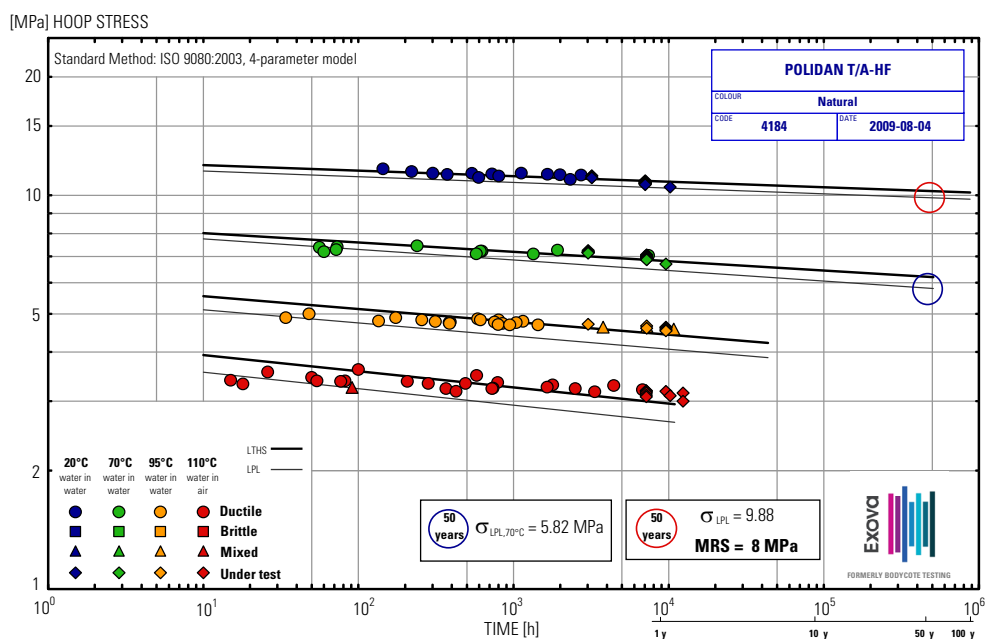


CLIENT: Solvay Padanaplast S.p.A

REGRESSION ANALYSIS ACCORDING TO ISO 9080 OF THE PE-X PIPE GRADE POLIDAN® T/A-HF



INTRODUCTION

Exova (formerly Bodycote Testing) 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.

The evaluation was performed in accordance with ISO 9080:2003. The 4-parameter model gave the best fit. More information can be found in Report P-09/97.

TASK

The aim was to evaluate the compound according to ISO 9080 in order to obtain a MRS-classification according to ISO 12162 of the PE-X pipe grade POLIDAN® T/A-HF from Solvay Padanaplast S.p.A.

RESULTS OBTAINED

10 000 hours of exposure time at each testing temperature was fulfilled according to DIN 16892 (DIN 16887). The PE-X pipe grade POLIDAN® T/A-HF also fulfilled the Class 1, 2, 4 and 5 performance requirements according to DIN 16892 and ISO 15875.

EXTRAPOLATED STRENGTH VALUES

Temp [°C]	Time [Yrs]	σ_{LPL} [MPa]	σ_{LTHS} [MPa]
20	50	9.88	10.27
20	100	9.78	10.17
70	50	5.82	6.22
70	57.9	5.80	6.20
95	4.64	3.87	4.22
110	1.16	2.65	2.95

CLASSIFICATION

MRS = 8 MPa

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