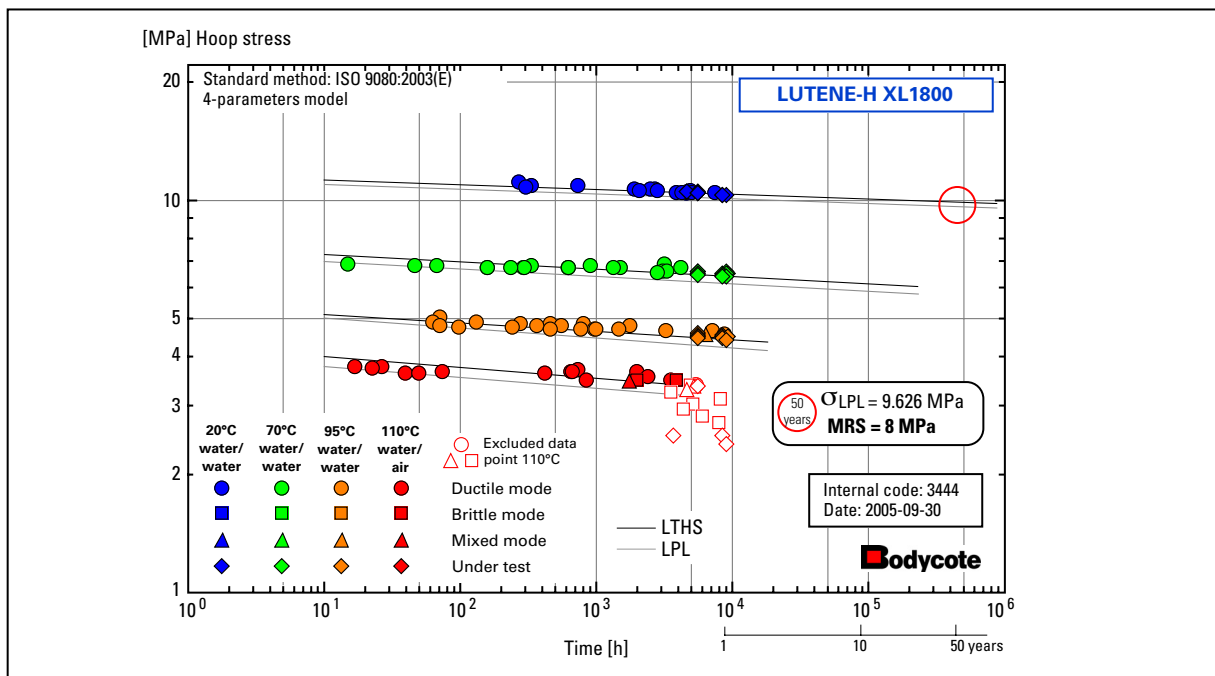


Client: LG Chem, Ltd.

Regression analysis according to ISO 9080 of the PE-Xa pipe grade LUTENE-H XL1800



Introduction

Bodycote Polymer offers accredited testing and evaluation according to ISO 9080, i.e. hydrostatic pressure testing followed by evaluation of the long-term hydrostatic strength and MRS-classification according to ISO 12162.

Task

The aim was to use the Standard Extrapolation Method (SEM) according to ISO 9080:2003 in order to obtain a classification of the PE-Xa pipe grade LUTENE-H XL1800 from LG Chem, Ltd.

The work covers hydrostatic pressure testing at 20, 70, 95 and 110°C and a SEM-evaluation according to ISO 9080:2003.

Results obtained

The evaluation was performed in accordance with ISO 9080:2003. The 4-parameters model gave the best fit.

Number of observations

20°C	70°C	95°C	110°C
30	31	30	32

Extrapolated strength values

Temp °C	Time yrs	σ_{LPL} MPa	σ_{LTHS} MPa
20	50.0	9.626	9.899
20	100	9.539	9.815
70	26.5	5.778	6.027
95	2.07	4.141	4.355
110	0.53	3.178	3.370

Classification: MRS = 8 MPa

Please contact us for further information!