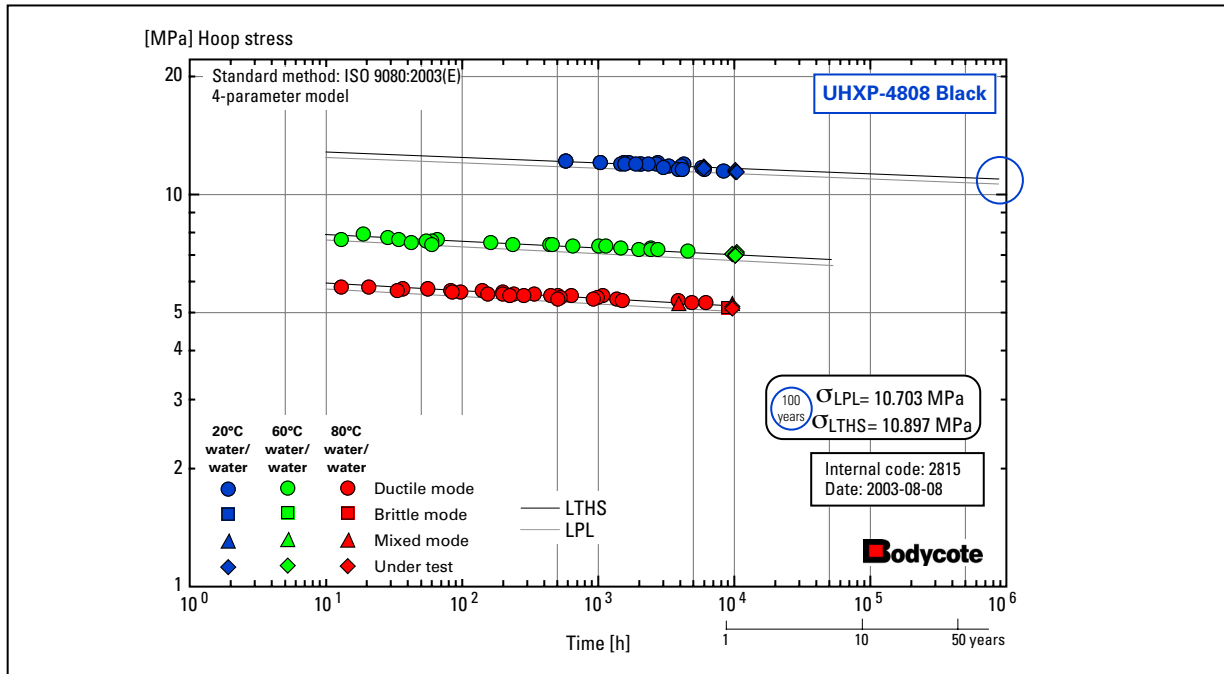


Client: Univation Technologies

Regression analysis according to ISO 9080 of the PE pipe grade UHXP-4808 Black



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(E) in order to obtain a classification of the PE pipe grade UHXP-4808 Black from Univation Technologies.

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

Results obtained

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

Number of observations

20°C	60°C	80°C
30	30	34

Extrapolated strength values

Temp °C	Time yrs	σ_{LPL} MPa	σ_{LTHS} MPa
20	50.0	10.807	11.000
20	100	10.703	10.897
60	6.00	6.631	6.780
80	1.00	5.044	5.169

Classification: MRS = 10 MPa

Please contact us for further information!