ICS 83.120
CCS Q 23

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 21492-2019

Replacing GB/T 21492-2008

Glass fiber reinforced plastics jacking pipes

Issued on: August 30, 2019 **Implemented on: July 1, 2020**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 21492-2008 "glass fiber reinforced plastic pipe jacking", compared with GB/T 21492-2008, the main technology

The changes are as follows.

---The nominal diameter has been changed from "400mm~3000mm" to "100mm~4000mm"; the pressure level is from "0.1MPa~

1.0MPa" was changed to "0.1MPa~3.2MPa"; the minimum stiffness level was changed from "15000N/m2" to "20000N/m2"

(See Chapter 1, Chapter 1 of the.2008 edition);

--- Added the definition of "vertical vibration process", adding a vertical vibration process to the process classification (see 3.7 and 4.1.2);

--- Increased classification by allowable top force (see 4.1.1 and 4.1.6);

--- Revised the resin performance requirements, increased the bending strength of the inner liner resin, structural layer resin and accelerated aging bending strength retention rate

Requirements (see 5.2.3 and Appendix A, 5.1.1 of the.2008 edition);

--- Modified the packing requirements (see 5.3, 5.1.2.2 of the.2008 edition);

--- Removed the minimum thickness requirements for the joining material and sleeve (see 5.2.2 and 5.2.3 of the.2008 edition);

--- Revised the size requirements (see 6.2,.2008 version 6.2);

--- Increased straightness requirements (see 6.2.5);

--- Modified the verticality requirements of the pipe end face (see 6.2.6, 6.2.4 of the.2008 edition);

--- Increased the quality requirements of the pipe wall component of the straight pipe section (see 6.5);

--- Increased initial hoop tensile strength and initial axial tensile strength requirements associated with nominal diameter and pressure rating (see 6.6.2)

And 6.6.3);

---Modified water pressure leakage requirements (see 6.6.4, 6.6 of the.2008 edition);

--- Revised the initial flexibility requirements and removed the deflection level B (see 6.6.5, 6.5.5 of the.2008 edition);

--- Modified the initial axial compressive strength requirements and increased the "axial compression elastic modulus" (see 6.6.6, 6.5.1 of the.2008 edition);

--- Increased allowable top force requirements (see 6.6.7);

--- Increased long-term performance requirements (see 6.7);

---Modified and added test methods (see Chapter 7, Chapter 7 of the.2008 edition);

--- Removed hygienic performance requirements (see Chapter 8 of the.2008 edition);

---Modified inspection rules (see Chapter 8, Chapter 9 of the.2008 edition);

--- Added technical documentation (see 9.5.3);

--- Added connection technology description (see Chapter 10 and Appendix E);

--- Increased long-term bending strain Sb test and determination method (see Appendix D);

--- Removed the dimension measurement method (see Appendix A of the.2008 edition);

--- Removed the axial compression strength test method (see Appendix B of the.2008 edition);

--- Removed the method of measuring the hoop tensile strength of the tube by the separation disc method (see Appendix C of the.2008 edition);

--- Remove the vertical deflection and ring stiffness calculation method for the ring stiffness test (see Appendix E of the.2008 edition);

--- Removed the allowable top force table given by the minimum wall thickness (see F.3 of the.2008 edition).

This standard uses the redrafting method with reference to ISO 25780.2011 "Plastic pipes for water supply, irrigation, drainage or sewage under pressure and pressure"

System based on unsaturated polyester resin glass fiber reinforced thermoset plastic (GRP) system with jacking technology for installation with flexible joints

The pipe is compiled to be non-equivalent to ISO 25780.2011.

This standard was proposed by the China Building Materials Federation.

This standard is under the jurisdiction of the National Fiber Reinforced Plastics Standardization Technical Committee (SAC/TC39).

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1 Scope

This standard specifies the terms and definitions, classification and marking of glass fiber reinforced plastic pipe jacking, raw materials, requirements, test methods, inspection rules

Then, signs, packaging, transportation, storage, factory certificates and technical documents.

This standard applies to nominal diameters of 100mm~4000mm, pressure grades of 0.1MPa~3.2MPa, and ring stiffness grades.

Glass fiber reinforced plastic pipe jacking (hereinafter referred to as GRP pipe jacking) for.20000N/m2 and above, the maximum temperature of the medium is not exceeded

Over 50 ° C. GRP pipe jacks whose nominal diameter and pressure rating are not within the scope of this standard can also be used.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

Test method for tensile properties of GB/T 1447 fiber reinforced plastics

GB/T 1448 fiber reinforced plastics compression performance test method

GB/T 1458 filament wound reinforced plastic ring specimen tensile test method

Plastics -- Determination of deformation temperature of plastics - Part 2. Plastics, hard rubber and long fibre reinforced composites

material

GB/T 2567 resin casting body performance test method

GB/T 2573-2008 Test method for aging properties of glass fiber reinforced plastics

GB/T 2576 fiber reinforced plastic resin insoluble content test method

GB/T 2577 glass fiber reinforced plastic resin content test method

GB/T 3854 reinforced plastic Barcol hardness test method

Test method for axial tensile properties of GB/T 5349 fiber reinforced thermosetting plastic tubes

GB/T 5350 fiber reinforced thermosetting plastic tube axial compression performance test method

GB/T 5351 fiber reinforced thermosetting plastic pipe short-time water pressure failure pressure test method

GB/T 5352 fiber reinforced thermosetting plastic tube parallel plate external load performance test method

GB/T 8237 liquid unsaturated polyester resin for fiber reinforced plastics

GB/T 17470 glass fiber chopped strand mat and continuous strand mat

GB/T 18369 glass fiber roving

GB/T 18370 glass fiber roving

GB/T 21238 glass fiber reinforced plastic sand pipe

GB/T 32491 Glass fiber reinforced thermosetting resin tube and pipe fittings for long-term hydrostatic test

ISO 8639.2016 Test method for the verification of the sealing and structural design of glass fiber reinforced thermosetting plastic pipes and fittings

[Glass-reinforcedthermosettingplastics(GRP)pipesandfittings-Testmethodsforleaktightness

Andproofofstructuraldesignofflexiblejoints]

ISO 10928.2016 Plastic pipe system glass fiber reinforced thermosetting plastic pipe and fittings regression analysis method and its application

[Plasticspipingsystems-Glass-reinforcedthermosettingplastics(GRP)pipesandfittings-Methods

Forregressionanalysisandtheiruse]