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HG

Chemical Industry Standard of the People's Republic of China

HG/T 2374-2017
Replace HG/T 2374-2011

One piece glass-lined steel vessels for storage

搪玻璃闭式贮存容器

(*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 original shall prevail.

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

This standard replaces HG/T 2374-2011 *One piece 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 2374-2011:

——Containers of 1 000L, 1 250L, 1 500L and 2 000l are added;

——The dimension of the center hole of the upper head of the 10 000L, 12 500L containers is revised from 500mm to 600mm;

——Adjusted the specifications of the liquid level gauge nozzles and the nozzle spacing of containers above 10,000L;

——For vessels below 5000L(including 5000L), the number of liquid level gauge nozzles is revised from 4 to 2;

——Deletion of the original Subclause 5.3 and 5.5.

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 5-253-1965, HG 5-253-1969, HG 5-253-1979, HG/T 2374-1992, HG/T 2374-2004 and HG/T 2374-2011.

One piece 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 one piece glass-lined steel vessels for storage.

This standard applies to one piece glass-lined steel vessels for storage with a design pressure less than or equal to 0.6 MPa, a design temperature higher than -20 ℃ to 200 ℃ and a nominal volume of 1,000L to 80,000L.

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 2036 *Glass-lined vessel parameter*

HG/T 2050 *Gaskets for glass-lined steel vessel*

HG/T 2053 *Glass-lined equipment—Manhole flange*

HG/T 2054 Clamps for g*lass-lined vessels*

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

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

3 Terms and definitions

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

3.1 One piece glass-lined steel vessels for storage

The vertical glass-lined vessel with a flange less than or equal to 1/2 of the container nominal diameter on the upper head.

4 Type, basic parameters and main dimension

4.1 The type, basic parameters and main dimension of the one piece glass-lined steel vessels for storage are in accordance with the relevant provisions of HG/T 2036, see Figure 1, Figure 2, Figure 3 and Table 1, Table 2.

