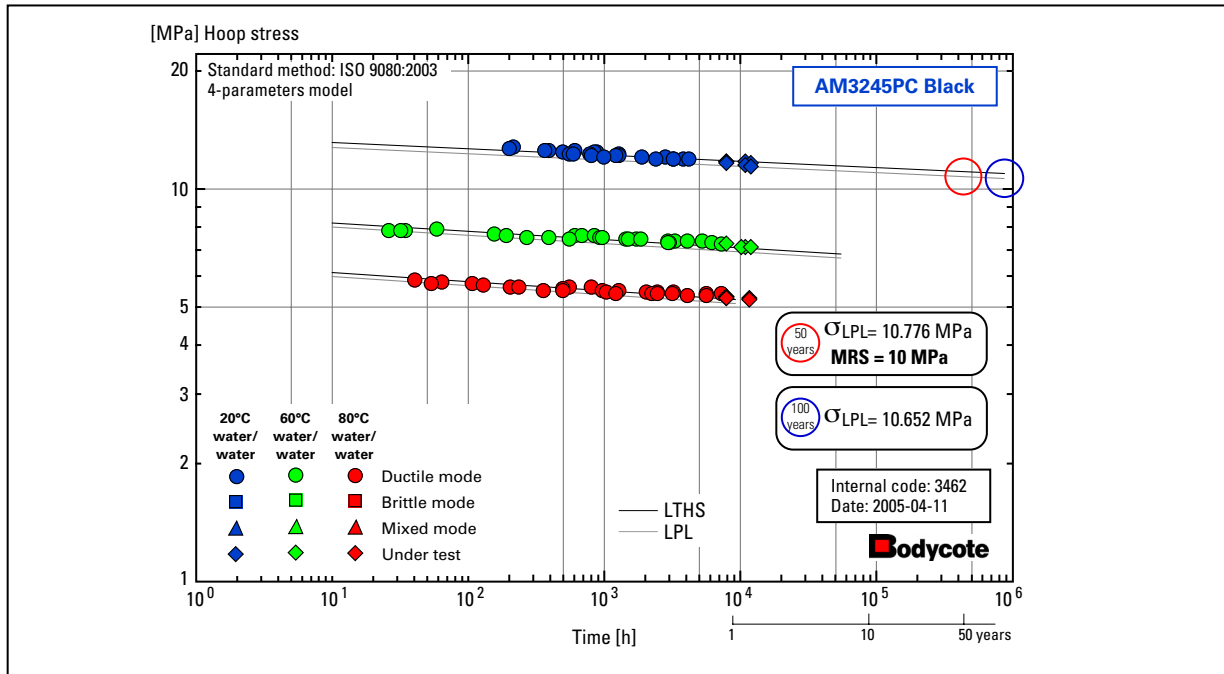


Client: IRPC Public Company Limited

Regression analysis according to ISO 9080 of the PE pipe grade AM3245PC Black



Introduction

Bodycote Polymer offers accredited testing and evaluation according to ISO 9080:2003, 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 in order to obtain a classification of the PE pipe grade AM3245PC Black from IRPC Public Company Limited.

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

Results obtained

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

Number of observations

20°C	60°C	80°C
30	30	32

Extrapolated strength values

Temp °C	Time yrs	σ_{LPL} MPa	σ_{LTHS} MPa
20	50.0	10.776	11.031
20	100	10.652	10.910
60	6.34	6.643	6.837
80	1.06	5.053	5.216

Classification: MRS = 10 MPa