

补充技术要求(Supplementary technical requirements):

- 除注明外,所有尺寸单位为“mm”。法兰螺栓孔沿设备中心线或平行线均匀分布。

All dimensions are in mm, unless otherwise specified. The flange bolt holes shall be evenly distributed across the centre line of the equipment or its parallel line.
- 壳体用S31603钢板应逐块进行100%超声检测,按NB/T47013.3-2023中9.1条款合格。

The shell made of S31603 steel plate shall be subject to 100% ultrasonic testing one by one, and it is qualified according to Grade I in NB/T47013.3-2023.
- S31603材料及焊接接头(包括焊接工艺评定、成品焊接试件)按GB/T4334-2020方法进行晶间腐蚀试验,平均腐蚀速率应不大于1.6g/m²h。腐蚀试验取样和组批按GB/T21433-2008第8.6条规定执行。

S31603 materials and welded joints (including welding process qualification, finished welded test pieces) shall be subject to intergranular corrosion test according to method B in GB/T4334-2020, and the average corrosion rate shall not be greater than 1.6g/m²h, and the sampling and batching of corrosion test pieces shall be carried out in accordance with the provisions of GB/T21433-2008, Clause 8.
- 与工艺介质接触的焊缝应采用氩弧焊且表面应保持钝化。

Welds in contact with process medium shall be covered with argon arc welding and remain in a welded state.
- 采用无缝钢管的接管厚度公差应不大于10%(S为接管壁厚)。

The negative deviation of the thickness of the flange connection pipe with seamless steel pipe shall not be greater than 10% S (S is the thickness of the flange pipe wall).
- 本设备A类焊接接头按GB/T150.4-2024中第9条的附录A产品焊接试件,焊接试件的检验与评定按NB/T47016-2023的要求进行。

The product weld coupon for this equipment Class A welded joints shall be prepared in accordance with the provisions of Article 9 of GB/T 150.4-2024, and the inspection and evaluation of the weld coupon shall be carried out in accordance with the requirements of NB/T 47016-2023.
- 壳体检测合格后,应按GB/T150.4-2024第6.5.11条检查壳体的圆度。

After the shell is fully welded, the roundness of the shell shall be inspected in accordance with Clause 6.5.11 of GB/T 150.4-2024.
- 液位计管口安装尺寸公差按HG/T20584-2020中14.2.13第6条的规定。

The dimensional tolerance of the level gauge pipe port installation shall be in accordance with the sixth provision of 14.2.13 in HG/T20584-2020.
- 受压元件之间所有对接焊缝、角焊缝均需采用全熔透结构,焊接接头不得有表面裂纹、未熔合、未焊透、表面气孔、夹渣、未填满和飞溅物等缺陷,焊缝与母材应当圆滑过渡,角焊缝的外形应当凹形圆滑过渡,且焊缝表面不得有咬边。

All butt welds and fillet welds between pressurized elements shall be of full penetration type, and the welded joints shall be free of surface cracks, lack of fusion, incomplete penetration, surface porosity, arc pits, lack of filler and spatter, etc., and the welds shall transition smoothly to the parent metal, the fillet welds shall have a concave smooth transition, and the weld surface shall be free of undercut.
- DN<250的接管与法兰的对接接头应按NB/T47013.3-2015进行100%渗透检测,合格等级不低于Ⅰ级。

Manifolds and flanges with a nominal diameter MDN < 250 for butt welded joints shall be subject to 100% penetrant testing in accordance with NB/T47013.3-2015, and the qualification level shall be lower than Grade I.
- NO2、MO接管与壳体的对接接头应按NB/T 47013.3-2023进行100%超声检测,合格等级不低于Ⅰ级。

The welded joints of NO2, MO takeover and the shell shall be subject to 100% ultrasonic testing in accordance with NB/T47013.3-2023, and the qualification level shall not be lower than Grade I.
- 不锈钢设备水压试验用水的氯离子含量应小于25mg/L,试验合格后应立即冲洗干净。

