







Contractor:  TIANCHEN CORP. CHINA	Project :	MKP Methanol Project			Owner :  شرکت کیمیای پارس خاورمیانه Middle East Kemiya Pars Co.
	Unit :	Flare	Phase	Detail Engineering	
	Doc. Title :	Knock-out Drum Drawing			
Vendor:  SUNPOWER GROUP LTD.	Owner No. :	MKP-VD-8500-237-307-A1			
	Contr. No.:	MKP-11-DE-9000-FE-REQ-237			
	Vendor No.	17013D85000EQ01			
				Rev. :4	Page : 1 of 15


Knock-out Drum Drawing

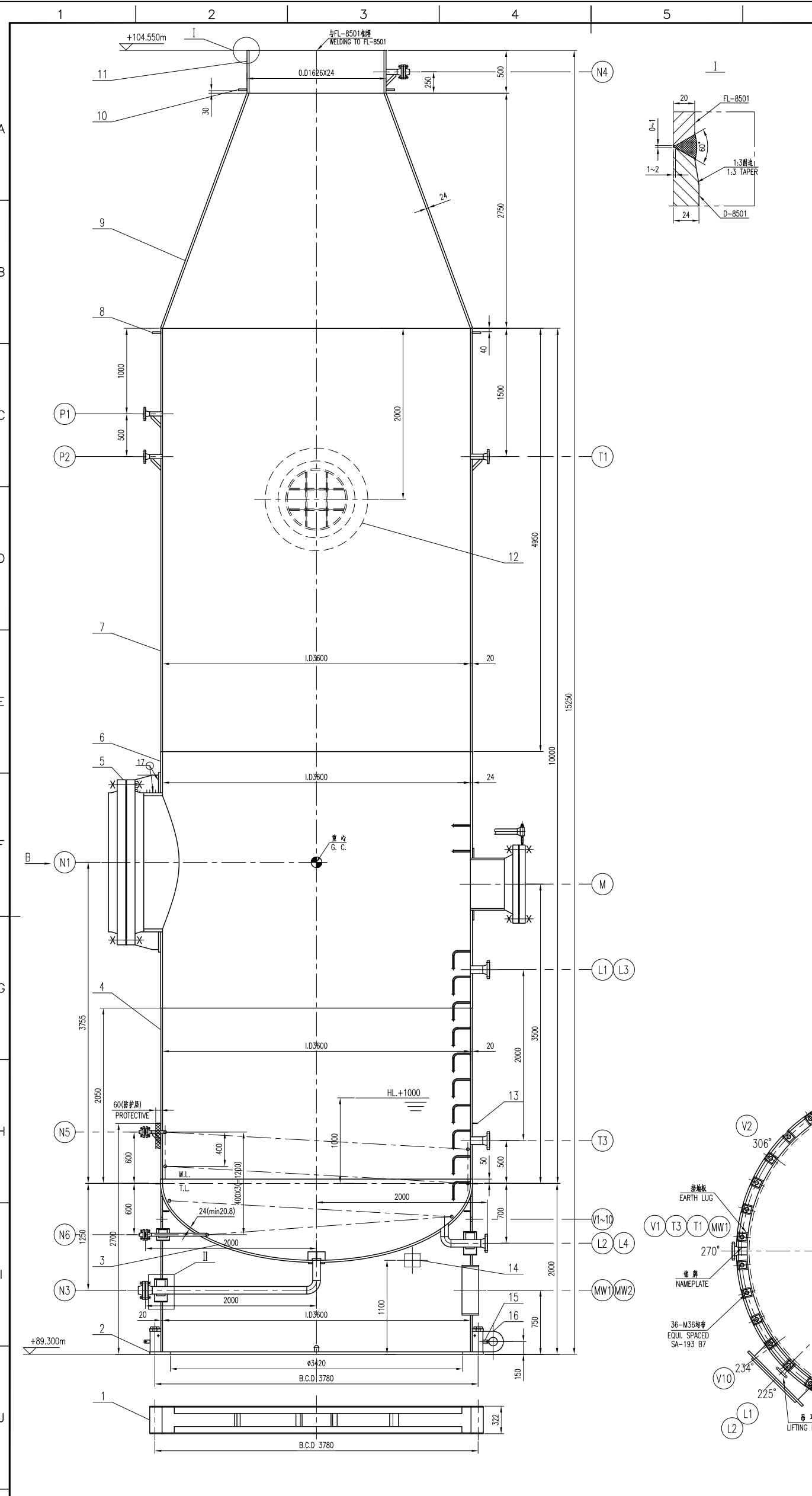
4	11.30.2018	Final Issue	N ZHAO	Q Tu	CD FU	
3	11.09.2018	Final Issue	N ZHAO	Q Tu	CD FU	
2	10.30.2018	Final Issue	N ZHAO	Q Tu	CD FU	
1	03.02.2018	Final Issue	N ZHAO	Q Tu	CD FU	
0	11.30.2017	Final Issue	N ZHAO	Q Tu	CD FU	
C	09.21.2017	Issued For Approval	N ZHAO	Q Tu	CD FU	
A	07.22.2017	Issued For Approval	N ZHAO	Q Tu	CD FU	
REV.	DATE	PURPOSE OF ISSUE	PREPARE	CHECK	REVIEW	APPROVE

Contractor:  TIANCHEN CORP. CHINA	Project :	MKP Methanol Project			Owner :  شرکت کیمیای پارس خاورمیانه Middle East Chemicals Parsa Co.
	Unit :	Flare	Phase	Detail Engineering	
Vendor:  中聖集團 SUNPOWER GROUP LTD.	Doc. Title :	Knock-out Drum Drawing			Rev. :4
	Owner No. :	MKP-VD-8500-237-307-A1			
	Contr. No.:	MKP-11-DE-9000-FE-REQ-237			
	Vendor No.	17013D85000EQ01			Page : 2 of 15

REVISION INDEX

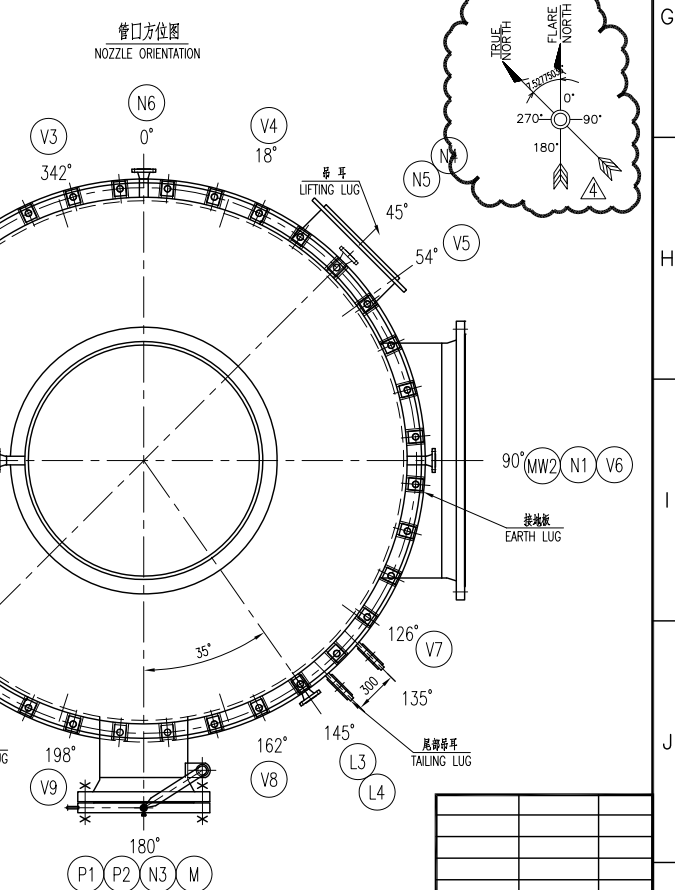
REV. PAGE								REV. PAGE								REV. PAGE							
	A	C	0	1	2	3	4		A	C	0	1	A	C	A								
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15	X	X	X	X	X	X	X																

