

总图
工艺
建筑
结构
给排水
电力
热力
暖通
自控
环保
设备

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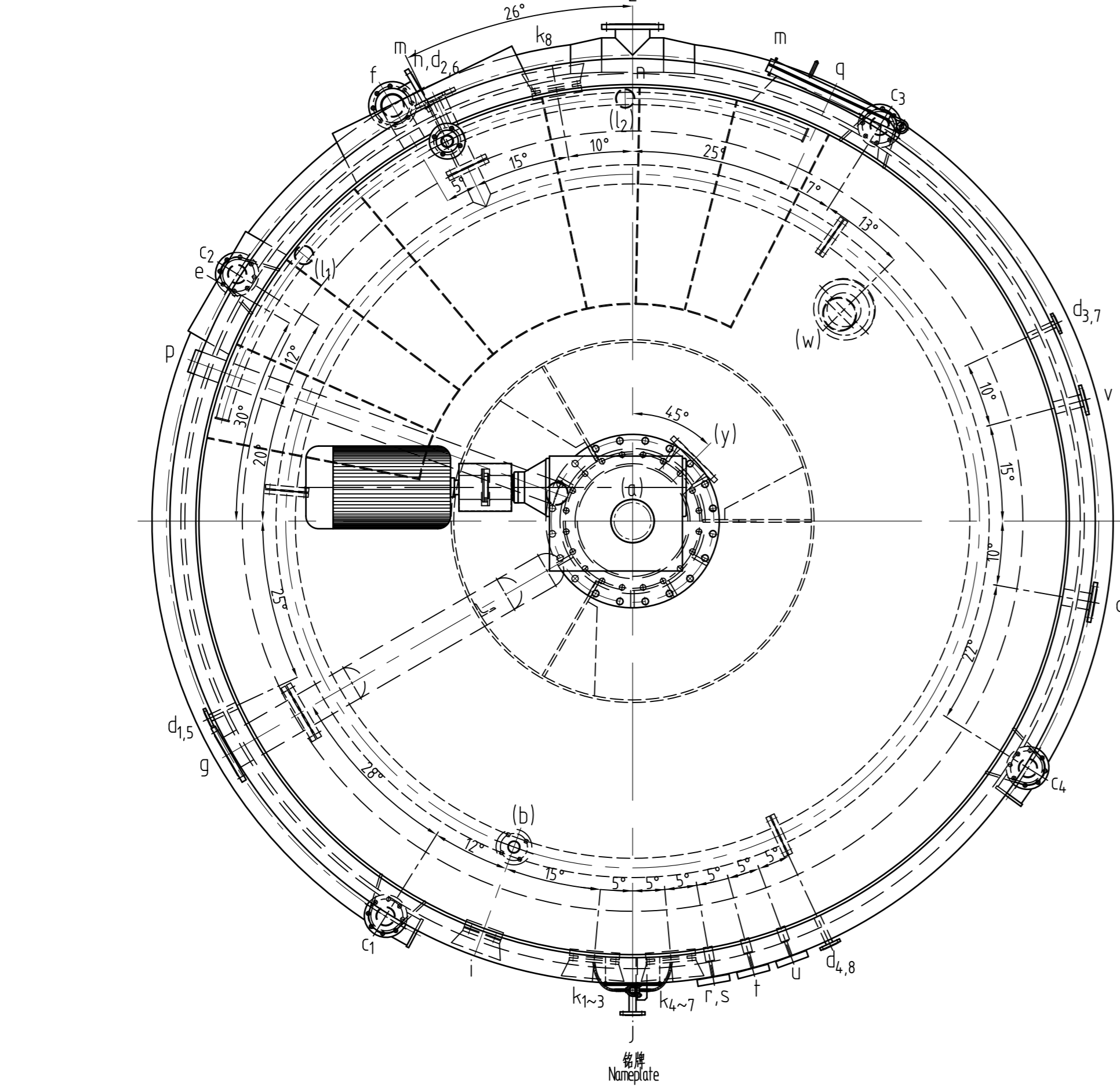
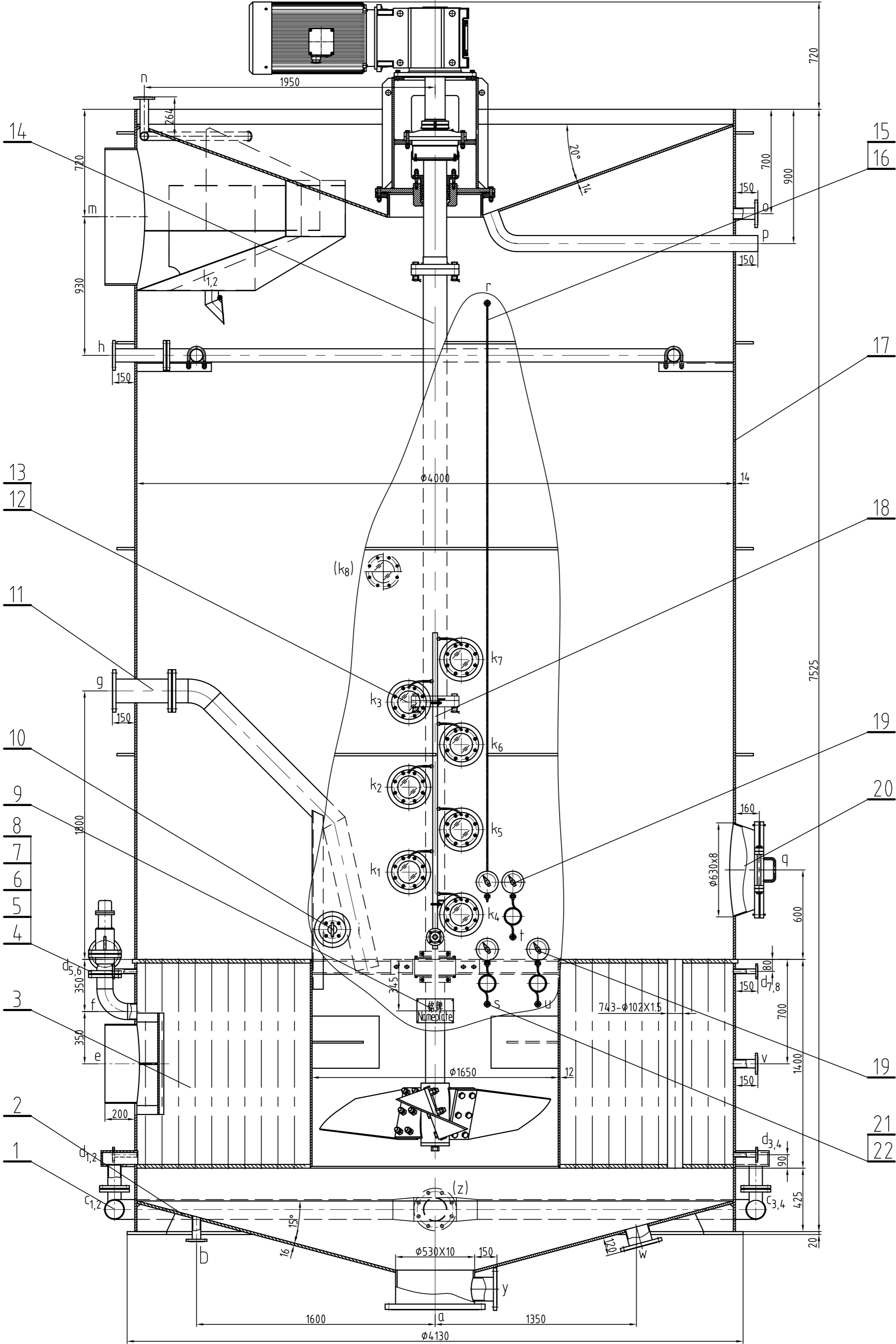
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设计数据表 Design data sheet