Units: mm

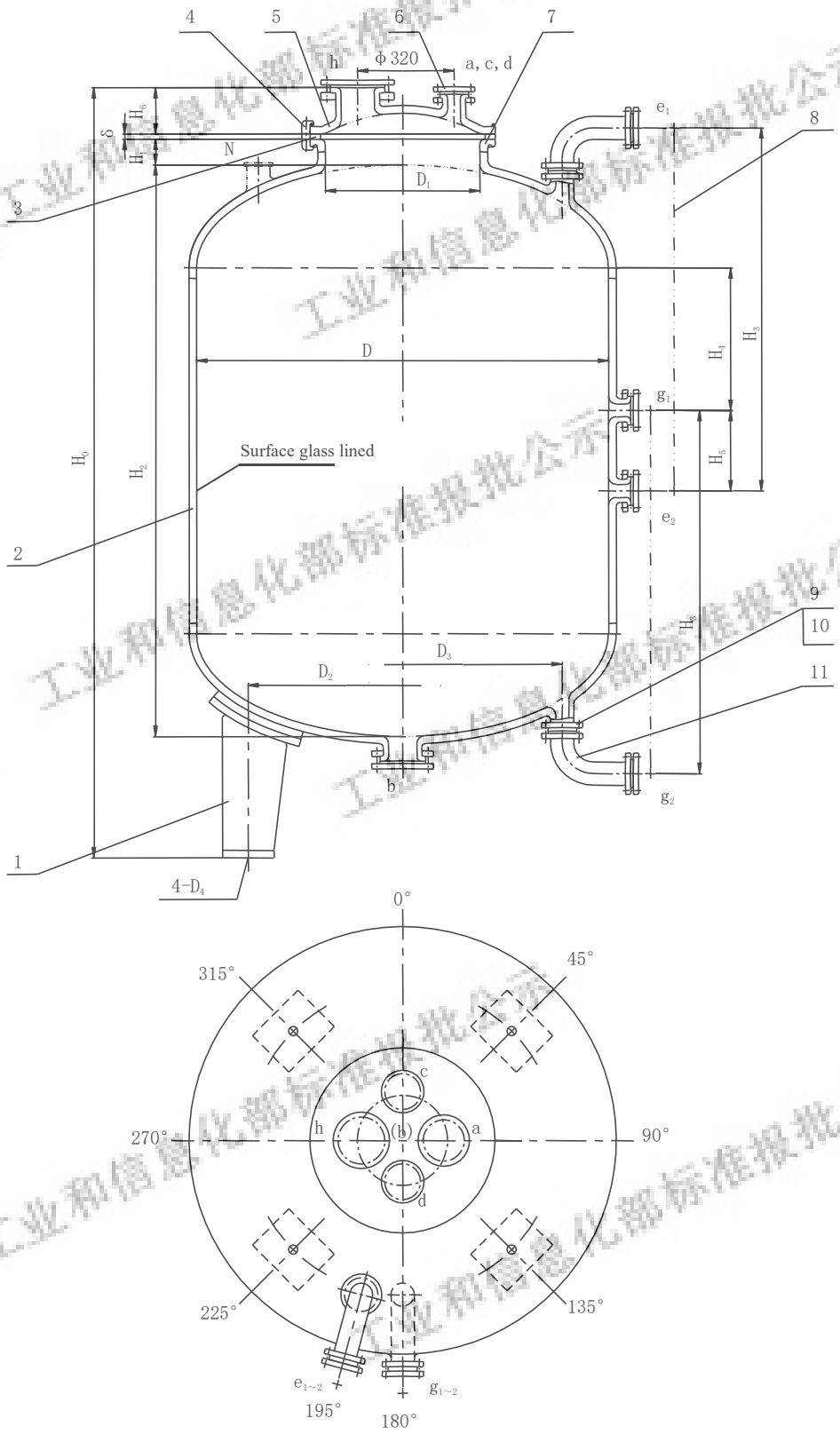

Fig. 1 1 000 L - 8 000 L one piece glass-lined steel vessels for storage

Units: mm

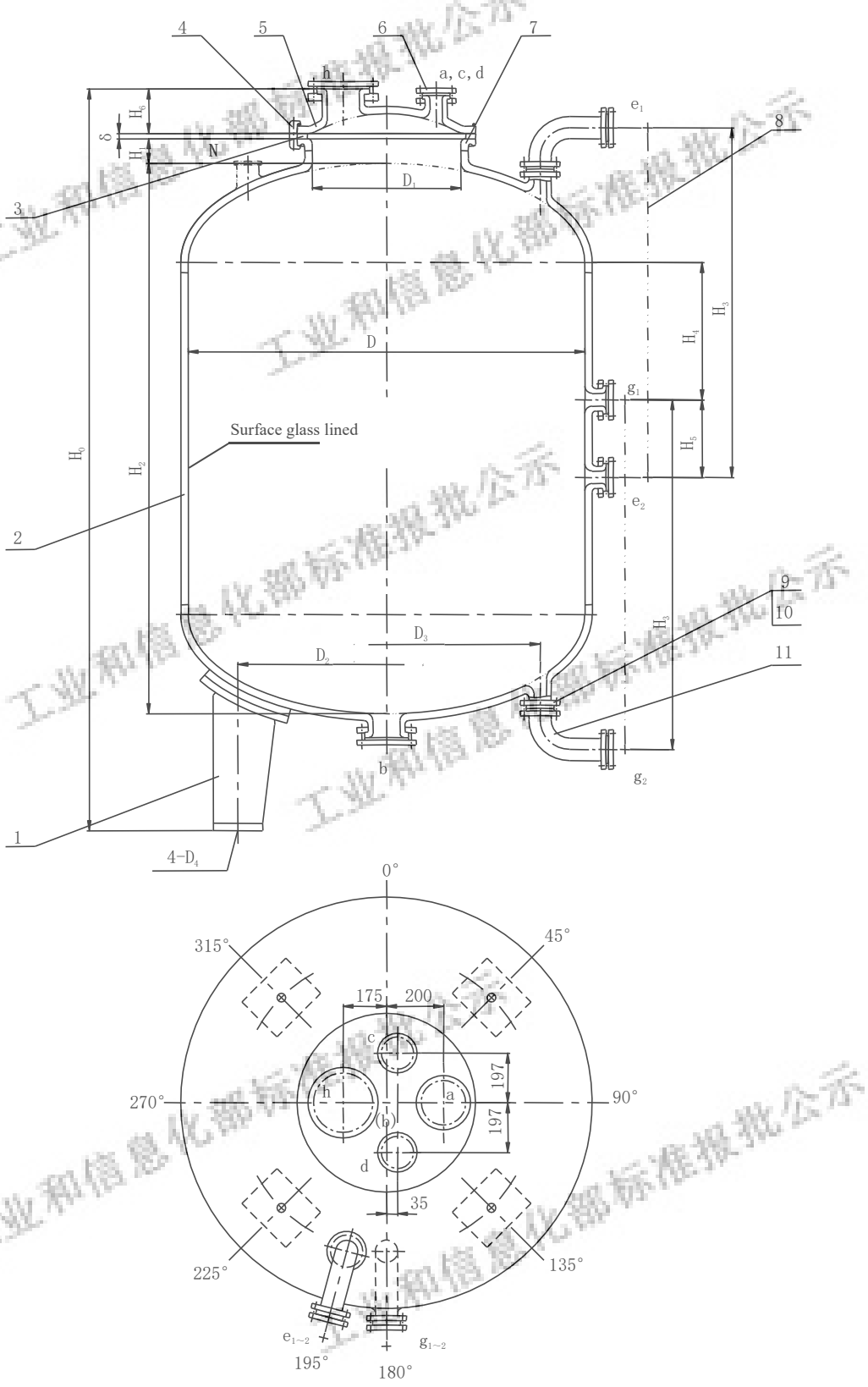

Fig. 2 10 000 L - 50 000 L one piece glass-lined steel vessels for storage

Units: mm

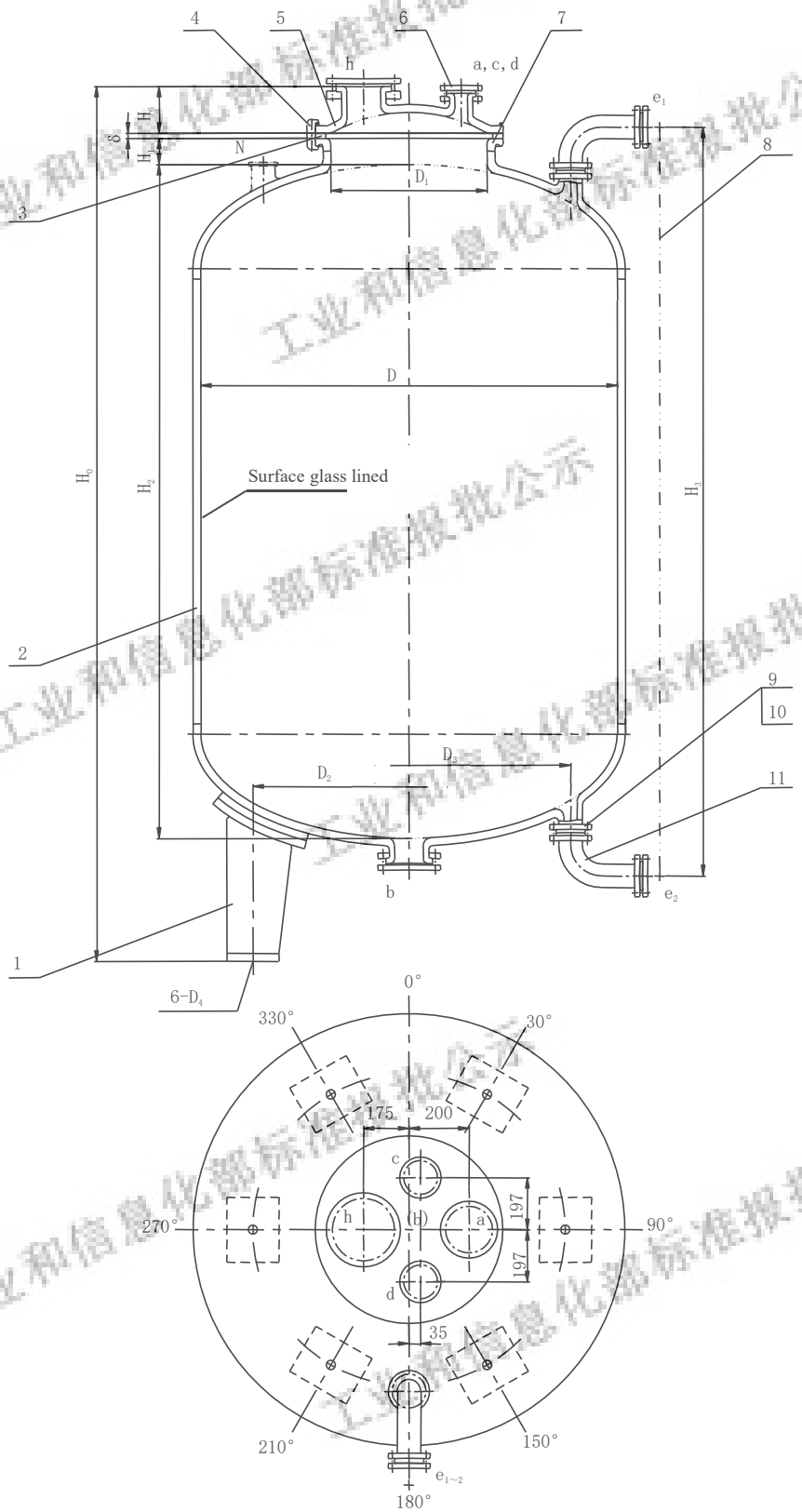

Fig. 3 63 000 L – 80 000 L one piece glass-lined steel vessels for storage

Table1. Dimension chart

Nominal volume VN/L	Full volume VN/L	Nominal diameter D/mm	Nozzle nominal diameter DN/mm						Liquid Level gauge port Nominal length× Quantity mm
			Feed port a	Discharge port b	Craft mouth c	Spare port d	Craft mouth h	Liquid Level gauge port e_1、e_2 g_1、g_2	
1 000	1 165	1 000	80	100	50	50	100	65	1 900×1
1 250	1 641	1 200							1 800×1
1 500	1 867	1 200							2 000×1
2 000	2 370	1 300							2 100×1
3 000	3 355	1 450		125					2 500×1
4 000	4 777	1 600							2 850×1
5 000	5 561	1 600							3 250×1
6 300	6 877	1 750							1 900×2
8 000	8 944	1 900							2 000×2
10 000	11 668	2 200	100	150	80	80	150	100	2 050×2
12 500	13 644	2 200							2 250×2
16 000	17 318	2 400							2 450×2
20 000	21 738	2 600							2 550×2
25 000	27 640	2 800						125	2 800×2
30 000	32 547	3 000							2 900×2
40 000	43 189	3 200		200					3 300×2
50 000	53 892	3 400							3 500×2
63 000	67 505	3 400							8 150×1
80 000	85 508	3 600							9 120×1

For vessels above 10,000L, glass lining reducing flanges with a diameter of DN100/DN65 or DN125/DN65 should be provided between the liquid level gauge nozzle and the elbow.

Table1 （continued）