The chloride ion content of water used for hydraulic pressure test of stainless steel equipment shall be less than 25 mg/L, and the water shall be drained and dried immediately after the test is qualified.
- 水压试验合格后,外接管焊缝应进行机械抛光处理,所形成的氧化膜按GB/T25150-2010规定的方法检测,合格后必须将酸洗液清洗干净,不得有残留。


After the pressure test is qualified, the surface of the stainless steel in contact with the medium should be pickled and passivated, and the formed passive film should be inspected according to the specified method in GB/T25150-2010, and after qualification, the pickling medium must be cleaned thoroughly without residue.

注: (1) 介质组成(wt%): 氢气、氮气、氧气、二氧化碳、一氧化碳、甲烷、乙烷、丙烷、异丁烷、正丁烷、异戊烷、新戊烷、异戊烷、异己烷、水、其它、酯类等。
The composition content is different under different discharge conditions, mainly including hydrogen, formaldehyde, isobutanol, hydroxypentyl alcohol, trimethylamine, neopentyl glycol, methanol, formic acid, isobutanol, isobutyl resin, hydroxypentyl acetate, hydroxynonyl acetate, isobutyric acid ester, water, others, esters, etc.

设计、制造与检验主要数据表									
规范、标准 CODE & STANDARD		《承压设备》GB/T5010-2024		《承压设备》NB/T47042-2014					
		PRESSURE VESSELS		HORIZONTAL VESSELS ON SADDLE SUPPORTS					
		《承压设备》HG/T20584-2020		《承压设备》HG/T20584-2020					
		TECHNICAL STANDARD OF FABRICATION FOR STEEL CHEMICAL VESSELS							
		盘卷 COIL		壳体 SHELL		压力容器类别 PRESS VESSEL CLASS			
工作压力 WORKING PRESS		kg/cm²G	4.08/4.6	0.51		焊接接头 WELDING SPEC		NB/T47015-2023	
设计压力 DESIGN PRESS		kg/cm²G	7/-1	3.9/-1				S31603	A022, ER316L
最高允许工作压力 MAX ADMISSIBLE OPERATING PRESS		kg/cm²G				焊接材料 WELDING MATERIAL		CS AND SS	A312
工作温度 WORKING TEMP		°C	152/70	34.7/AMB				Q235B	J427
设计温度 DESIGN TEMP		°C	230	350					
介质 (组分) FLUID (COMPONENT)		STEAM/WATER		H2, N2, F, A, NPG WATER(NOTE)		焊接接头形式 WELDING STRUCTURE		除注明外按HG/T20583-2020附录A的焊接结构 ALL PER DESIGN AND NB/T20583-2020	
介质 (组分) FLUID (COMPONENT)		978.03 (液) / 2.67 (气) 978.03 (液) / 2.67 (气)		850-1000 (液) 850-1000 (液)		焊缝厚度 THICK OF FILLET WELD		除注明外按GB/T20583-2020附录A的焊接结构 THE THICKNESS OF FILLET WELD PER DESIGN AND NB/T20583-2020	
介质特性 FLUID PERFORMANCE		--		--		法兰与接管焊接 FLANGE AND PIPE WELDING		按相应标准 ACCORDING TO THE STANDARD	
安全阀整定压力 RELIEF PRESSURE SETTING		kg/cm²G		--		产品焊接接头 PRODUCT WELD JOINT TEST COUPLING		按相应标准 ACCORDING TO THE STANDARD	
设计使用寿命 DESIGN WORKING LIFE (YEARS)		10		--		热处理 P.W.H.T		按相应标准 ACCORDING TO THE STANDARD	
主要承压元件材料 MAIN MATERIAL		牌号 (规格) NAME (SPEC)	S31603	S31603, S31603H		其它 OTHERS		按相应标准 ACCORDING TO THE STANDARD	
		标准 STANDARD	GB/T13296-2023	GB/T17017-2021 NB/T47010-2017		其它 OTHERS		按相应标准 ACCORDING TO THE STANDARD	
筒体厚度 CYL. ALL. TH.		mm	0	0		运输、包装、运输 PACK, PACKAGING, TRANSPORTATION		NB/T10558-2021 22150-00000-MC08	
焊接接头系数 JOINT EFF <td></td> <td>1.0</td> <td colspan="2">1.0</td> <td colspan="2">管口、支管等方位 NOZZLE ORIENTATION</td> <td colspan="2">按相应标准 ACCORDING TO THE STANDARD</td>			1.0	1.0		管口、支管等方位 NOZZLE ORIENTATION		按相应标准 ACCORDING TO THE STANDARD	
耐压试验方法 (压力/介质) TYPE OF PROOF PRESS TEST		kg/cm²G	8.8 (HYDRO.-H)	6.5 (HYDRO.-H)		焊接接头类别 JOINT CATEGORY		按相应标准 ACCORDING TO THE STANDARD	
泄漏试验方法 (压力/介质) TYPE OF LEAK TEST		kg/cm²G	3.0 (GAS LEAK TEST PRESS)	3.0 (GAS LEAK TEST PRESS)		壳体 SHELL		100%	RT-II AB NB/T47032-2015
容积 CAPACITY		m³	0.1	33.7		法兰 FLANGE		100%	RT-I AB NB/T47032-2015
换热面积 HEAT TRANSFER AREA		m²	12.6	12.6		管口、支管等方位 NOZZLE ORIENTATION		按相应标准 ACCORDING TO THE STANDARD	
重量 WEIGHT <td>kg</td> <td></td> <td colspan="2"></td> <td colspan="2">保温材料 INSULATION MATERIAL</td> <td>按相应标准 ACCORDING TO THE STANDARD</td> <td></td>		kg				保温材料 INSULATION MATERIAL		按相应标准 ACCORDING TO THE STANDARD	
防腐层厚度 CORROSION PREVENTION THICKNESS		mm				防腐层材料 CORROSION PREVENTION MATERIAL		按相应标准 ACCORDING TO THE STANDARD	
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						防腐层材料 CORROSION PREVENTION MATERIAL		按相应标准 AC	

