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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 48040-2026

**Glass-reinforced thermosetting plastics (GRP) pipes -
Determination of initial ring stiffness**

玻璃纤维增强热固性塑料（GRP）管材 初始环刚度的测定

(English Translation)

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

This document is equivalent to ISO 7685:2026 "Glass fiber reinforced thermosetting plastic (GRP) pipes - Determination of initial ring stiffness".

The following minimal editorial changes have been made to this document.

--Added provisions for preload of pipes with nominal diameters not within the ranges of a) and b) (see note 8.2).

1 Scope

This document describes a test method for the initial ring stiffness of glass fiber reinforced thermosetting plastic (GRP) pipes. Two methods are presented in this document.

The methods (constant load method and constant deformation method) are equally effective within the specified deformation range and are applicable to GRPs of any diameter.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

ISO 3126 Determination of dimensions for plastic components in plastic piping systems (Plastics piping systems - Plastics components - Note: GB/T 8806-2008 Determination of dimensions of plastic components in plastic piping systems (ISO 3126:2005, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Compressive load

A load applied to a pipe that causes radial deformation of the pipe.

Note: The unit is Newton (N).

3.2 Radial deflection

The change in diameter in the direction perpendicular to the horizontal position of the pipe under radial compressive load (3.1).

Note: The unit is meters (m).

3.3 Relative vertical deflection

y/d_m The ratio of the radial deformation y (3.2) of the pipe to the mean diameter d_m (3.4).

3.4 Mean diameter

The diameter of the circle corresponding to the center of the pipe wall cross-section.