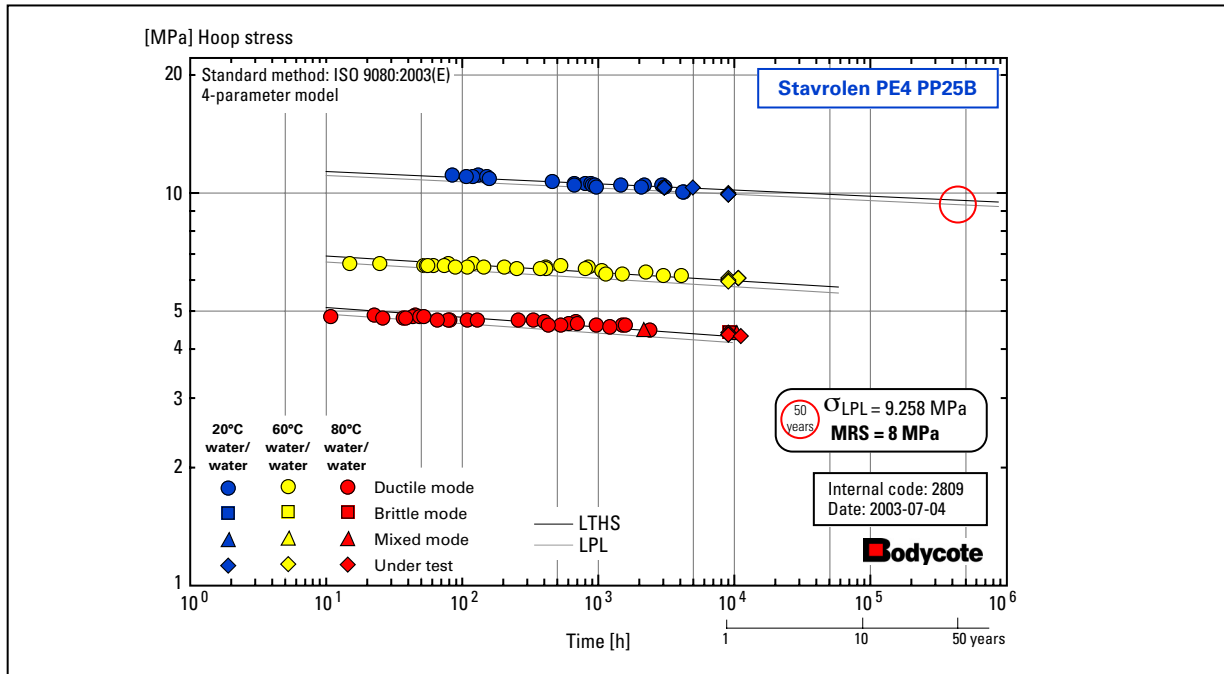


Client: LUKOIL Chemical Group

# Regression analysis according to ISO 9080 of the PE pipe grade Stavrolen PE4 PP25B



## 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(E) in order to obtain a classification of the PE pipe grade Stavrolen PE4 PP25B from Stavrolen Ltd., Russia. LUKOIL Chemical Group sponsored this work.

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

## Results obtained

The evaluation was performed in accordance with ISO 9080:2003(E). The 4-parameter model gave the best fit.

### Number of observations

20°C	60°C	80°C
30	32	34

### Extrapolated strength values

Temp °C	Time yrs	$\sigma_{LPL}$ MPa	$\sigma_{LTHS}$ MPa
20	50.0	9.258	9.510
20	100	9.154	9.407
60	6.69	5.549	5.740
80	1.11	4.148	4.307

**Classification: MRS = 8 MPa**

Please contact us for further information!