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HG

Chemical Industry Standard of the People's Republic
of China

HG/T 2375-2017

Replace HG/T 2375-2011

Horizontal glass-lined steel vessels for storage

搪玻璃卧式贮存容器

(English Translation)

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Foreword

SAC/TC 72 is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese version shall prevail.

This Standard is drafted in accordance with the rules given in GB/T 1.1—2009.

This Standard replaces HG/T 2375-2011 *Horizontal glass-lined steel vessels for storage in whole*.

In addition to some editing, the following technical revisions have been made with respect to the HG/T 2375-2011:

- The manufacturing craft port m_2 in the original standard is cancelled;
- For vessels above 25000L (including 25000L), the number of liquid level gauge ports is revised from 4 to 2, and their corresponding dimension is deleted;
- Both number and nominal diameter of the nozzles on the manhole cover have been modified to be same as those of the one piece glass-lined steel vessels for storage for easy interchange.

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

This Standard was prepared by SAC/TC 72 National Technical Committee for Glass-lined Equipment Standardization.

The previous editions of this Standard are as follow (s) :

- HG 2375-1992, HG 2375-2004 and HG 2375-2011.

Horizontal glass-lined steel vessels for storage

1 Scope

This standard specifies the type, basic parameters, main dimension, requirements, nameplate, factory documents, packaging and transportation of the horizontal glass lined steel vessels for storage.

This standard applies to horizontal glass lined steel vessels for storage with a design pressure less than or equal to 0.6 MPa, a design temperature higher than $-20\text{ }^{\circ}\text{C}$ to $200\text{ }^{\circ}\text{C}$ and a nominal volume of 3,000L to 100,000L.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 25025 *Specification of glass-lined equipment for industry*

HG/T 2055.1 *Manhole for glass-lined steel vessel*

HG/T 2105 *Loose flange for glass-lined steel vessel*

HG/T 2143 *Nozzles for glass-lined steel vessel*

JB/T 4712.1 *Vessel supports-Part1:saddle support*

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions apply.

3.1 Horizontal glass-lined steel vessels for storage

Glass-lined storage vessels with horizontal cylinder.

4 Type, basic parameters and main dimension

4.1 The type, basic parameters and main dimension of the horizontal glass lined steel vessels for storage, see Figure 1, Table 1 and Table 2.

