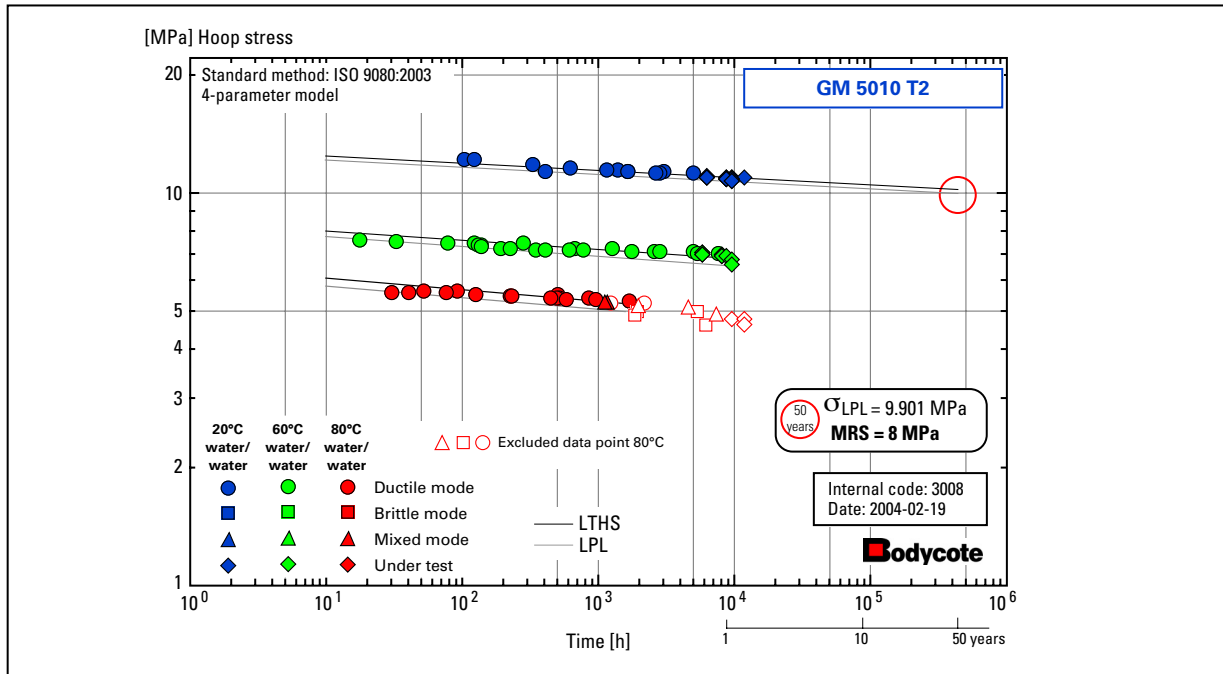


Client: Ipiranga Petroquímica S.A.

Regression analysis according to ISO 9080 of the PE pipe grade GM 5010 T2



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 black PE pipe grade GM 5010 T2 from Ipiranga Petroquímica S.A.

The work covers hydrostatic pressure testing at 20, 60 and 80°C and a SEM-evaluation according to ISO 9080:2003.

Results obtained

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

Number of observations

20°C	60°C	80°C
30	32	30

Extrapolated strength values

Temp °C	Time yrs	σ_{LPL} MPa	σ_{LTHS} MPa
20	50.0	9.901	10.232
20	50.0	9.901	10.232
60	1.11	6.489	6.758
80	0.18	6.787	7.059

Classification: MRS = 8 MPa

Please contact us for further information!