 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD		图纸文件 目录 DWG. & DOC. TOC.			工程号 PROJ. NO.	17013	
					文件号 DOC. NO.	17013D10000EQ01-ML	
MKP Methanol Project FLARE D-8501 Knock-out Drum					单元号 UNIT NO.	10000	
					设计阶段 DES. STAGE	详细设计	
					第PAGE 1 页 共OF 1 页		
序号 No.	图纸文件号 Dwg. & Doc. No.	名称 Title	版次 Rev.	文表 页数 Doc. and tab. Pages	图纸张数 Dwg. Sheet		备注 Remarks
					自然 张数 Sheet	折合A1 Equiv. to A1	
1	17013D10000EQ01-ML	Knock-out Drum 图纸目录 DWG. & DOC. TOC.	4	1		0.125	
2	17013D10000EQ01-01	Knock-out Drum 装配图 (1/2) Assembly Drawing (1/2)	4		1	1	
3	17013D10000EQ01-02	Knock-out Drum 装配图 (2/2) Assembly Drawing (2/2)	4		1	1	
4	17013D10000EQ01-03	Knock-out Drum 管口组件图 Nozzle Component Drawing	4		1	1	
5	17013D10000EQ01-04	Knock-out Drum 基础模板图 Template Drawing	4		1	1	
6	17013D10000EQ01-05	Knock-out Drum 人孔部件图 Manhole Part Drawing	4		1	1	
7	17013D10000EQ01-06	Knock-out Drum 裙座部件图 Skirt Part Drawing	4		1	1	
8	17013D10000EQ01-07	Knock-out Drum 铭牌及支架图 Name Plate & Support Drawing	4		1	0.5	
9	17013D10000EQ01-08	Knock-out Drum 零部件 Parts Drawing	4		1	1	
10	17013D10000EQ01-09	Knock-out Drum 管道支架护板 Pipe Support Pad Drawing	4		1	1	
11	17013D10000EQ01-10	Knock-out Drum 电气支架护板 Electric Support Pad Drawing	4		1	1	
12	17013D10000EQ01-11	Knock-out Drum 梯子平台装配图 PLATFORM & LADDER DRAWING	4		1	1	
13	17013D10000EQ01-12	Knock-out Drum 梯子平台零部件 图 PARTS OF LADDER & PLATFORM DRAWING	4		1	1	
		小 计		1	12	11.625	
4	Final Issue	11.30.2018	N Zhao	Q Tu	CD Fu		
3	Final Issue	11.09.2018	N Zhao	Q Tu	CD Fu		
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C	Issued For Approval	21.09.2017	N Zhao	Q Tu	CD Fu		
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版次 REV.	说明 DESCRIPTION	日期 DATE	编制 PRP.	校核 CHK.	审核 RVW.		



设计数据 DESIGN DATA			
设计标准 DESIGN CODE	ASME CODE SEC.VIII DIV.1, 2015ED		
U钢印 STAMP WITH ASME CERTIFICATION MARK	否/NO		
介质名称/密度 FLUID NAME / DENSITY (kg/m ³)	CO ₂ , CO ₂ , CH ₄ , H ₂ O, H ₂ , CH ₃ OH etc./-	VAPOR (COIL)	
介质特性 FLUID PERFORMANCE	NON-LETHAL		
设计压力 DESIGN PRESSURE	7.0	52	
设计温度 DESIGN TEMP.	410/35	410	
设计液位高度 DESIGN LIQUID LEVEL	1000	NA	
工作压力 WORKING PRESSURE	0.41	10	
工作温度 WORKING TEMP.	410/35	345	
最低设计金属温度 MDMT.	℃ AT bar(g)	-10 @ 7.0 bar	/
最大许用工作压力 MAP	MAMP	7.0 @ 410℃	52 @ 410℃
	MAP	NA	NA
试验压力(立式/卧式) TEST PRESSURE (VER./HOR.)	bar(g)	12.8/14.29(UC99-b(36))	84(UC99-b)
水压试验温度 HYDRO. TEST TEMP.	℃	7~48	
气密性试验压力 GAS LEAKAGE TEST PRESS.	bar(g)	NA	
腐蚀裕度 CORROSION ALLOWANCE	mm	3	0
使用寿命 SERVICE LIFE	year	20	
容积 CAPACITY	m ³	124	
射线检验 RT (A,B,C)		SPOT (20%) (SEE NOTE)	FULL (100%)
焊接接头系数 JOINT EFFICIENCY		0.85/1.0(FOR NOZZLE)	
焊后热处理 PWHT		NO	
消除应力 STRESS RELIEVING		N/A	
冲击试验 IMPACT TEST		YES (SEE NOTE)	
基本风速 BASIC WIND SPEED	km/h	200.3	
风载荷 WIND LOAD		ASCE 7-10(10 Terrain Surface Roughness: D : Flat unobstructed coastal areas; Important Factor: 1.0; Type of surface: Smooth; Beta: Operating/Empty/Full(0.1/0.0/0.0))	
地震载荷 SEISMIC LOAD		ASCE 7-10(Importance factor: 1.5; Response Factor R: 2.5/4.0/3.0; Ie: 1.0; Ie: 1.0; Ss: 1.0; Ss: 0.25; Vibe Use: 1; Site Class: B; sp: 2.5; Force Factor: 0; Minimum Acceleration Multiplier: 0; Ss: 1.0; Sp: 1.0)	
保温厚度 INSULATION THK.	mm	60(SEE NOTE)	
防火厚度 FIREPROOF THK.	mm	NA	
油漆及表面处理 PAINTING & SURFACE PROTECTION		MKP-11-BE-9000-PI-SPC-010	
包装及运输要求 PACKING & SHIPPING REQUIREMENT		9355 C400 EMSP ACC 0005 & NOTE	
制造质量 FABRICATED WEIGHT	kg	~35700	
吊装重量 LIFTING WEIGHT	kg	~37000	
设备空重 EMPTY WEIGHT	kg	~35700	
操作重量 OPERATING WEIGHT	kg	52500	
水压试验重量 HYDROSTATIC TEST WEIGHT	kg	159700	
管口方位 NOZZLE ORIENTATION		PER THIS DWG.	

接管表 NOZZLE SCHEDULE										
接管号 NOZZLE	数量 NO.	规格 NPS	壁厚等级 NECK SCH.	法兰等级 FLANGE CLASS/PN	法兰标准 STD.	法兰型式 TYPE	法兰面形式 FACING	接管中心至设备中心线的距离 PROJ. FROM C.L.	用途或名称 SERVICE	备注 NOTES
N1	1	64"	t=34	EN 1092-1:2013	PN 16	11	B1	2200	火炬气进口 FLARE GAS INLET	WITH FLANGE
N3	1	3"	Sch160	ASME B16.5-2013	300	WN	RF	SEE DWG.	排水口 DRAIN	WITH FLANGE
N4	1	2"	Sch160	ASME B16.5-2013	300	WN	RF	1000	吹扫气进口 CLEAR GAS INLET	WITH FLANGE
N5	1	1"	Sch160	ASME B16.5-2013	300	WN	RF	2000	蒸汽进口 VAPOR INLET	WITH FLANGE
N6	1	1"	Sch160	ASME B16.5-2013	300	WN	RF	2000	蒸汽出口 VAPOR OUTLET	WITH FLANGE
P1	1	1 1/2"	Sch160	ASME B16.5-2013	300	WN	RF	2000	就地压力表接口 LOCAL PRES. NOZZLE	
P2	1	1 1/2"	Sch160	ASME B16.5-2013	300	WN	RF	2000	压力变送器接口 PRES. TRANS. NOZZLE	
T1	1	2"	Sch160	ASME B16.5-2013	300	WN	RF	2000	火炬气温度接口 LOCAL TEMP. METER	WITH GASKET/ BOLTS/NUTS
T3	1	2"	Sch160	ASME B16.5-2013	300	WN	RF	2000	蒸汽温度接口 TEMP. TRANS. NOZZLE	WITH GASKET/ BOLTS/NUTS
L1,L2	2	3"	Sch160	ASME B16.5-2013	300	WN	RF	2000	就地压力表接口 LOCAL PRES. NOZZLE	
L3,L4	2	2"	Sch160	ASME B16.5-2013	300	WN	RF	2000	就地压力表接口 LOCAL PRES. NOZZLE	
M	1	24"	t=20	ASME B16.5-2013	300	WN	RF	2100	人孔 MANWAY	
MW1-2	2	22"	t=16	/	/	/	/	/	检修孔 ACCESS HOLE	
V1-10	10	(DN50)	/	/	/	/	/	/	排气孔 VENT	



管口载荷表 NOZZLE LOADS DATA							
NOZZLE	DN	F _A (KN)	F _T (KN)	F _C /F (KN)	M _r (KN·m)	M _L (KN·m)	M _c /M (KN·m)
N1	64"	69.351	25.668	36.492	46.918	129.117	278.872
N3	3"	4.9	/	6.14	1.1	/	1.58
N4	2"	3.3	3.3	2.5	0.5	0.4	0.6

基础载荷 FOUNDATION LOAD					
工况 CASES	重量 WEIGHTS (kg)	剪力 SHEAR (N)	弯矩 MOMENT (N·m)	地震剪力 EARTHQUAKE SHEAR	地震弯矩 EARTHQUAKE MOMENT
D-8501(HL-8501)HL-8502(HL-8503)	81200	41245	368083	338543	4816315
空载工况 EMPTY OPERATION	98000	41245	514661	338543	5752725

