EXOVA MATERIALS TECHNOLOGY Plastic Pipes

CLIENT: OAO Nizhnekamskneftekhim

REGRESSION ANALYSIS ACCORDING TO ISO 9080 OF THE PE PIPE COMPOUND PE6949C



INTRODUCTION

Exova 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 evaluate the pipe grade according to ISO 9080:2012, in order to obtain a MRS-classification according to ISO 12162 of the PE pipe compound PE6949C from OAO Nizhnekamskneftekhim.

According to ISO 4427-1:2007, for PE 100 pipe materials there shall be no knee detected in the regression curve before 5 000 h at 80°C.

RESULTS OBTAINED

The evaluation was performed in accordance with ISO 9080:2012. More information can be found in Exova Report P-17/12.

EXTRAPOLATED STRENGTH VALUES

T [°C]	Time [Yrs]	G LPL [MPa]	б ітня [MPa]
20	50.0	10.81	11.17
20	64.5	10.77	11.13
60	2.10	7.09	7.38
80	0.35	5.50	5.76

CLASSIFICATION MRS = 10 MPa

This only covers the ISO 9080-evaluation, MRS classification and material designation. Any additional requirements for PE 100 pipe grade are given in the relevant product standards.

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