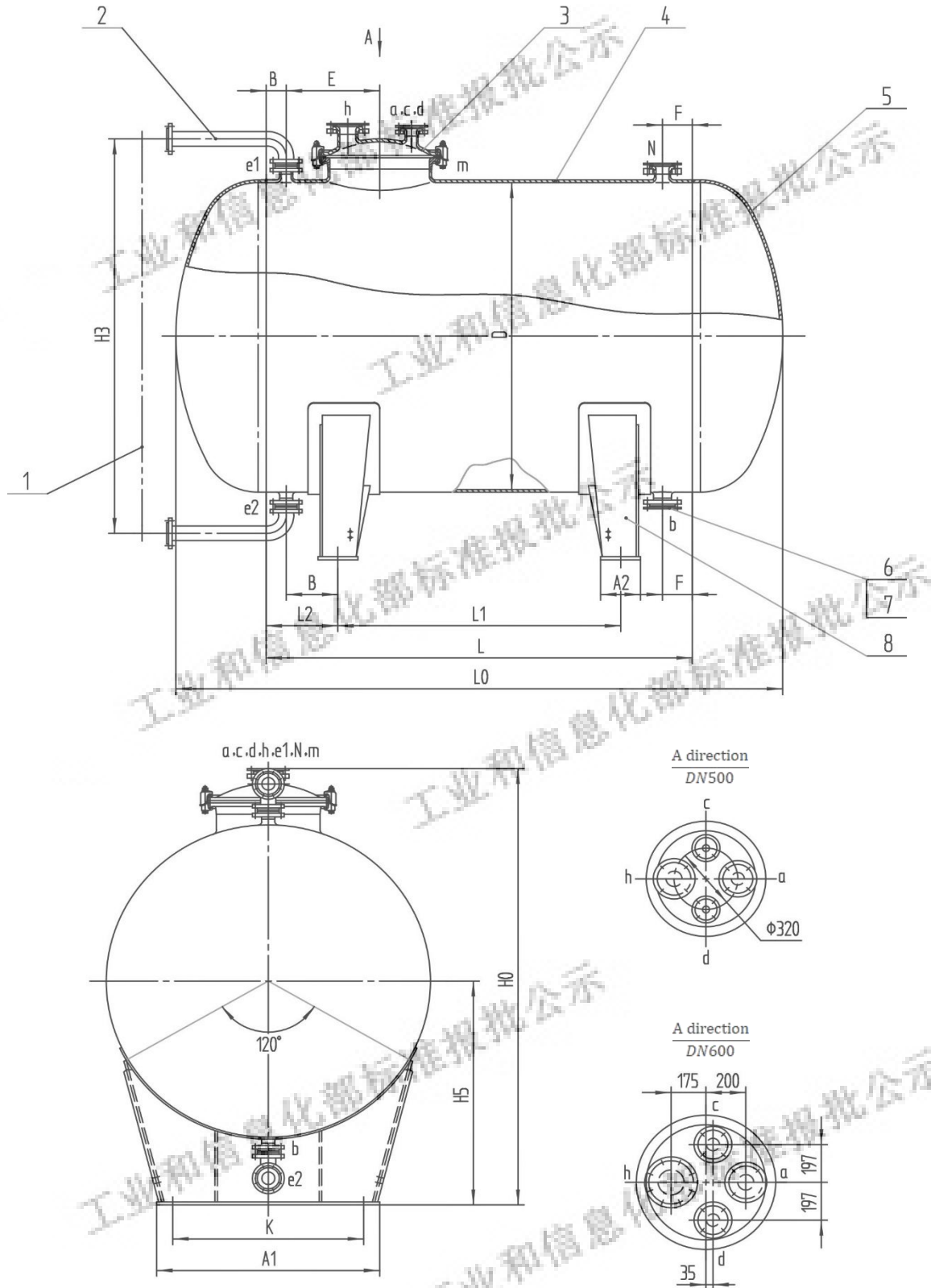


Fig.1 Horizontal glass - lined steel vessels for storage

Table1. Details

Part number	Standard	Name	Quantity	Material
1	—	Liquid level gauge	1	Assembly
2	—	90 ° elbow	2	As specified in GB 25025
3	HG/T 2055.1	Manhole for glass-lined steel vessel	1	Assembly
4	—	Cylinder	1	As specified in GB 25025
5	GB/T 25198	Head EHA	2	As specified in GB 25025
6	HG/T 2143	A-type nozzle		As specified in GB 25025
7	HG/T 2105	Loose flange		As specified in GB 25025
8	JB/T 4712.1	Saddle support	2	Carbon steel components

Table2. Dimension chart

Nominal volume VN/L	Full volume VN/L	Nominal diameter D/mm	Cylinder length L/mm	Nominal diameter of nozzle DN/mm							Liquid Level gauge port Nominal length × Quantity mm
				Craft mouth N	Feed port a	Spare port c, d	Discharge port b	Liquid Level gauge port e ₁ , e ₂	Craft mouth h	Manhole m	
3 000	3 330	1 450	1 485	80	80	50	80	65	100	Φ500	1 900×1
4 000	4 453	1 450	2 165	80	80	50	80	65	100	Φ500	1 900×1
5 000	5 533	1 600	2 170	80	80	50	80	65	100	Φ500	2 050×1
6 300	6 847	1 750	2 215	80	80	50	80	65	100	Φ500	2 200×1
8 000	8 909	1 900	2 460	80	80	50	80	65	100	Φ500	2 350×1
10 000	11 074	2 000	2 810	150	80	50	150	125	100	Φ500	2 550×1
12 500	13 555	2 000	3 600	150	80	50	150	125	100	Φ500	2 550×1
16 000	17 225	2 200	3 720	150	100	80	150	125	150	Φ600	2 750×1
20 000	21 705	2 400	3 920	150	100	80	150	125	150	Φ600	2 950×1
25 000	27 595	2 800	3 470	150	100	80	150	150	150	Φ600	3 400×1
30 000	32 502	3 000	3 520	150	100	80	150	150	150	Φ600	3 600×1
40 000	43 947	3 200	4 320	200	100	80	200	150	150	Φ600	3 800×1
50 000	53 848	3 400	4 720	200	100	80	200	150	150	Φ600	4 000×1
63 000	66 643	3 600	5 270	200	100	80	200	150	150	Φ600	4 200×1
80 000	84 645	3 800	6 120	200	100	80	200	150	150	Φ600	4 400×1
100 000	107 187	4 000	7 120	200	100	80	200	150	150	Φ600	4 600×1

Note: The liquid level gauge nozzles of 10,000L and above glass-lined horizontal storage containers must be equipped with DN125 / DN65 or DN150 / DN65 glass-lined reducing flanges, and the connecting pipes of liquid level gauge shall be provided to adjust the position of liquid level gauge interface.

