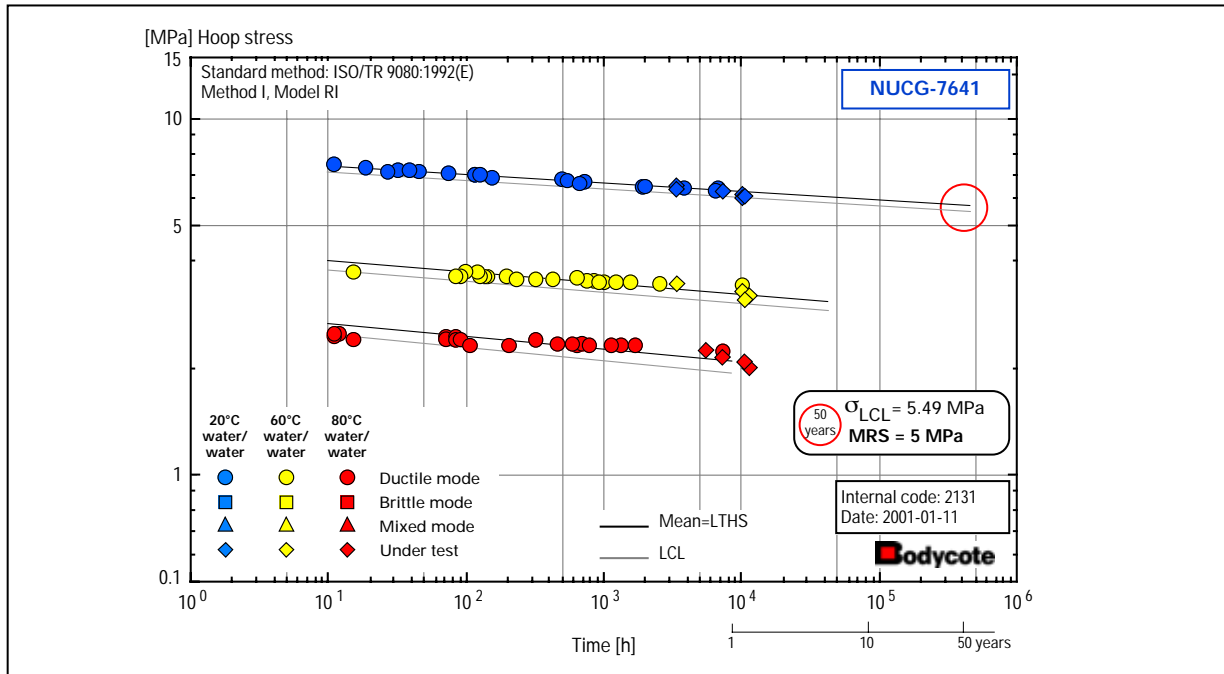


Client: Nippon Unicar Co., Ltd.

Regression analysis according to ISO/TR 9080 of the LDPE pipe grade NUCG-7641



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 NUCG-7641 from Nippon Unicar Co., Ltd.

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
26	25	25

Extrapolated strength values

Temp °C	Time yrs	σ_{LCL} MPa	σ_{LTHS} MPa
20	50.0	5.49	5.74
20	52.2	5.48	5.74
60	4.82	2.89	3.07
80	0.96	1.94	2.08

Classification: MRS = 5 MPa

Please contact us for further information!