容器类别/级别 Vessel class	I类 Class/D级 Grade	设计、制造与检验标准 Design, manufacturing and inspection standards
参数名称 Parameters name	壳体 Shell pass 管程 Pipe pass	1. TSG 21-2016 《固定式压力容器安全技术监察规程》 TSG 21-2016 Supervision Regulation on Safety Technology for Stationary Pressure Vessel 2. GB150.1~150.4-2011 《压力容器》 GB150.1~150.4-2011 Pressure Vessels 3. GB/T20688-94 《轻工机械 压力容器(I)》 GB/T20688-94 Light Industrial Mechanical Pressure Vessel (I) 4. GB/T20722-94 《轻工机械 压力容器(II)》 GB/T20722-94 Light Industrial Mechanical Pressure Vessel (II) 5. NB/T47015-2011 《压力容器 制造》 NB/T47015-2011 Welding specification for pressure vessels 6. HG/T20584-2011 《钢制化工容器制造技术条件》 HG/T20584-2011 Technical requirements of fabrication for steel chemical vessels
工作压力 Operating pressure MPa	0.30 -0.098	
设计压力 Design pressure MPa	0.35 -0.092	
工作温度 Operating temperature ℃	127 182	
设计温度 Design temperature ℃	150 150	
介质名称 Medium features	蒸汽 Steam 糖膏 Massecurite	
介质特性 Medium features	无毒 Non-poisonous 不燃 Non-combustible	
腐蚀裕量 Corrosion allowance mm	2	
焊接接头系数(筒体/管板) Welded joint coefficient(Shell/pipe plate)	0.85/1.0	接头形式 Joint type
主要受压元件材料 Materials of main pressure parts	Q235B, Q245R, Q35408R	材料 Material
传热面积 Heat exchanger area m ²	310	焊接材料 Welding materials
连接管与管板连接 Connecting pipe to pipe plate	焊接 Welding	无损检测 Non-destructive testing
管程容积 Pipe pass volume m ³		试验 Tests
公称容积 Nominal volume m ³	4.0	
保温材料 Thermal insulation material		
保温厚度 Insulation thickness mm		
容器自重 Vessel self-weight kg	~26304	
搅拌功率 Agitation power kW	45(变频)	
搅拌转速 Agitation speed rpm	30~60	
工作总重 Working weigh kg		
试水总重 Water testing weight kg		
设计使用年限 Designed service life y	15	