OWNER: Middle East Kimiyae Pars Company

CONTRACTOR: HALDOR TOPSØE A/S

CONTRACTOR: TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION

VENDOR: 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD

PROJECT: D-8501 Knock-out Drum

UNIT: Flare

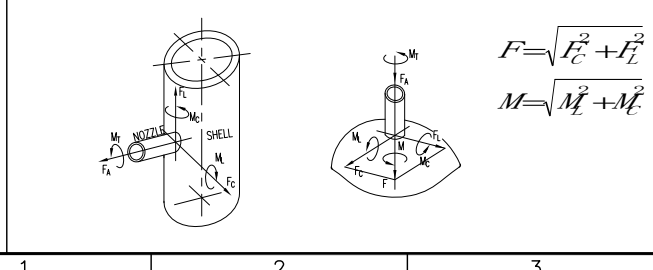
PHASE: DETAIL_ENGINEERING

CONTRACTOR DRAWING NO.: MKP-11-DE-9000-FE-REQ-237

VENDOR DRAWING NO.: 17013D8500EQ01-01

SCALE: 1:25 SHEET 1 TOTAL 10 SIZE A1

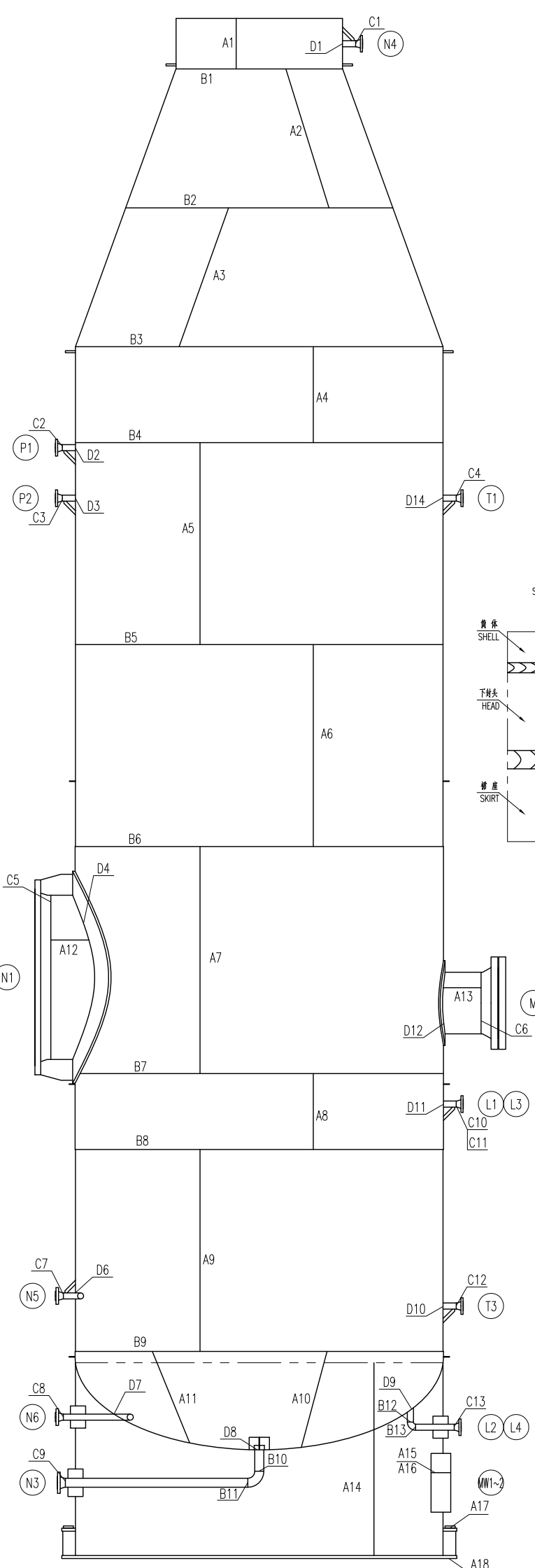
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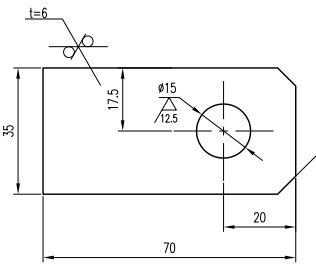
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▲	Final Issue	11.30.2018	N Zhao		Q Tu	CD Fu	
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▲	Final Issue	03.02.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	11.30.2017	N Zhao		Q Tu	CD Fu	
▲	Issued For Approval	09.21.2017	N Zhao		Q Tu	CD Fu	
▲	Issued For Approval	07.22.2017	N Zhao		Q Tu	CD Fu	

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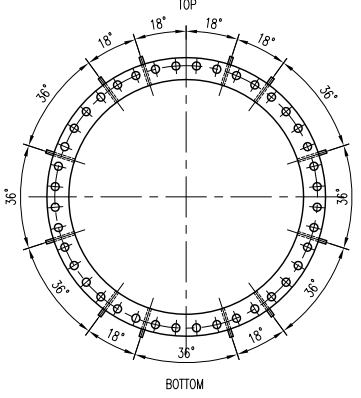
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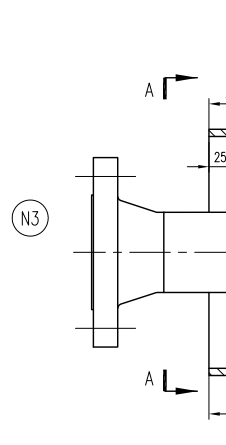
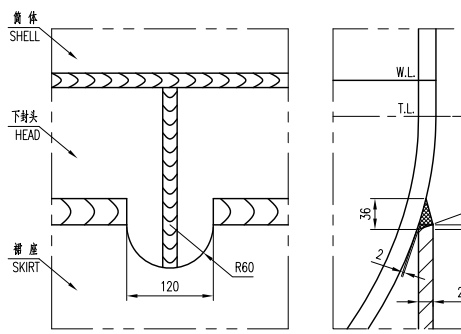
接地板详图
DETAIL FOR EARTH LUG



接管N1船板布置详图
DETAIL OF THE RIBS FOR NOZZLE N1



裙座与下封头焊接结构图
SKIRT AND BTM. EAD WELD DETAIL



技术要求 TECHNICAL NOTE

- 1. 本设备的设计、制造、检验及验收应符合... MKP-11-BE-9000-FE-REQ-001的要求...
2. 设备的制造、检验及验收应符合...
3. 主要承压元件材料应符合...
4. 承压元件材料应符合...
5. 承压元件材料应符合...
6. 承压元件材料应符合...
7. 承压元件材料应符合...
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16. 承压元件材料应符合...
17. 承压元件材料应符合...
18. 承压元件材料应符合...

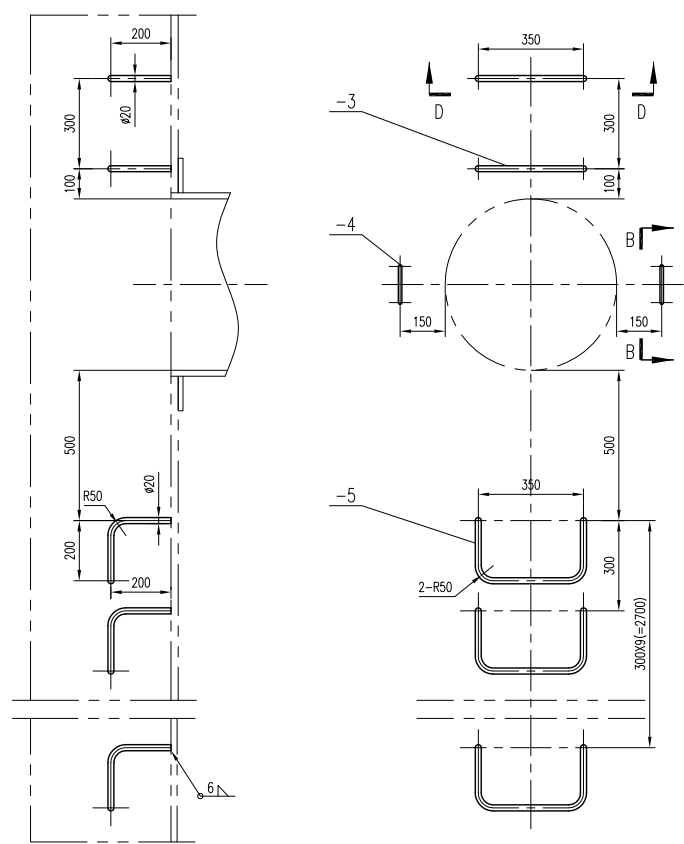
Table with columns: 序号 (No.), 图号或代号 (Drawing No. or Code), 名称 (Name), 数量 (Quantity), 材料 (Material), 单重 (Single Weight), 总重 (Total Weight), 备注 (Remarks). It lists various components like electric support pads, pipe support pads, and stiffening rings.

Table with columns: 图号 (Drawing No.), 图号或代号 (Drawing No. or Code), 名称 (Name), 数量 (Quantity), 材料 (Material), 单重 (Single Weight), 总重 (Total Weight), 备注 (Remarks). It lists various joints and their details.

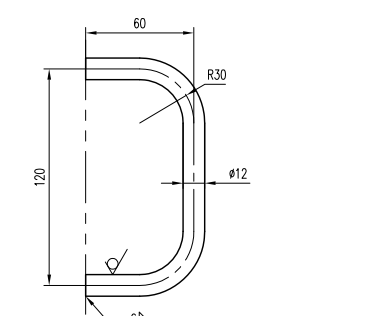
Contractor information including Middle East Kimiaye Pars Company, Haldor Topsøe A/S, TCC China Tianchen Engineering Corporation, Jiangsu Sunpower Technology Co., Ltd. and project details for D-8501 Knock-out Drum.