Nominal volume VN/L	Dimension /mm											Clamp specifications and quantity	
												design pressure /MPa	
	～H_0	H_1	H_2	H_3	H_4	H_5	H_6	D_1	D_2	D_3	D_4	0.25	0.6
1 000	2 100	95	1 620	1 900	–	–	160	500	700	800	30	24—BM12	24—AM12
1 250	2 120	95	1 645	1 800	–	–			840	880			
1 500	2 320	95	1 845	2 000	–	–			840	880			
2 000	2 440	95	1 950	2 100	–	–			950	940			
3 000	2 840	105	2 260	2 500	–	–			1 090	1 086			
4 000	3 243	105	2 630	2 850	–	–			1 200	1 240			
5 000	3 633	105	3 020	3 250	–	–			1 200	1 240			
6 300	3 745	110	3 140	1 900	894	477			1 320	1 394			
8 000	4 093	115	3 460	2 000	1 051	408			1 430	1 544			
10 000	4 060	115	3 430	2 050	960	425	180	600	1 650	1 648	36	28—BM12	36—AM12
12 500	4 580	115	3 950	2 250	1 280	305			1 650	1 648			
16 000	4 880	120	4 220	2 450	1 336	360			1 800	1 852			
20 000	5 167	120	4 520	2 550	1 460	315			1 950	2 056			
25 000	5 624	130	4 950	2 800	610	335			2 100	2 256			
30 000	5 760	130	5 100	2 900	1 637	330			2 250	2 256			
40 000	6 550	135	5 900	3 300	1 940	425			2 400	2 560			
50 000	7 135	135	6 500	3 500	2 175	455			2 550	2 720			
63 000	8 635	135	8 000	8 150	—	—			2 550	2 720			
80 000	9 630	145	9 000	9 120	—	—			2 700	2 880			

Table2. Details

Part number	Standard	Name	Quantity	Material	Note
1	-	Support		-	-
2	-	Tank	1	Assembly	-
3	HG/T 2050	Gasket	1	Soft gasket	As specified in equipment working condition
4	HG/T 2054	Clamp	See Table 1.	Assembly	-
5	-	Tank lid	1	Assembly	-
6	HG/T 2143	Nozzle		As specified in GB 25025	-
7	HG/T 2053	Manhole flange	1	As specified in GB 25025	-
