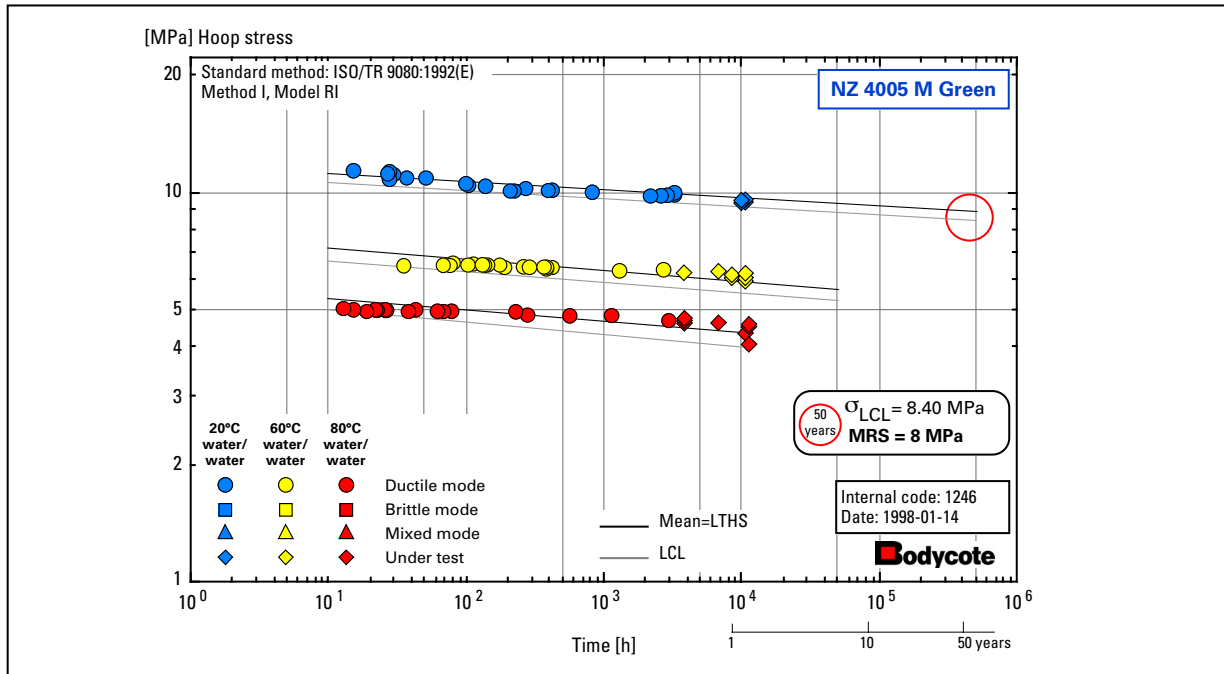


Client: Mitsui Chemicals Inc.

Regression analysis according to ISO/TR 9080 of the PE pipe grade NZ 4005 M Green



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/TR 9080:1992(E) in order to obtain a classification of the PE pipe grade NZ 4005 M Green from Mitsui Chemicals Inc.

The work covers hydrostatic pressure testing at 20, 60 and 80°C and a SEM-evaluation according to ISO/TR 9080:1992(E).

Results obtained

The evaluation was performed in accordance with ISO/TR 9080:1992(E). Method I and Model RI gave the lowest lack of fit.

Number of observations

20°C	60°C	80°C
25	26	27

Extrapolated strength values

Temp °C	Time yrs	σ_{LCL} MPa	σ_{LTHS} MPa
20	50.0	8.40	8.87
20	58.3	8.38	8.84
60	5.83	5.24	5.60
80	1.16	3.99	4.30

Classification: MRS = 8 MPa

Please contact us for further information!