1 2 3 4 5 6 7 8

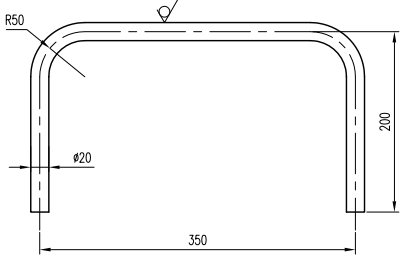
人孔内把手和梯子图
DETAIL FOR LADDER & HANDLE OF N1



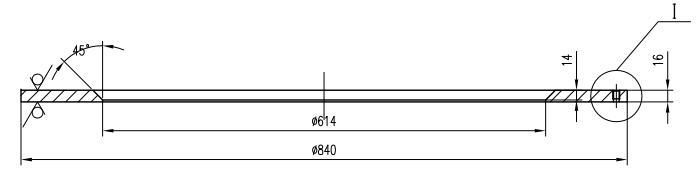
B-B
SECTION B-B



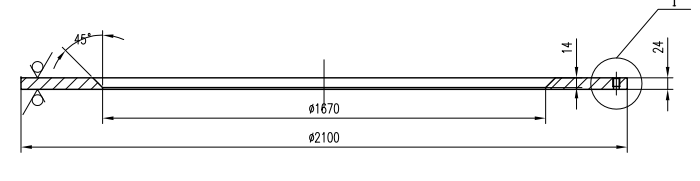
D-D
SECTION D-D



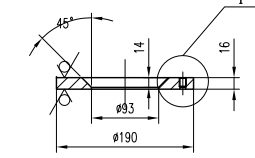
人孔补强图
DETAIL FOR REINFORCE PLATE OF M



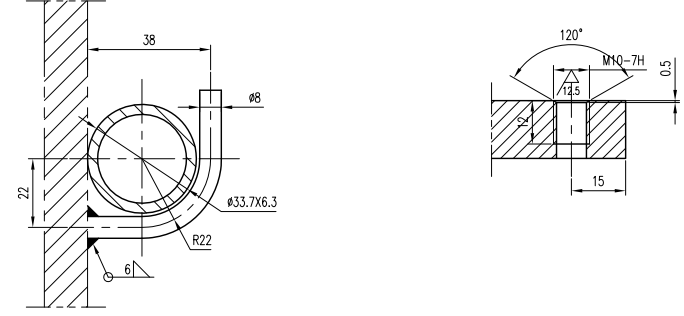
N1补强图
DETAIL FOR REINFORCE PLATE OF N1



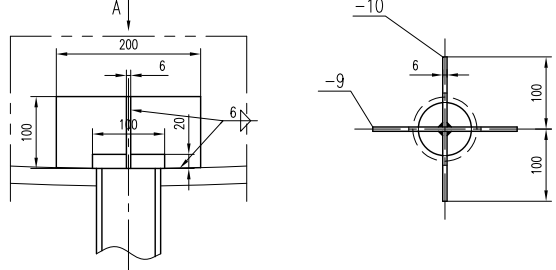
N3补强图
DETAIL FOR REINFORCE PLATE OF N3



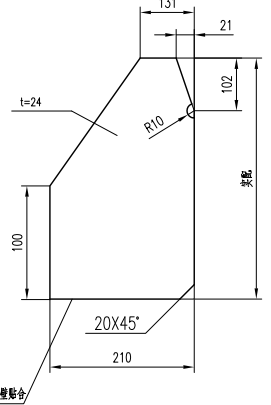
N5,N6 盘管卡子详图
DETAIL FOR CLIP OF N5,N6



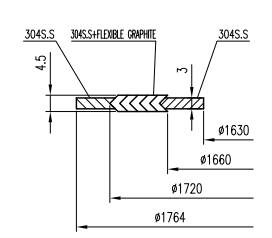
N3管口防涡持板详图
DETAIL FOR VORTEX OF N3



N1筋板详图
DETAIL FOR RIBS FOR N1-8



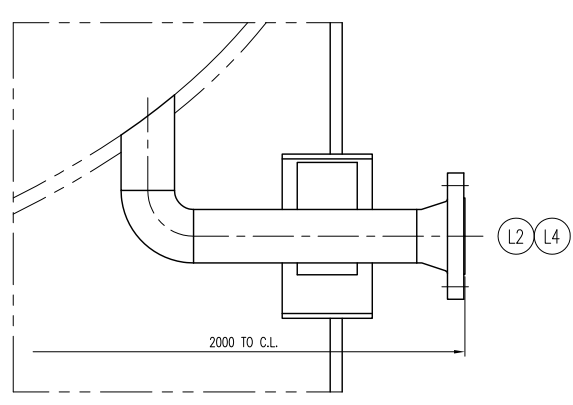
N1-7垫片详图
DETAIL FOR GASKET OF N1-7



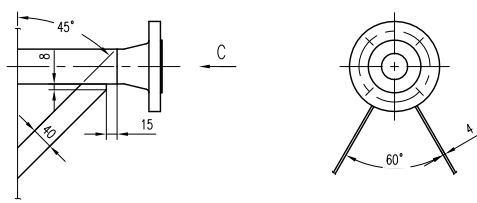
注 NOTE:

- 1. 缠绕垫材质如下:
 - 缠绕垫: 柔性石墨
 - 螺栓垫: 304 S.S
 - 内外环: 304 S.S
- SPRICAL WOUND GASKET:
 - FILLER: GRAPHITE
 - HOOP: 304S.S
 - INNER AND OUTER RING: 304 S.S
- 2. 内盘管卡子间距为400mm, 数量按配。
- 3. 盘管卡子间距为400mm, 数量按配。
- 4. THE CLIP USED FOR COIL SHOULD BE ARRANGED WITH 400mm SPACING, AND THE NUMBER ASCERTAINED ON SITE.
- 5. 管口N1垫片缠绕垫: 缠绕垫片, 内环材质及规格: 304S.S, 厚度: 4.5mm, 规格: 1514-22005.
- 6. MATERIAL OF NOZZLE N1 GASKET (SPRICAL WOUND GASKET), THE THICKNESS IS 4.5mm.
- 7. -FILLER: FLEXIBLE GRAPHITE. -HOOP, INNER RING: 304S.S. REFER EN 1514-22005.

L2/L4 详图
DETAIL FOR L2/L4



管口筋板详图
DETAIL FOR RIB



件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SCALE	MASS (kg)	REMARKS
-8	见本图	筋板 t=4	2	SA-516 Gr.70	0.15	0.3	
-7	见本图	卡子 1/2"	N	304S.S		10	见注
-6	ASME B16.20-2012	缠绕垫 1"-CL 300 RF	2	组合件 ASSEMBLY	/	/	见注
-5	ASME B18.2.2-2015	重六角螺母 5/8"-11UNC-2B	16	SA-194 B7	0.05	0.8	
-4	ASME B18.31.2-2014	全螺双螺栓 5/8"-11UNC-2A L=75	8	SA-193 Gr.2H	0.152	1.216	
-3	见本图	接管 1" Sch160 L=33150	1	SA-312 304		142.5	
-2	ASME B16.5-2013	法兰 1"-300# WN/RF Sch160	2	SA-105	1.82	1.82	配对法兰
-1	ASME B16.5-2013	法兰 1"-300# WN/RF Sch160	2	SA-105	1.82	1.82	配对法兰
-7	见本图	筋板 t=4	2	SA-516 Gr.70	0.15	0.3	
-6	ASME B16.20-2012	缠绕垫 2"-CL 300 RF	1	组合件 ASSEMBLY	/	/	见注
-5	ASME B18.2.2-2015	重六角螺母 5/8"-11UNC-2B	16	SA-194 B7	0.05	0.8	
-4	ASME B18.31.2-2014	全螺双螺栓 5/8"-11UNC-2A L=90	8	SA-193 Gr.2H	0.152	1.22	
-3	见本图	管 2" Sch160 L=155	1	SA-106 Gr.B		1.14	
-2	ASME B16.5-2013	法兰 2"-300# WN/RF Sch40	1	SA-105		3.63	配对法兰
-1	ASME B16.5-2013	法兰 2"-300# WN/RF Sch160	1	SA-105		3.63	配对法兰
-11	见本图	补强圈 O.D.190/I.D.93 t=16	1	SA-516 Gr.70		2.67	
-10	见本图	补强圈 O.D.190/I.D.93 t=16	2	SA-516 Gr.70		0.45	0.9
-9	见本图	板1	1	SA-516 Gr.70		0.93	
-8	ASME B16.20-2012	缠绕垫 3"-CL 300 RF	1	组合件 ASSEMBLY	/	/	见注
-7	ASME B18.2.2-2015	重六角螺母 3/4"-10UNC-2B	16	SA-194 B7	0.101	1.62	
-6	ASME B18.31.2-2014	全螺双螺栓 3/4"-10UNC-2A L=110	8	SA-193 Gr.2H	0.276	2.21	
-5	见本图	管 3" Sch160 L=264	1	SA-106 Gr.B		3.98	
-4	ASME B16.9-2012	90°短半径弯头 3" Sch160 (LR)	1	SA-234 WPB		2.7	
-3	见本图	管 3" Sch160 L=1806	1	SA-106 Gr.B		27.2	
-2	ASME B16.5-2013	法兰 3"-300# WN/RF Sch40	1	SA-105		8.17	配对法兰
-1	ASME B16.5-2013	法兰 3"-300# WN/RF Sch160	1	SA-105		8.17	配对法兰
-8	见本图	筋板 t=24	12	SA-516 Gr.70	9.1	109.2	
-7	见本图	缠绕垫	1	SEE NOTE 3		/	
-6	DIN 2510-5	六角螺母 MS2	80	1.1181	1.2	96	
-5	DIN 2510-1	六角螺栓 MS2 L=380 TYPE L	40	1.7218	5.21	208.5	
-4	见本图	补强圈 O.D.2100/I.D.1670 t=24	1	SA-516 Gr.70		236	
-3	见本图	接管 O.D.1666x34	1	SA-516 Gr.70		607	
-2	EN 1092-1:2013	法兰 11/16"/DN1600X14/PN16	1	SA-105		476	配对法兰
-1	EN 1092-1:2013	法兰 11/16"/DN1600X14/PN16	1	SA-105		476	配对法兰