管口表 LIST OF NOZZLE

序号 ITEM	公称尺寸 DN	公称压力 CLASS (PN)	连接标准 COND STD	连接法兰形式 TYPE	连接管形式 FACING	用途或名称 SERVICE	管子规格 NOZZLE SIZE	制造标准 MANUFACTURE	备 注 REMARK
N01	10×14	150	SH/T3426-2014	WN	RF	入口 INLET 1	Ø173×12.5/Ø355.6×10.5	1550	
N02	12×16	150	SH/T3426-2014	WN	RF	出口 OUTLET	Ø123.9×12.7/Ø406.4×12	1550	
N03	3×6	150	SH/T3426-2014	WN	RF	出口 OUTLET	Ø88.9×8.2/Ø108.3×7.5	1520	
N04	10	150	ASME B16.5-2020	WN	RF	出口 OUTLET	Ø273×12.5	1520	
N05	8×10	150	SH/T3426-2014	WN	RF	出口 OUTLET	Ø178.1×12.5/Ø173.9	1550	
C11	1.5	150	HG/T20615-2009	LWN	RF	换热管出口(等径三管) (FL CONNECTION W/3)	Ø65×12	见图 SEE DRAW	
C21	1.5	150	HG/T20615-2009	LWN	RF	换热管出口(等径三管) (FL CONNECTION W/3)	Ø65×12	见图 SEE DRAW	
C31	2	150	HG/T20615-2009	LWN	RF	换热管出口(等径三管) (FL CONNECTION W/3)	Ø78×13	14.00	
C41	2×3	150	SH/T3426-2014	WN	RF	换热管出口(等径三管) (FL CONNECTION W/3)	Ø603.8×9/Ø603.8×7	1520	
C51-52	3	150	ASME B16.5-2020	WN	RF	换热管出口(等径三管) (FL CONNECTION W/3)	Ø88.9×8.2	见图 SEE DRAW	
C61-62	2×3	150	SH/T3426-2014	WN	RF	换热管出口(等径三管) (FL CONNECTION W/3)	Ø603.8×9/Ø603.8×7	见图 SEE DRAW	
U01	1.5	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø48.3×5.15	见图 SEE DRAW	
U02	1.5	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø48.3×5.15	见图 SEE DRAW	
V01	2×3	150	SH/T3426-2014	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø603.8×9/Ø603.8×7	1520	
M	20	PN25	HG/T21524-2014	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø530×14	按相应标准 AS PER CODE	
11, 14	1	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø33.7×4.6	见图 SEE DRAW	
01, 04	1	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø33.7×4.6	见图 SEE DRAW	
12	1.5	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø48.3×5.15	见图 SEE DRAW	
02	1.5	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø48.3×5.15	见图 SEE DRAW	
13	0.75	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø26.9×4.2	见图 SEE DRAW	
03	0.75	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø26.9×4.2	见图 SEE DRAW	
15-8	0.5	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø213.3×6.5	见图 SEE DRAW	
05-8	0.5	150	ASME B16.5-2020	WN	RF	管口/管口 IN/OUTLET CONNECTION	Ø213.3×6.5	见图 SEE DRAW	

