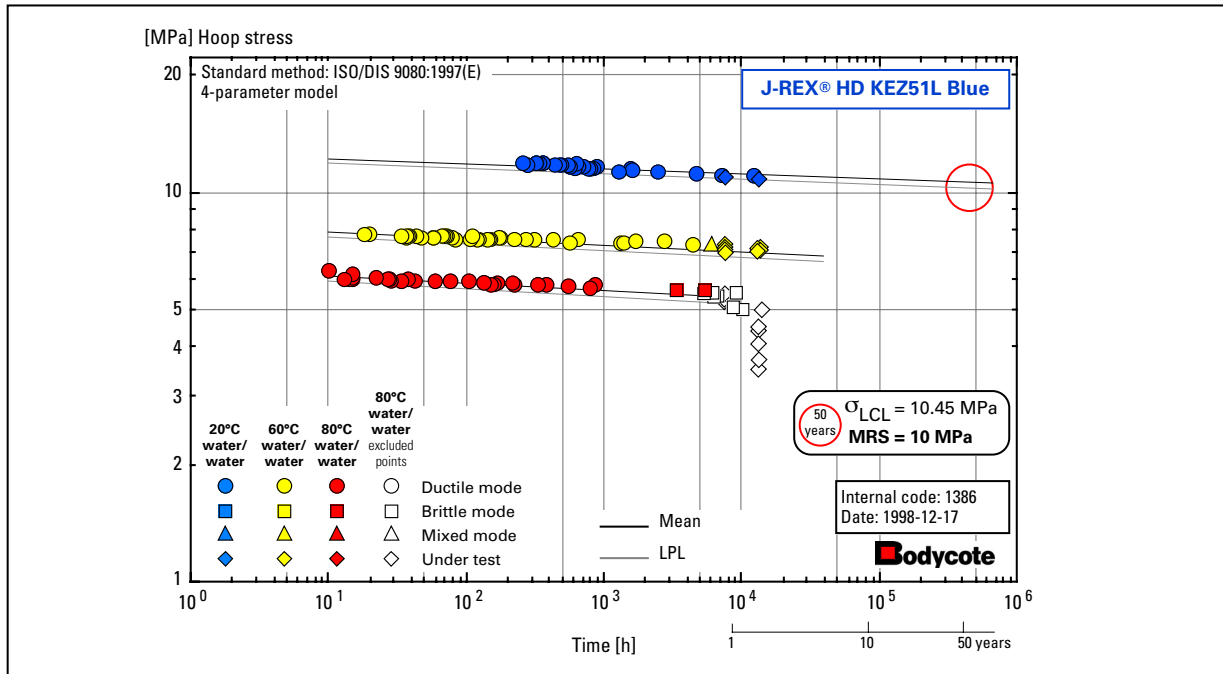


Client: Japan Polyolefins Co., Ltd.

Regression analysis according to ISO/DIS 9080 of the PE pipe grade J-REX® HD KEZ51L 431 Blue

(renamed from J-REX® HD TR431 blue)



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/DIS 9080:1997(E) in order to obtain a classification of the PE pipe grade J-REX® HD KEZ51L Blue from Japan Polyolefins Co., Ltd.

The work covers hydrostatic pressure testing at 20, 60 and 80°C and a SEM-evaluation according to ISO/DIS 9080:1997(E).

Results obtained

The evaluation was performed in accordance with ISO/DIS 9080:1997(E). The 4-parameter model gave the best fit.

Number of observations

| 20°C | 60°C | 80°C |
|------|------|------|
| 30 | 46 | 45 |

Extrapolated strength values

| Temp °C | Time yrs | σ_{LPL} MPa | σ_{LTHS} MPa |
|---------|----------|--------------------|---------------------|
| 20 | 50.0 | 10.451 | 10.713 |
| 20 | 76.8 | 10.388 | 10.651 |
| 60 | 4.61 | 6.752 | 6.963 |
| 80 | 0.77 | 5.273 | 5.461 |

Classification: MRS = 10 MPa

Please contact us for further information!