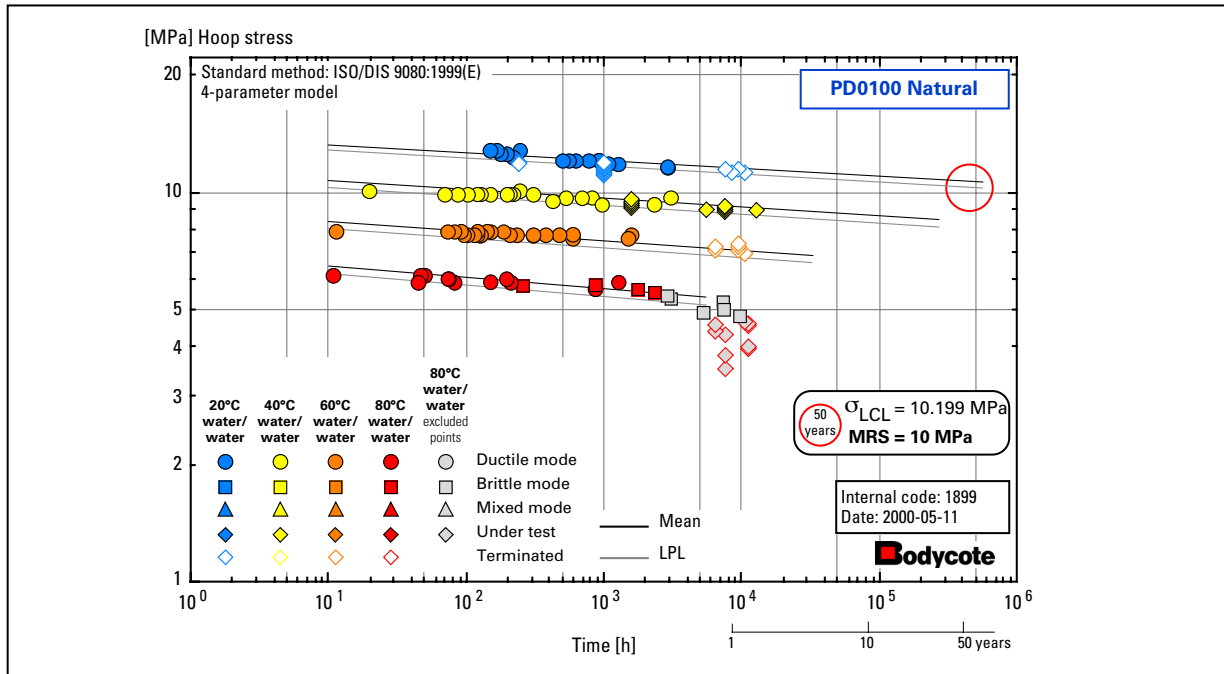


Client: LG Petrochemical Ltd.

Regression analysis according to ISO/DIS 9080 of the PE pipe grade PD0100 Natural



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/DIS 9080:1997(E) in order to obtain a classification of the PE pipe grade PD0100 Natural from LG Petrochemical Ltd.

The work covers hydrostatic pressure testing at 20, 40, 60 and 80°C and a SEM-evaluation according to ISO/DIS 9080:1999(E).

Results obtained

The evaluation was performed in accordance with ISO/DIS 9080:1999(E). The 4-parameter model gave the best fit.

Number of observations

20°C	40°C	60°C	80°C
30	30	30	32

Extrapolated strength values

Temp °C	Time yrs	σ_{LPL} MPa	σ_{LTHS} MPa
20	50.0	10.199	10.559
20	62.4	10.151	10.513
40	31.2	8.079	8.400
60	3.75	6.511	6.790
80	0.62	5.081	5.329

Classification: MRS = 10 MPa

Please contact us for further information!