Table2 (continued)

Nominal volume VN/L	Dimension /mm					Clamp specifications and quantity	
	L ₀	L ₁	L ₂	~H ₀	H ₃	design pressure /MPa	
						0.25	0.6
3 000	2 260	845	320	2 035	1 900	24-BM12	24-AM12
4 000	2 940	1 525	320	2 035	1 900		
5 000	3 020	1 450	360	2 190	2 050		
6 300	3 140	1 435	390	2 340	2 200		
8 000	3 460	1 620	420	2 490	2 350		
10 000	3 860	1 910	450	2 640	2 550		
12 500	4 650	2 700	450	2 640	2 550		
16 000	4 900	2 720	500	2 835	2 750	28-BM12	36-AM12
20 000	5 200	2 820	550	3 040	2 950		
25 000	4 950	2 270	600	3 475	3 400		
30 000	5 100	2 260	630	3 675	3 600		
40 000	6 000	3 020	650	3 880	3 800		
50 000	6 500	3 320	700	4 080	4 000		
63 000	7 150	3 770	750	4 280	4 200		
80 000	8 100	4 520	800	4 485	4 400		
100 000	9 200	5 420	850	4 685	4 600		

Table2 (continued)

Nominal volume VN/L	Dimension /mm						
	A ₁	K	A ₂	B	E	F	H ₅
3 000	1 060	900	200	100	500	100	1 089
4 000	1 030	890	200	100	500	100	1 089
5 000	1 120	960	200	100	500	100	1 166
6 300	1 240	1 070	200	100	500	100	1 243
8 000	1 360	1 200	220	100	500	100	1 318
10 000	1 420	1 260	220	150	550	150	1 368
12 500	1 420	1 260	220	150	550	150	1 368
16 000	1 580	1 380	240	150	550	150	1 470
20 000	1 720	1 520	240	150	550	150	1 572
25 000	2 040	1 800	300	200	650	150	1 774
30 000	2 180	1 940	360	200	650	150	1 876
40 000	2 340	2 100	360	200	650	200	1 978
50 000	2 480	2 200	380	200	650	200	2 080
63 000	2 640	2 360	380	200	650	200	2 182
80 000	2 780	2 500	380	200	650	200	2 284
100 000	2 940	2 660	380	200	650	200	2 386

4.2. Tags and their examples

Take the horizontal glass-lined steel vessel for storage that conforms to HG/T2375 with the design pressure of 0.6 MPa, the nominal volume of 12 500 L and the nominal diameter of 2 000 mm as an example. It is marked as:

HG/T 2375-W-0.6-12500-2000 *Horizontal glass-lined steel vessel for storage*

The meaning of each element in the mark is as follows:

W — code of container structure type;

0.6 — The design pressure is 0.6MPa;

12 500—the nominal volume is 12 500L;

2000 — Nominal diameter is 2 000mm.

5 Requirement

5.1 The horizontal glass-lined steel vessels for storage should be designed, manufactured,

inspected and accepted in accordance with this Standard and GB 25025.

5.2 The nozzles connected to the glass-lined liquid level gauge shall be on the same vertical plane, and the deviation of the vertical centerline is $\pm 1.0\text{mm}$.

5.3 The design and manufacturing unit shall give priority to the use of new-type liquid level gauges. The selection of the liquid level gauge shall be in conformity with the requirements of relevant standards.

5.4 The design and manufacturing unit can set 1 or 2 manholes on the container according to the requirements of the equipment or manufacturing process.

6 Nameplate, factory documents, packaging and transportation

6.1 The nameplate, factory documents, packaging and transportation of the horizontal glass lined steel vessel for storage are as specified in GB 25025.

6.2 All nozzles and the exposed glass-lined surface of the horizontal glass lined steel vessel for storage must be effectively protected.

6.3 The container shall be properly stored before delivery and should not be stored in the open air.