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

GB/T 25027-2010

**Two pieces glass-lined steel vessels with agitator
(English Translation)**

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Foreword

This Standard was formulated and based on references of DIN 28136.1.2005 "The main dimensions of stirring vessels", DIN 28136.3.2005 "Glass-lined vessel spout head orientation and size", DIN 28137.3.1983 "Connection size of glass-lined vessel port reducer flange", DIN 28140.2.1978 "Connection size of discharge valve and glass-lined vessels PN10", DIN 28145.3.1982 "Welding pieces of glass-lined vessels - Lug position and size" and DIN 28151.1999 "Industrial glass-lined vessel jacketed mouth position and size". It summarized problems and disadvantages of HG/T 2371-2003 "Two pieces glass-lined steel vessels with agitator" during its implementation, and combined national manufacturing process characteristics of glass-lined equipment and present manufacturing level.

This Standard was proposed by China Petroleum and Chemical Industry Association.

This Standard shall be under the jurisdiction of National Technical Committee on Glass Lining Equipment of Standardization Administration of China (SAC/TC 72).

Main drafting organizations of this Standard. Jiangyin Chemical Equipment

Plant, Changshu Huamao Chemical Equipment Co., Ltd., Ningbo Mingxin Chemical Machinery Co., Ltd., Suzhou Xieli Chemical Equipment Co., Ltd, and Quality Supervision and Inspection Center of Non-metallic Materials and Equipment in Chemical Industry.

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Two pieces glass-lined steel vessels with agitator

1 Scope

This Standard specifies the terms and definitions, basic parameters and the main dimensions, models and technical characteristics, technical requirements and factory documents, packaging, transportation and storage of two pieces glass-lined steel vessels with agitator.

This Standard is applicable to two pieces glass-lined steel vessels with agitator, of which the designed pressure of inner vessel is less than or equals to 1.0 MPa, nominal volume is greater than or equals to 50 L, less than or equals to 5000 L, designed pressure in U-type jacket is less than or equals to 0.6 MPa, and designed temperature of inner vessel and jacket is higher than -20°C~200°C.

2 Normative references

The following standards contain the provisions which, through reference in this Standard, constitute the provisions of this Standard. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to this Standard. However, the parties who enter into agreement based on this Standard are encouraged to investigate whether the latest versions of these documents are applicable. For undated reference documents, the latest

versions apply to this Standard.

GB 25025 Specification of glass-lined equipment for industry

HG/T 2048 Glass-lined stuffing boxes

HG/T 2049 Glass-lined Equipment H Flange

HG/T 2050 Gaskets for Glass-lined Steel Vessel

HG/T 2051 Glass-lined Agitator

HG/T 2052 Drive for Glass-lined Steel Vessel with Agitator

HG/T 2054 Clamps for glass lined vessels

HG/T 2055 Glass-lined Manhole

HG/T 2057 Mechanical seals for glass lined vessel

HG/T 2058 Glass Lined Vessel Parameter

HG/T 2143 Welding Neck for Glass Lined Steel Vessel

HG/T 2145 Hand Hole for Glass Lined Equipment

HG/T 3217 Glass lined-life up valves

HG/T 3218 Glass lined-life down valves

HG/T 20592 Steel pipe flanges and model parameters

JB/T 4712.3 Vessel supports - Part 3.Lug support

JB/T 4712.4 Vessel supports - Part 4.Brace support

JB/T 4746 Formed Heads for Steel Pressure Vessels

3 Terms and definitions

The following terms and definitions apply to this Standard.

3.1 Two pieces glass-lined steel vessels with agitator

The glass-lined steel vessels with agitator of which the high-neck flange is set on cylinder and has equal diameter with cylinder. The code is K and the structure is shown in Figure 1.

3.2 Capacity for under equipment flange

The capacity that is below high-neck flange.

9 HG/T 2051 Glass-lined agitator 1 Assembly Carbon steel and glass-lined steel

HG/T 3217 Glass lined-life up valves 1 Assembly

HG/T 3218 Glass lined-life down valves 1 Assembly

Table 3 Technical characteristics

Nominal volume VN/L 50 100 200 300 400 500 800

Nominal

diameter

d1/mm

L Series - - - 800 900 1000

S Series 500 600 700 800 - - -

Capacity for under

equipment flange VJ/L 70 127 247 369 469 588 878

Full volume VT/L 101 179 324 483 583 744 1082

Jacket heat transfer area

/m² 0.54 0.84 1.50 1.90 2.40 2.60 3.70

Designed pressure /MPa Inner vessel. 0.25, 0.60, 1.0; Jacket. 0.60

Designed temperature /°C Inner vessel. 0~200, > -20~200; Jacket. 0~200, > -20~200

Agitator shaft nominal

diameter dn/mm 40 50 65

Motor power /kW 0.55 0.75 1.1 1.5 2.2 3.0

Motor model Y type or YB type series (Synchronous speed. 1500r/min)

Agitator shaft speed Anchor type, frame type agitators. 50r/min~80r/min; paddle type and impeller type agitators. 70r/min~125r/min

Transmission model W1 W2 W3

Lug support A1 A2 A3