件号	名称	材料	数量	质量(kg)	比例	所在图号	装配图号
PARTS NO.	PARTS NAME	MATL	QTY.	MASS	SCALE	DWG. NO.	G.A. DWG. NO.
5	管口组件	ASSEMBLY	3326	1/		17013085000E001-03	17013085000E001-01
	NOZZLE COMPONENT						
	NOZZLE						
	NOZZLE						

OWNER: Middle East Kimiaye Pars Company

HALDOR TOPSØE A/S

CONTRACTOR: TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION

VENDOR: 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD

PROJECT: D-8501 Knock-out Drum

UNIT: MKP Methanol Project

PHASE: DETAIL_ENGINEERING

SCALE: 1/ SHEET 3 TOTAL 10 SIZE A1

OWNER DWG NO: MKP-VD-8500-237-307-A1

A

B

C

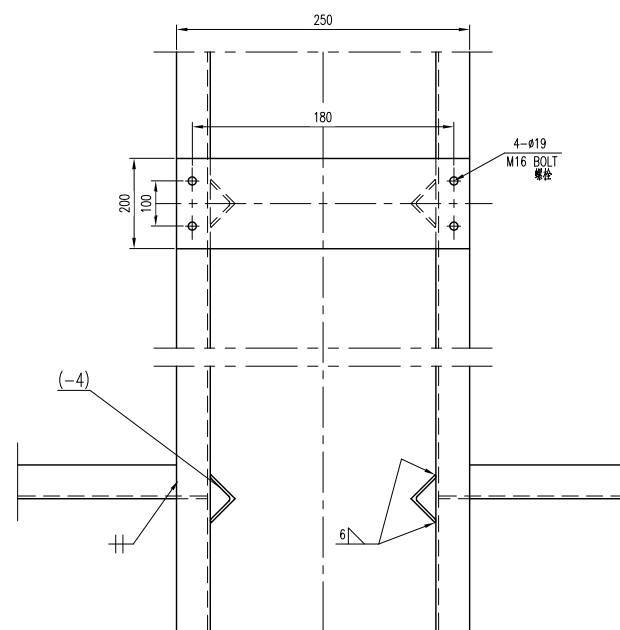
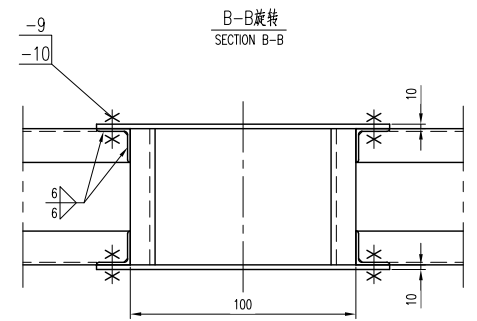
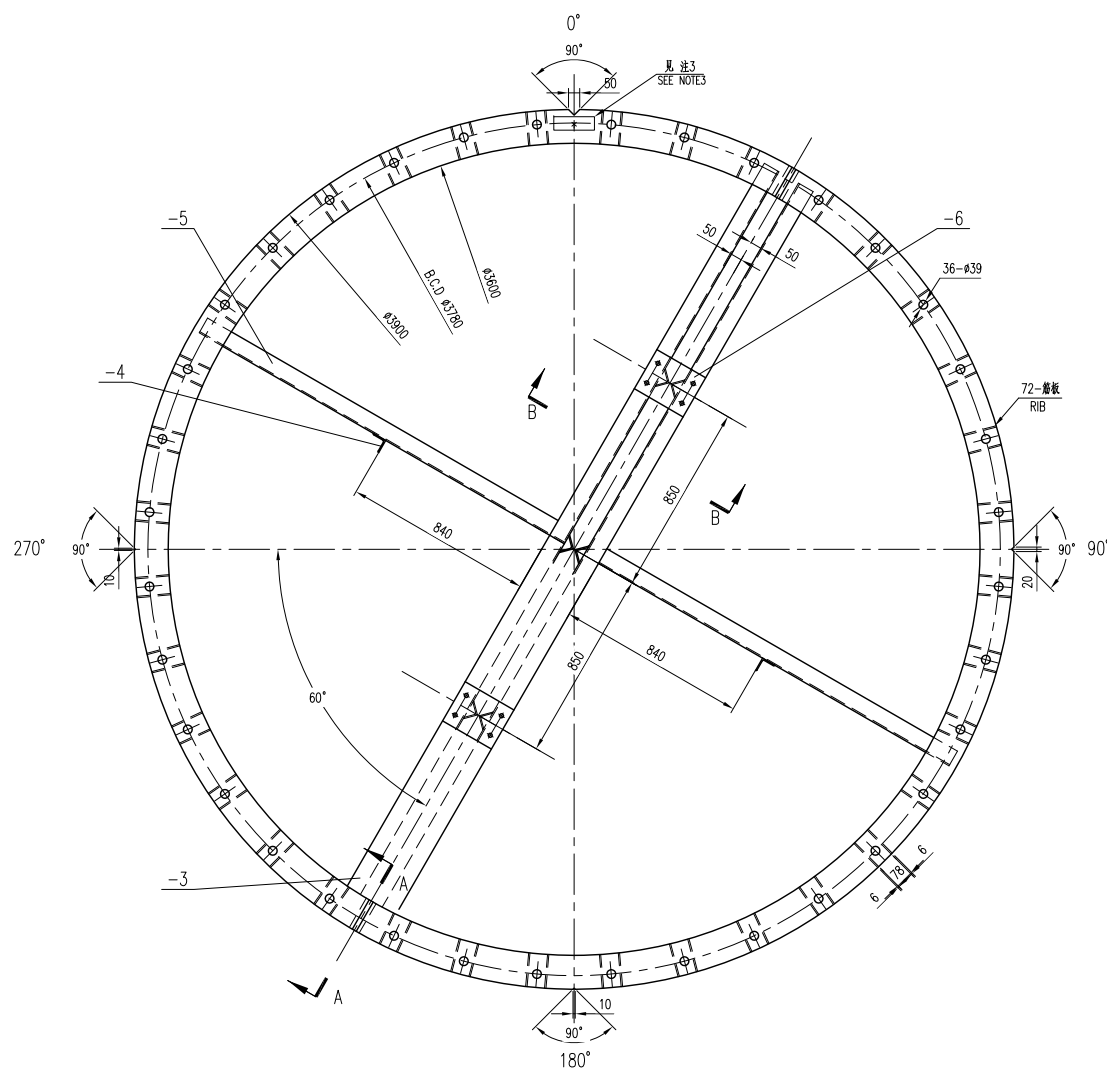
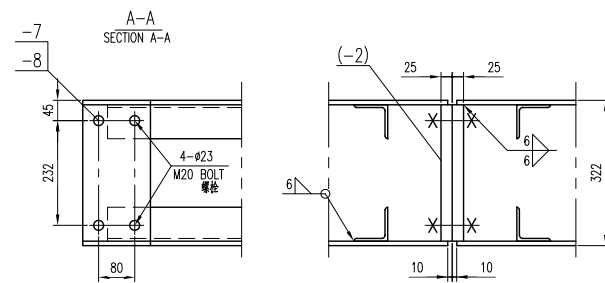
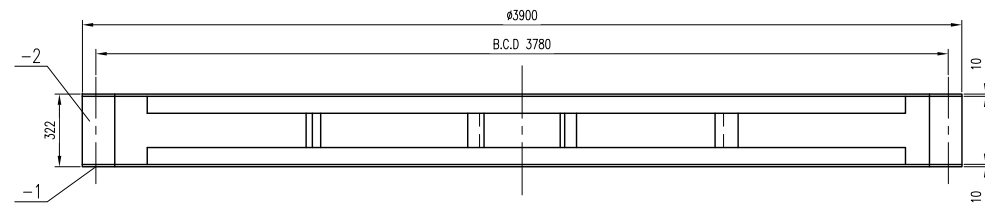
D

E

F

G

H



TECHNICAL NOTE 技术要求

- 模板应与基础环使用同一规格钢板。
THE TEMPLATE AND BASE RING OF THE OUTER SHELL SHALL BE DRILLED USING SAME GAUGE PLATE.
- 模板应提前发往现场。
THE TEMPLATE SHALL BE DELIVERED TO SITE IN ADVANCE.
- 取套位等方位角 (0°, 90°, 180°, 270°) 应在图中明确标注。
ITEM NO. AND ORIENTATION (0°, 90°, 180°, 270°) SHALL BE CLEARLY PAINTED AND HARD STAMPED ON "V" - MARKED POSITION OF UPPER SURFACE.
- 除注明外, 所有焊缝应连续满焊, 焊缝高度不低于板厚厚度的0.7倍。
UNLESS NOTED, ALL FILLED WELD SHALL BE CONTINUED AND PENETRATION. THICKNESS OF FILLET WELD SHALL BE NOT LESS THAN THE THICKNESS OF THE THINNER ONE.
- 地脚螺栓孔中心距直径以及相邻两孔间距应满足长边间距差均±3mm。
THE ALLOWABLE TOLERANCE OF ANCHOR BOLT HOLE CIRCLE DIAMETER AND CHORD LENGTH BETWEEN ANY TWO BOLT HOLE IS ±3mm.
- 本零件的表面处理及油漆要求应符合项目规范MKP-11-BE-9000-PI-SPC-010的要求。
THE REQUIREMENTS OF SURFACE TREATMENT & PROTECTION SHALL BE ACCORDING TO MKP-11-BE-9000-PI-SPC-010.
- 本零件的包装和运输要求应符合项目规范MKP-11-BE-9000-ST-CSS-003的要求。
THE REQUIREMENTS OF PACKING & SHIPPING SHALL BE ACCORDING TO MKP-11-BE-9000-ST-CSS-003.

