ISO/TS 10986:2021 (E)

Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) pipes — System design of above ground pipe and joint installations without end thrust

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Angular deflection of joints

4.1 General
4.2 Effects of loads on joint angular deflection
4.3 Measuring deflections
4.4 Checking the installed joint
4.4.1 General
4.4.2 Coupling-to-pipe position
4.4.3 Joint misalignment
4.4.4 Gap between pipe ends
4.4.5 Adjusting joints

5 Installation of above ground pipes

5.1 General
5.2 Supporting of pipes
5.2.1 General
5.2.2 Support design
5.2.3 Loads on supports
5.3 Anchor design
5.4 Guide design
5.5 Maximum support spacing
5.5.1 General
5.5.2 Perpendicular forces
5.5.3 Forces due to angular deviation
5.5.4 Axial forces
5.5.4.1 General
5.5.4.2 Axial forces due to pressure
5.5.4.3 Axial forces due to friction
5.5.4.4 Axial forces due to head loss
5.5.4.5 Axial force of vertical loads
5.5.5 Maximum total axial force
5.5.6 Deformations and bending moments for pipes resting on two supports
5.5.7 Deformations and bending moments for pipes resting on multiple supports
5.5.8 Load cases and combinations of long- and short-term loads
5.5.9 Checking of stresses and deformations
5.5.9.1 General
5.5.9.2 Axial tensile stresses
5.5.9.3 Deformations
5.5.9.4 Buckling stability

Annex A (informative) Pipeline pressure testing and inspection

A.1 General
A.2 Safety

A.2.1 Equipment and clothing
A.2.2 Test site guarding
A.3 Pre-test inspection
A.4 Hydrostatic test procedure
A.4.1 General
A.4.2 Filling
A.4.3 Integrity test
A.4.4 Leak test and inspection
A.4.5 Evaluation of test results
A.4.6 System test pressure (STP)

Annex B (informative) Recording above ground joint deflection data

Page count: 37