INTERNATIONAL STANDARD

ISO 10928

Second edition
2009-09-15

AMENDMENT 1
2013-07-01

Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Methods for regression analysis and their use — Amendment 1

Systèmes de canalisation en matières plastiques — Tubes et raccords plastiques thermodurcissables renforcés de verre (PRV) — Méthodes pour une analyse de régression et leurs utilisations — Amendement 1

Reference number
ISO 10928:2009/Amd.1:2013(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 6, *Reinforced plastics pipes and fittings for all applications*.

Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Methods for regression analysis and their use — Amendment 1

Page 49, Annex D

Replace Annex D with the following:

Annex D
(informative)

Calculation of Lower Confidence and Lower Prediction Limits for Method A

D.1 Introduction

The calculation of confidence limits is not required by any of the ISO or CEN test methods or referring standards. However, the calculation of lower confidence limit (*LCL*) and lower prediction limit (*LPL*) is required by other standards (ASTM for example) using the same basic covariant analysis procedures of test data collected by similar test methods.

D.2 Calculation of Quantities and Variances

Calculate the quantity B using Equation (D.1):

$$B = -D \times X(1+E) \tag{D.1}$$

Calculate the variance A of α using Equation (D.2):

$$A = D\left[X^2(1+E) + Q_{xy}/b\right] \tag{D.2}$$

Calculate the variance σ_n^2 of the fitted line at x_L using Equation (D.3):

$$\sigma_n{}^2 = A + Bx_L + Cx_L{}^2 \tag{D.3}$$

Calculate the error variance σ_ε^2 using Equation (D.4):

$$\sigma_\varepsilon{}^2 = 2\Gamma\sigma_\delta{}^2 \tag{D.4}$$

Calculate the total variance σ_y^2 for future values of y_L at x_L using Equation (D.5):

$$\sigma_y{}^2 = \sigma_n{}^2 + \sigma_\varepsilon{}^2 \tag{D.5}$$

Calculate the estimated standard deviation σ_y for y_L using Equation (D.6):

$$\sigma_y = (\sigma_n{}^2 + \sigma_\varepsilon{}^2)^{0,5} \tag{D.6}$$

D.3 Calculation of Confidence Intervals

Calculate the predicted value y_L for y at x_L using Equation (D.7):

$$y_L = a + bx_L \tag{D.7}$$

where a and b are as calculated by equations (D.8) and (D.9).