件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	MASS (kg)	TOTAL MASS (kg)	REMARKS
-11		模板 t=6	72	SA-516 Gr.70	2	144	
-10	GB/T 6170-2015	螺母 M16X2	16		0.03	0.48	镀锌
-9	GB/T 5282-2016	螺栓 M16X2 L=45	16		0.1	1.6	镀锌
-8	GB/T 6170-2015	螺母 M20	8		0.06	0.48	镀锌
-7	GB/T 5282-2016	螺栓 M20 L=80	8		0.245	1.96	镀锌
-6		连接板 t=10	4	SA-516 Gr.70	10	40	
-5		角钢 L6.3X6.3X6	4	SA-36	11.4	45.6	L=1870
-4		角钢 L6.3X6.3X6	8	SA-36	1.15	9.2	L=300
-3		角钢 L7.5X7.5X6	4	SA-36	26.2	52	L=3800
-2		连接板 t=25	4	SA-516 Gr.70	8.7	17.4	
-1		环板 t=10	2	SA-516 Gr.70	137.3	274.6	每件两个半圆 OUT TO TOOL HALF

件号	名称	材料	质量(kg)	比例	所在图号	装配图号
PARTS NO.	PARTS NAME	MATL	MASS	SCALE	DWG. NO.	G.A DWG. NO.
1	基础模板	组合件	443.3	1:20	17013085000E001-04	17013085000E001-01
	模板	ASSEMBLY				

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△	Final Issue	11.30.2018	N Zhao				CD Fu
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△	Final Issue	10.30.2018	N Zhao				Q Tu
△	Final Issue	03.02.2018	N Zhao				Q Tu
△	Final Issue	11.14.2017	N Zhao				Q Tu
△	Issued For Approval	09.21.2017	N Zhao				Q Tu
△	Issued For Approval	07.22.2017	N Zhao				Q Tu

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OWNER: Middle East Kimiaye Pars Company

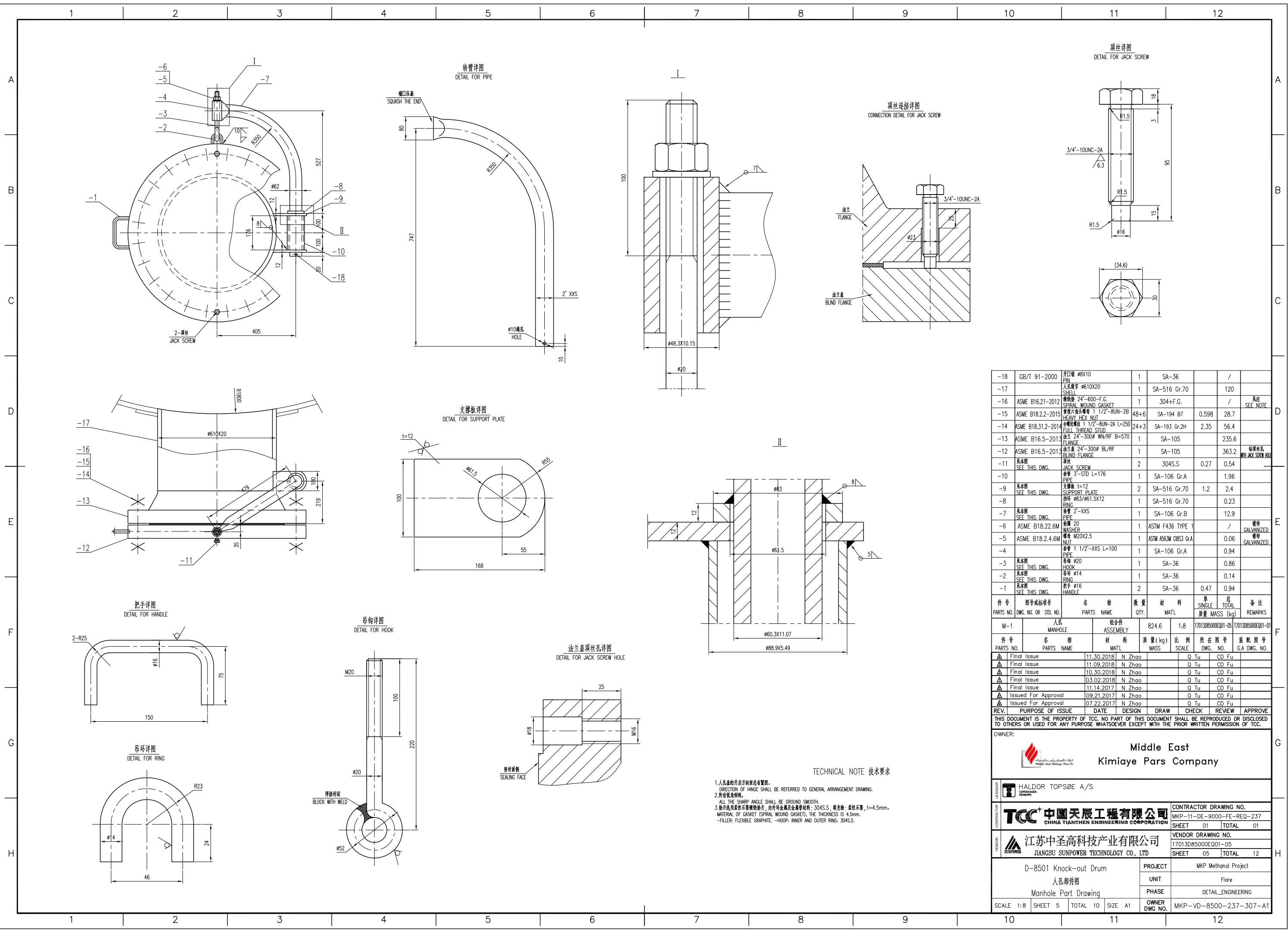
HALDOR TOPSØE A/S

CONTRACTOR: TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION

VENDOR: 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD

PROJECT: D-8501 Knock-out Drum
UNIT: Flare
PHASE: DETAIL_ENGINEERING

SCALE 1:16 SHEET 4 TOTAL 10 SIZE A1 OWNER DWG NO. MKP-VD-8500-237-307-A1



件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	MASS (kg)	MASS (kg)	REMARKS
-18	GB/T 91-2000	开口销 #8X10 PIN	1	SA-36	/	/	
-17		人孔盖铰链 #610X20 SHDILL	1	SA-516 Gr.70	120	120	见注
-16	ASME B16.21-2012	螺旋垫圈 24"-600-F.G. SPIRAL WOUND GASKET	1	304+F.G.	/	/	见注
-15	ASME B18.2.2-2015	螺母 24"-600-F.G. HEAVY HEX NUT	48+6	SA-194 B7	0.598	28.7	
-14	ASME B18.31.2-2014	全螺纹螺柱 1 1/2"-BUN-2B FULL THREAD STUD	24+3	SA-193 Gr.2H	2.35	56.4	
-13	ASME B16.5-2013	法兰 24"-300# WN/RF B=570 FLANGE	1	SA-105		235.6	
-12	ASME B16.5-2013	法兰盖 24"-300# BL/RF BLIND FLANGE	1	SA-105		363.2	镀锌螺
-11	见本图	顶丝 JACK SCREW	2	304S.S	0.27	0.54	镀锌螺
-10	见本图	接管 3"-STD L=176 PIPE	1	SA-106 Gr.A		1.96	
-9	见本图	支撑板 t=12 SUPPORT PLATE	2	SA-516 Gr.70	1.2	2.4	
-8	见本图	环 #63/#61.5X12 RING	1	SA-516 Gr.70		0.23	
-7	见本图	接管 2"-XXS PIPE	1	SA-106 Gr.B		12.9	
-6	ASME B18.22.6M	垫圈 20 WASHER	1	ASTM F436 TYPE 1	/	/	镀锌
-5	ASME B18.2.4.6M	螺母 M20X2.5 NUT	1	ASTM A563M 08S3 Gr.A		0.06	镀锌
-4	见本图	接管 1 1/2"-XXS L=100 PIPE	1	SA-106 Gr.A		0.94	
-3	见本图	吊钩 #20 HOOK	1	SA-36		0.86	
-2	见本图	吊环 #14 RING	1	SA-36		0.14	
-1	见本图	把手 #16 HANDLE	2	SA-36	0.47	0.94	