GK	R25024-GK	管口零件 NOZZLE PARTS	1		94.25	
11	060-STD-EQ.12.02	卧式容器保温支架 INSULATION SUPPORTS FOR HORIZONTAL VESSELS	1	S31603	66.2	标准图
10		隔热30×6 PIB PLATE	16	S31603	0.1	16 长度视配
9		接地板 8=10 EARTH PLATE	2	S304.08	0.5	1.0
8	NB/T47065.1-2018	管板 B1-2400 F/S h=250 SADDLE	2	Q235B/S31603	489	978 标准图
7		加强圈 L100×100×10 STRENGTHENING RING	1	S31603	135	L=7930
6	R25024-6	盘管 COIL	1	S31603	855	
5		铭牌架 H=190 NAMEPLATE BRACKET	1	S31603	1.0	
4	R25024-4	铭牌 NAMEPLATE	1	S304.08		
3		管板 DN2400×12 SHELL	1	S31603	4687	L=6500
2		防冲板 Ø4.00×10 IMPINGEMENT PLATE	1	S31603	10	
1	GB/T25198-2023	封头 EHA2400×12 (mm10.1) HEAD	2	S31603	610	1220
件号 PARTS NO	图号或标准号 DWG NO. OR STD NO	名称 PARTS NAME	数量 QTY	材料 MAT'L	重量 SINGL OR TOTAL MASS (Kg)	备注 REMARKS
设备自重 (供货质量) NET MASS (Kg)			8900			
空质量 EMPTY MASS (Kg)						
操作质量 OPERATING MASS (Kg)						
盛水质量 MASS OF FULL WATER (Kg)			42700			
最大可拆件质量 MAX. REMOV. PART MASS (Kg)						
标志 MARK			数量 QTY	更改文件号 CHANGE THE FILE NO.	签字 SIGN	日期 DATE
 浙江诚泰化工机械有限公司 ZHEJIANG CHENGTAI CHEMICAL MACHINERY CO., LTD				图号 DWG. NO.	R25024-00	
设计 DESIGN 校核 CHECK 审核 APPR 标准 CODE APP 工艺标准 PRO. SPEC 批准 APPR				项目 SECTION 位号 ITEM NO	卧式容器保温支架 INSULATION SUPPORTS FOR HORIZONTAL VESSELS V-2701	
火炬分液罐 FLARE SEPARATOR 总装配图 ASSEMBLY DWG				版次	C00	审核 (CHECK BY BRAND) 审核人 (CHECK BY BRAND) 审核日期 (CHECK BY BRAND)
				REV	A01	
				比例 SCALE	1:25	第 2 页 共 2 页