8	-	Liquid level gauge		Assembly	For reference
9	HG/T 2105	loose flange		Assembly	-
10	HG/T 2050	Gasket		Soft gasket	As specified in equipment working condition
11	-	90 ° unequal elbow		Assembly	-

4.2. Tags and their examples

Take the one piece glass-lined steel vessels for storage that conforms to HG / T 2374 and with the design pressure of 0.6 MPa, the nominal volume of 5 000 L and the nominal diameter of 1 600 mm. It is marked as:

HG/T 2374-F-0.6-5000-1600 One piece glass-lined steel vessels for storage

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

F- code of container structure type;

0.6 - The design pressure is 0.6MPa;

5000-the nominal volume is 5 000L;

1600 - Nominal diameter is 1 600mm.

5 Requirement

5.1 The one piece 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 should be on the same vertical plane, and the deviation of the vertical centerline is ± 1.0mm.

5.3 The design and manufacturing unit should 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 container shall be provided with lifting lugs. The number and position of which shall meet the lifting and installation requirements.

6 Nameplate, factory documents, packaging and transportation

6.1 The nameplate, factory documents, packaging and transportation of one piece glass-lined steel vessels for storage should conform to GB 25025.

6.2 All nozzles and the exposed glass-lined surface of the one piece glass-lined steel vessels for storage should be effectively protected.

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