1. 设备壳体材料为Q235B, 应符合GB/T150.2-2011的相关规定; 管板材料为Q245R, 应符合GB/T7173-2014的规定。
The material of the equipment shell is Q235B, which should comply with the relevant provisions in Appendix D.1 (a) to (c) of GB/T150.2-2011; The material of the pipe plate is Q245R, which should comply with the provisions of GB/T7173-2014.
2. 换热管材料为S30408, 应符合GB/T24593-2018的规定。
The material of the heat exchanger pipe is S30408, which should comply with the provisions of GB/T24593-2018.
3. 接管材料为20# 应符合GB/T8163-2018的要求; 法兰材料为Q245R。
The material for the pipe is 20#, which should comply with the requirements of GB/T8163-2018; The flange material is Q245R.
4. 焊接材料应符合NB/T47018.1~47018.3-2017; NB/T47018.4-2022标准中规定。
Welding materials should comply with NB/T47018.1~47018.3-2017, according to NB/T47018.4-2022 standard.
5. 设备试水后, 应清除水和污物; 设备外表面应涂防锈漆和防腐漆。
After the equipment passes the pressure test, remove accumulated water and dirt; The outer surface shall be rust removed and coated with one layer of heat-resistant and rust proof primer and one layer of gray topcoat.
6. 设备的涂装和运输包装应符合NB/T10558-2021标准中有关规定。
The equipment coating and transport package shall comply with NB/T10558-2021 provisions.
7. 设备应符合GB/T4772-2008标准。
Equipment thermal insulation shall be subject to GB/T4772-2008 standards for execution. The user is responsible for it themselves.
8. 安全阀型号: A48H-16C DN100; 整定压力0.32MPa。
Safety valve type: A48H-16C DN100. Set the pressure to 0.32MPa.
9. 管程焊缝可不进行无损检测, 但其焊接质量应保证与工程的筒体焊缝检测质量一样。
Non destructive testing is not required for the welds on the pipe pass shell, but the quality of the welds must be ensured to be the same as that of the non-destructive testing welds on the shell pass.
10. 壳程(如加热)分两半交收, 现场组焊后应进行超声波检测合格。
The shell pass (heater) is delivered in two halves, and the weld seam inspection after on-site assembly welding can be carried out using ultrasonic testing for Level II qualified.

管口表
Table of pipe connection

符号 Symbol	公称直径 Nominal diameter	连接尺寸及标准 Connection dimensions and standards	密封面形式 Sealing surface	用途或名称 Usage or name
a	500	PL500(B)-10 HG/T20592-2009	RF	物料出口 Massecurite outlet
b	50	PL50(B)-10 HG/T20592-2009	RF	采样回流口 Sampling reflux inlet
c~4	80	PL80(B)-10 HG/T20592-2009	RF	冷凝水出口 Condensate water outlet
d~8	25	PL25(B)-10 HG/T20592-2009	RF	不凝气出口 Non-condensate gas outlet
e	500	φ530x8	焊口 Welded	蒸汽入口 Steam inlet
f	100	PL100(B)-10 HG/T20592-2009	RF	安全阀接口 Safety valve connector
g	150	PL150(B)-10 HG/T20592-2009	RF	蒸汽入口 Steam inlet
h	80	PL80(B)-10 HG/T20592-2009	RF	洗罐水或蒸汽入口 Wash pan water or steam inlet
i	50	PN0.6 DN50	平面 Plane	采样器口 Sampler port
j	25	PL25(B)-10 HG/T20592-2009	RF	洗罐水或蒸汽入口 Wash pan water or steam inlet
k~8	150	PN0.6 DN150 NB/T47017-2011	平面 Plane	视镜 Sightglass
l _{1,2}	80	φ89x4	敞口 Open	糖汁回流口 Sugar juice backflow inlet
m	900	φ920x10	焊口 Welded	蒸汽出口 Juice steam outlet
n	50	PL50(B)-10 HG/T20592-2009	RF	洗罐水或蒸汽入口 Wash pan water or steam inlet
o	65	PL65(B)-10 HG/T20592-2009	RF	真空释放阀口 Vacuum release valve port
p	100	φ108x4	敞口 Open	排放口 Discharge outlet
q	500	500-0.6 HG/T21516-2014	平面 Plane	人孔 Manhole
r	15	M20X1.5	内螺纹 Internal Thread	压力测量口 Pressure measuring port of pan body
s	15	M20X1.5	内螺纹 Internal Thread	压力测量口 Pressure measuring port of pan body
t	20	M27X2	内螺纹 Internal Thread	温度测量口 Temperature measuring port of pan body
u	20	M27X2	内螺纹 Internal Thread	温度测量口 Temperature measuring port of heater
v	50	PL50(B)-10 HG/T20592-2009	RF	冷水入口 Cold water inlet
w	150	PL150(B)-10 HG/T20592-2009	RF	蒸汽入口 Steam inlet
y	150	PL150(B)-10 HG/T20592-2009	RF	洗罐水出口 Wash tank emptying outlet
z	150	PL150(B)-10 HG/T20592-2009	RF	冷凝水出口 Total condensate outlet

