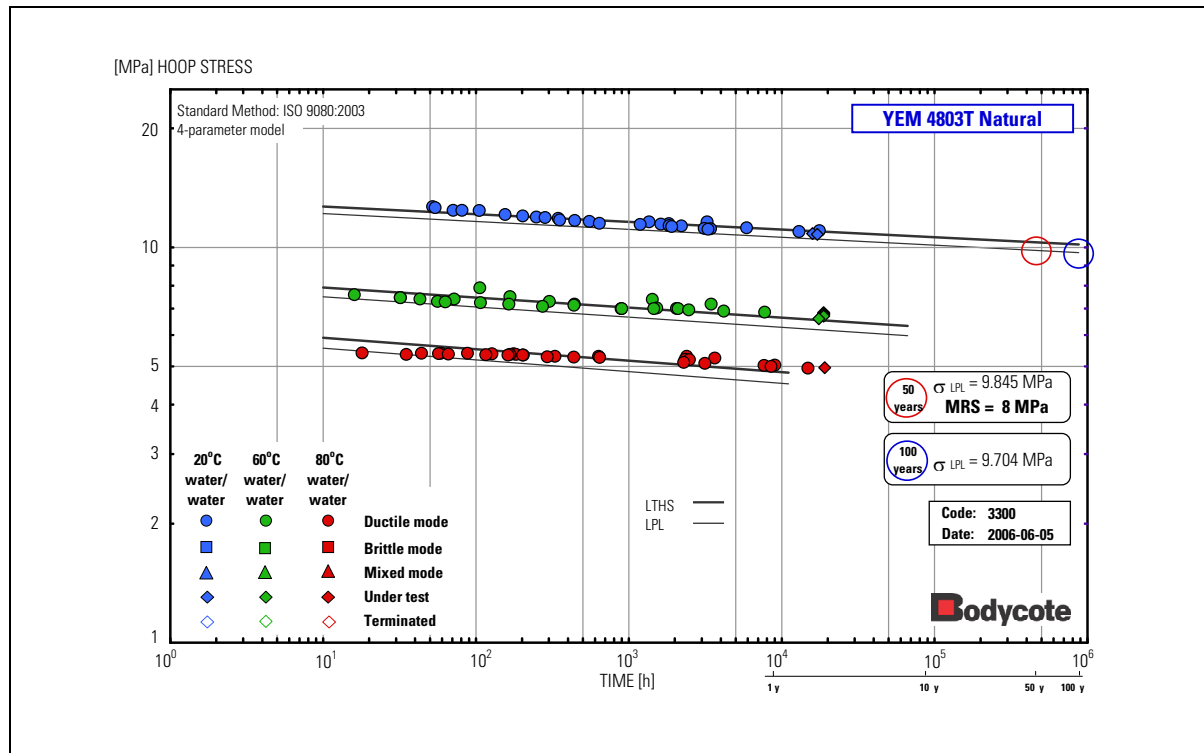


Client: Yangzi Petrochemical Co., Ltd

# Regression analysis according to ISO 9080 of the PE pipe grade YEM 4803T Natural



## 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 in order to obtain a classification of the PE pipe grade YEM 4803T Natural, from Yangzi Petrochemical Co., Ltd.

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

## Results obtained

The evaluation was performed in accordance with ISO 9080:2003. The 4-parameter model gave the best fit. Detailed information can be found in Bodycote Report P-06/95a.

### Number of observations

20°C	60°C	80°C
30	31	31

### Extrapolated strength values

Temp °C	Time Yrs	$\sigma_{LPL}$ MPa	$\sigma_{LTHS}$ MPa
20	50.0	9.845	10.310
20	100	9.704	10.172
60	7.59	5.976	6.331
80	1.27	4.518	4.821

**Classification: MRS = 8 MPa**

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