件号	名称	材料	质量(kg)	比例	所在图号	装配图号
PARTS NO.	PARTS NAME	MATL	MASS	SCALE	DWG. NO.	G.A DWG. NO.
M-1	人孔 MANHOLE	组合件 ASSEMBLY	824.6	1:8	17013085000E001-05	17013085000E001-01

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▲	Final Issue	11.09.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	10.30.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	03.02.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	11.14.2017	N Zhao		Q Tu	CD Fu	
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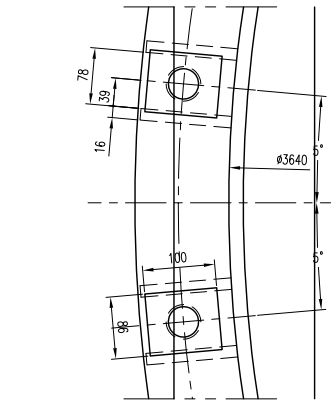
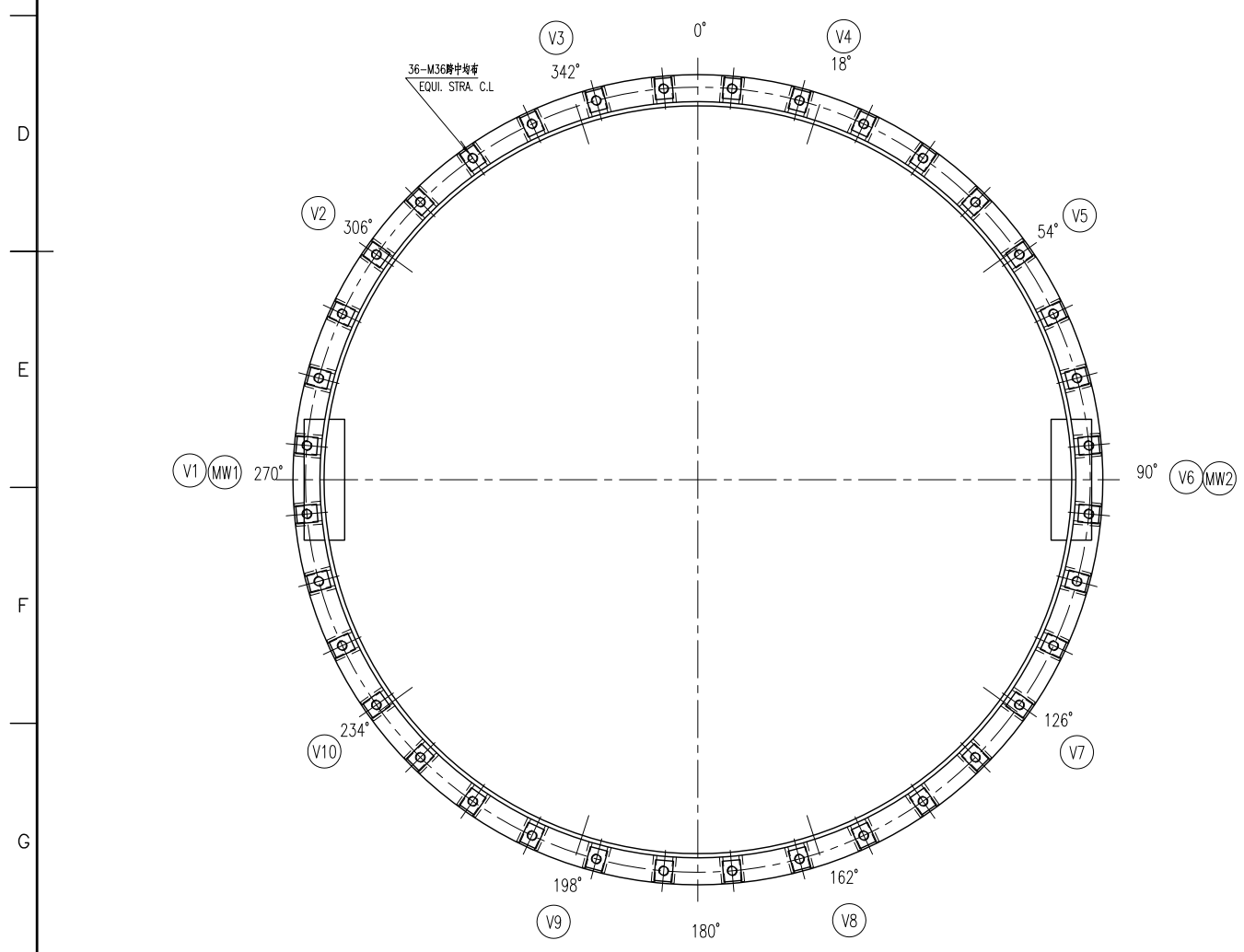
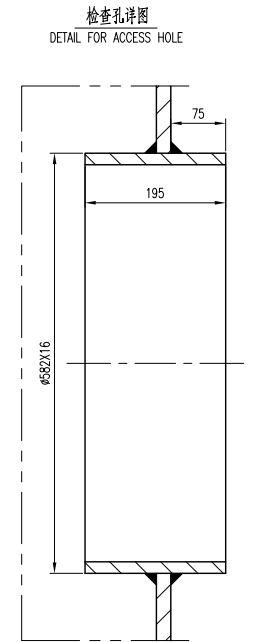
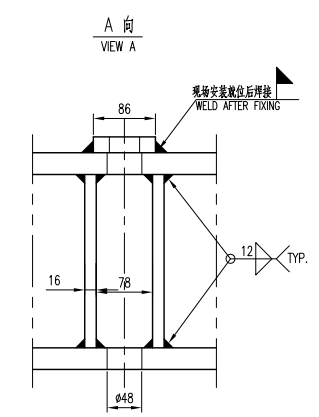
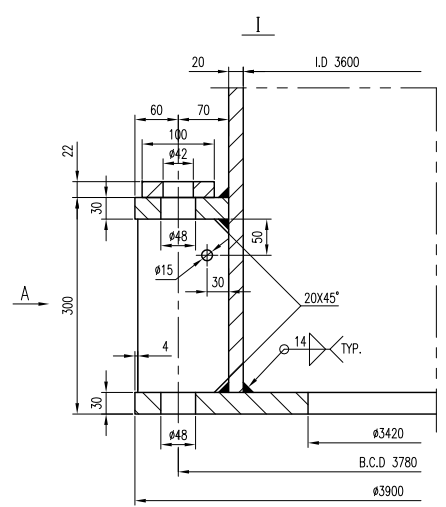
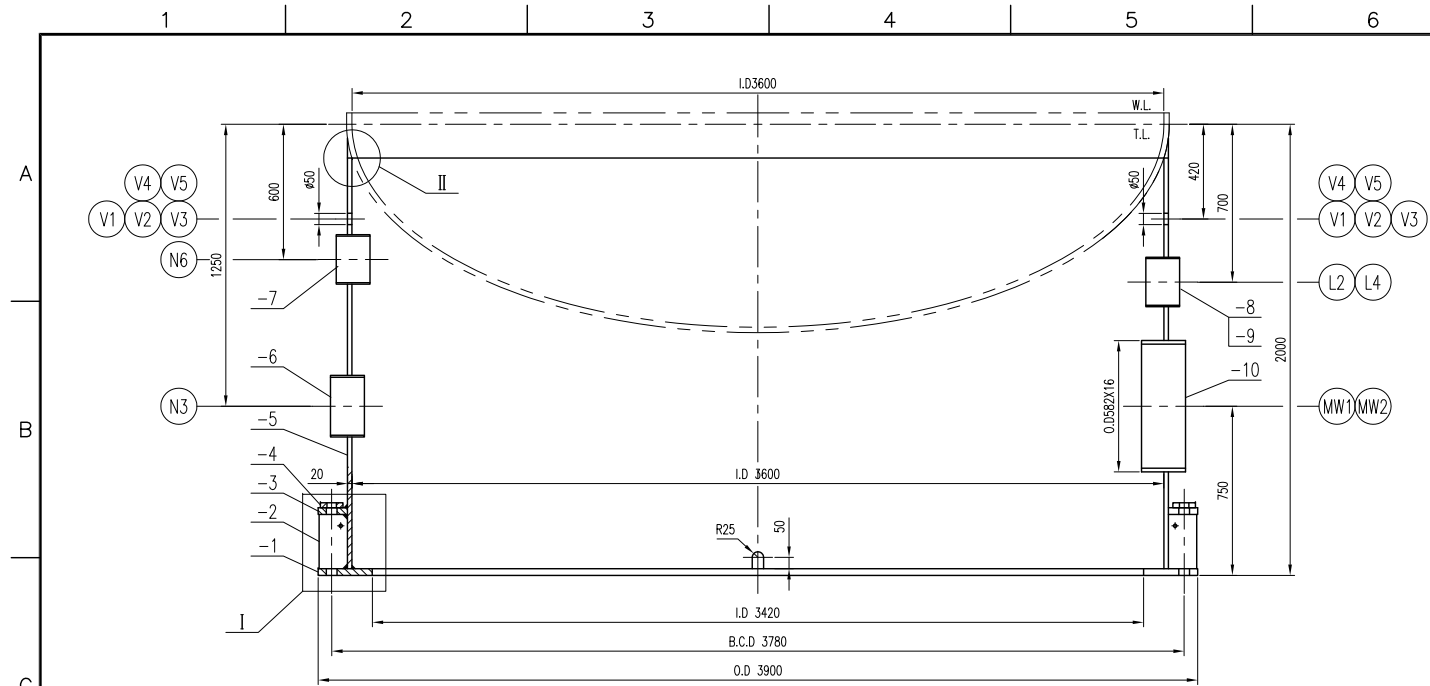
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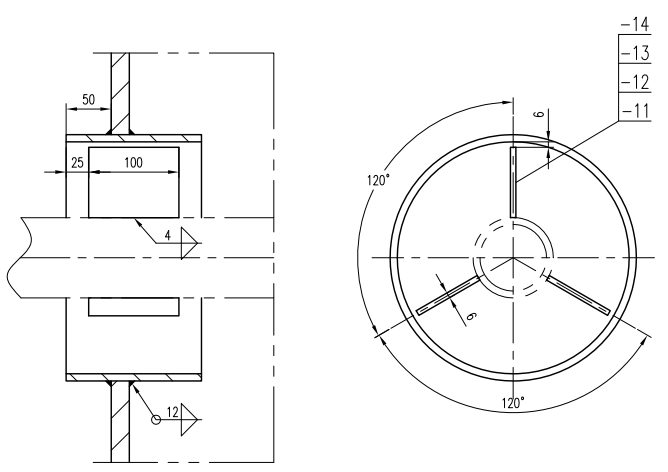
Middle East
Kimiaye Pars Company