22	Y-150	压力表 Pressure gauge 0~0.6MPa	1	成品 Finished goods	0.35	精度1.6 Accuracy class
21		压力表缓冲管 Pressure gauge buffer pipe	1	成品 Finished goods	1.20	
20	HG/T21516-2014	人孔 Manhole I 6NM-X350/A 500-0.6	1	组合件 Components	118.0	筒节为异径管 Shell is reducer pipe
19	WSS-501	温度表 Thermometer φ150 0~150℃	2	成品 Finished goods	0.35	0.70 总长200 Tail length
18	TXG(J)40-2309A-7-0	洗视镜管 Washing sightglass pipe	1	焊接件 Welding Parts	7.76	
17	TXG(J)40-2309A-6-0	罐体 Pan body	1	焊接件 Welding Parts	10525.90	
16	Z-150	真空表 Vacuum gauge -0.1~0MPa	1	成品 Finished goods	0.35	精度1.6 Accuracy class
15	K02-16	测压管路 Piezometric pipe line	1	组合件 Components	3.80	YHS4-1-74
14	JJG15.5	搅拌装置 Agitating device	1	组合件 Components	3900.0	
13	QB/T2072.8-94	视镜 Sightglass hood DN150	8	Q235B	1.80	14.40
12	NB/T47017-2011	视镜 Sightglass PN0.6 DN150	8	焊接件 Welding Parts	18.20	145.60
11	TXG(J)40-2309A-5-0	进料管 Feeding pipe	1	焊接件 Welding Parts	83.15	
10	Q/TJ30-75-0	采样器 Sampler	1	组合件 Components	18.40	
9	TXG(J)40-2309-4-0	铭牌 Nameplate	1	组合件 Components	2.62	
8	A48H-16C	安全阀 Safety valve DN100	1	成品 Finished goods	58.50	
7	XB350	垫片 Gasket φ158/φ110 83	1	石棉橡胶板 Asbestos rubber plate	0.03	
6	GB/T97.1-2002	垫圈 Gasket 16	8	200HV	0.01	0.08
5	GB/T6170-2015	螺母 Nut M16	8	8级 8 grade	0.03	0.24
4	GB/T5782-2016	螺栓 Bolt M16X65	8	8.8级 8.8 grade	0.11	0.88
3	TXG(J)40-2309A-3-0	加热体 Heater	1	焊接件 Welding Parts	9478.18	
2	TXG(J)40-2309A-2-0	底盖 Bottom head	1	焊接件 Welding Parts	1747.91	
1	TXG(J)40-2309A-1-0	冷凝水环管 Condensate ring pipe	1	焊接件 Welding Parts	196.29	
序号 Part No.	图号或标准号 Drawing No. or Standard No.	名称 Name	数量 Qty.	材料 Material	重量 Weight	备注 Remarks
设计 Designed by	日期 Date	审核 Checked by	日期 Date	批准 Approved by	日期 Date	跟踪 Traced by
标记 Mark	数量 Number	更改号 Rev. No.	签名 Signature	日期 Date	日期 Date	日期 Date
设计 Designed by	日期 Date	审核 Checked by	日期 Date	批准 Approved by	日期 Date	跟踪 Traced by
标记 Mark	数量 Number	更改号 Rev. No.	签名 Signature	日期 Date	日期 Date	日期 Date

广东粤凯机械有限公司
Guangdong Yuekai Machinery Co., Ltd.

60T结晶罐
Batch Vacuum Pan
(E2403)

设计证书: TS224.079-2027
Design License No.: TS224.079-2027

比例 Scale: 1:20

重量 Weight: 26304kg

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TXG(J)40-2309C-0