LICENSOR HALDOR TOPSØE A/S CONTRACTOR TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION VENDOR 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD	CONTRACTOR DRAWING NO. MKP-11-DE-9000-FE-REQ-237 SHEET 01 TOTAL 01 VENDOR DRAWING NO. 17013085000E001-05 SHEET 05 TOTAL 12
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D-8501 Knock-out Drum		PROJECT	MKP Methanol Project
Manhole Part Drawing		UNIT	Flare
		PHASE	DETAIL_ENGINEERING
SCALE 1:8	SHEET 5	TOTAL 10	SIZE A1
		OWNER DWG NO.	MKP-VD-8500-237-307-A1



引出管详图
DETAIL FOR PIPE OPENING



1 引出管方位按总布置图。
DIRECTION OF PIPE OPENINGS SHALL BE REFERRED TO GENERAL ARRANGEMENT DRAWING.

TECHNICAL NOTE 技术要求

件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-14		L4 支撑板 t=6 SUPPORT PLATE	3	SA-516 Gr.70	0.3	0.9	
-13		L2 支撑板 t=6 SUPPORT PLATE	3	SA-516 Gr.70	0.4	1.2	
-12		N6 支撑板 t=6 SUPPORT PLATE	3	SA-240 304	0.28	0.84	
-11		N3 支撑板 t=6 SUPPORT PLATE	3	SA-516 Gr.70	0.4	1.2	
-10		检查孔 O.D. 582X16 ACCESS HOLE	4	SA-516 Gr.70	4.35	17.4	
-9		L4 引出管 O.D. 219X6 PIPE OPENING	1	SA-106 Gr.B		4.66	
-8		L2 引出管 O.D. 273X8 PIPE OPENING	1	SA-106 Gr.B		7.7	
-7		N6 引出管 O.D. 133X4 PIPE OPENING	1	SA-106 Gr.B		1.88	
-6		N3 引出管 O.D. 273X8 PIPE OPENING	1	SA-106 Gr.B		7.7	
-5		裙座壳体 I.D. 3600X20 SHIRT SHELL	1	SA-516 Gr.70		3208.2	L=1820
-4		垫板 t=22 BEAR PLATE	36	SA-516 Gr.70	1.23	44.3	
-3		压环 t=30 COMPRESSION RING	1	SA-516 Gr.70		342.8	
-2		衬套 t=16 GUSSET PLATE	72	SA-516 Gr.70	3.74	269.3	
-1		基座环 t=30 BASE RING	1	SA-516 Gr.70		626.5	
2		裙座 SKIRT	组合件 ASSEMBLY	4534	1:16	17013085000E001-06	17013085000E001-01

件号	名称	材料	质量(kg)	比例	所在图号	装配图号
PARTS NO.	PARTS NAME	MATL	MASS	SCALE	DWG. NO.	G.A. DWG. NO.
Δ	Final Issue	11.30.2018	N Zhao		Q Tu	CD Fu
Δ	Final Issue	11.09.2018	N Zhao		Q Tu	CD Fu
Δ	Final Issue	10.30.2018	N Zhao		Q Tu	CD Fu
Δ	Final Issue	03.02.2018	N Zhao		Q Tu	CD Fu
Δ	Final Issue	11.14.2017	N Zhao		Q Tu	CD Fu
Δ	Issued For Approval	09.21.2017	N Zhao		Q Tu	CD Fu
Δ	Issued For Approval	07.22.2017	N Zhao		Q Tu	CD Fu

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OWNER: Middle East Kimiaye Pars Company

CONTRACTOR: HALDOR TOPSØE A/S

CONTRACTOR: TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION

VENDOR: 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD

PROJECT: D-8501 Knock-out Drum

UNIT: Flare

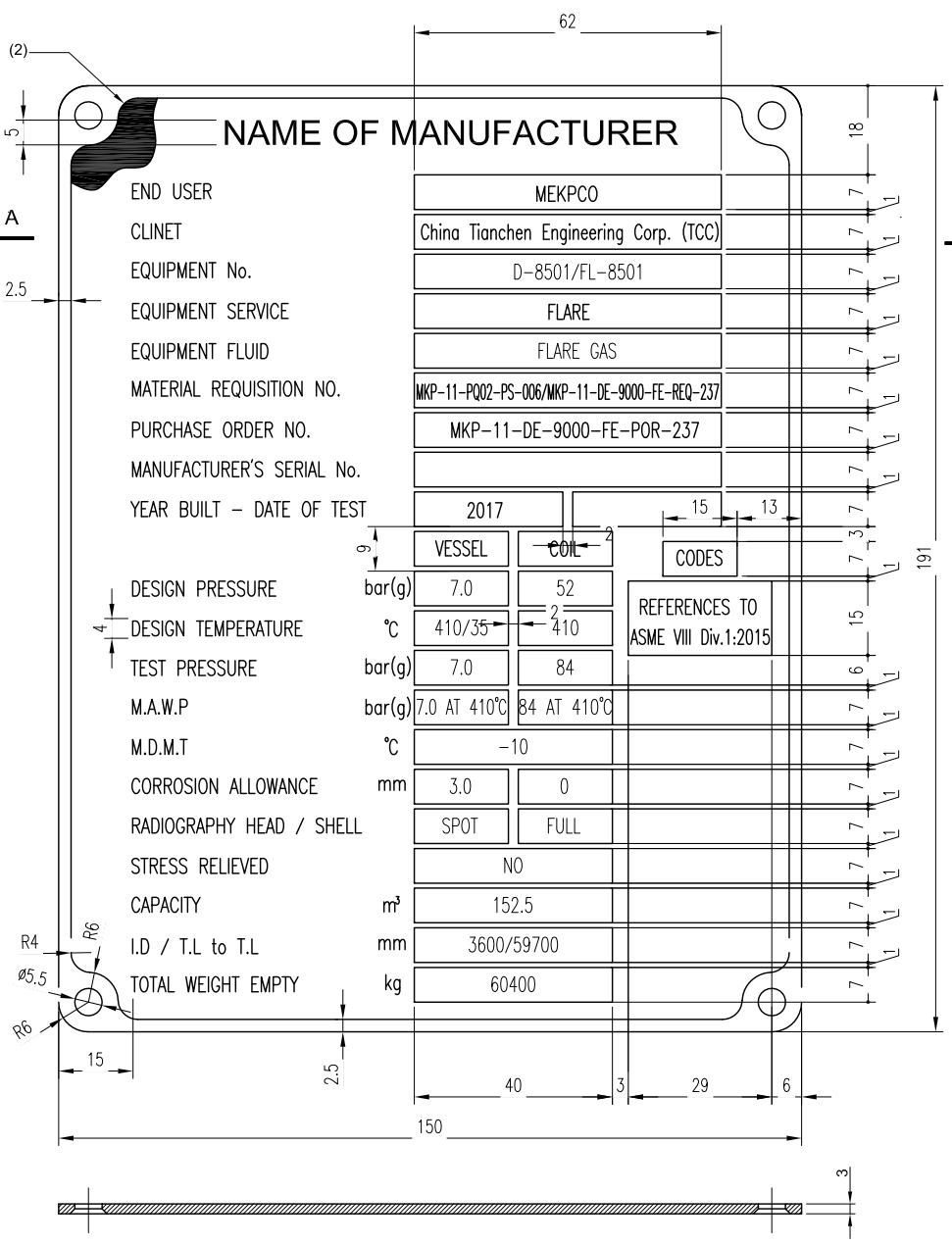
PHASE: DETAIL_ENGINEERING

SCALE: 1:16 SHEET 6 TOTAL 10 SIZE A1

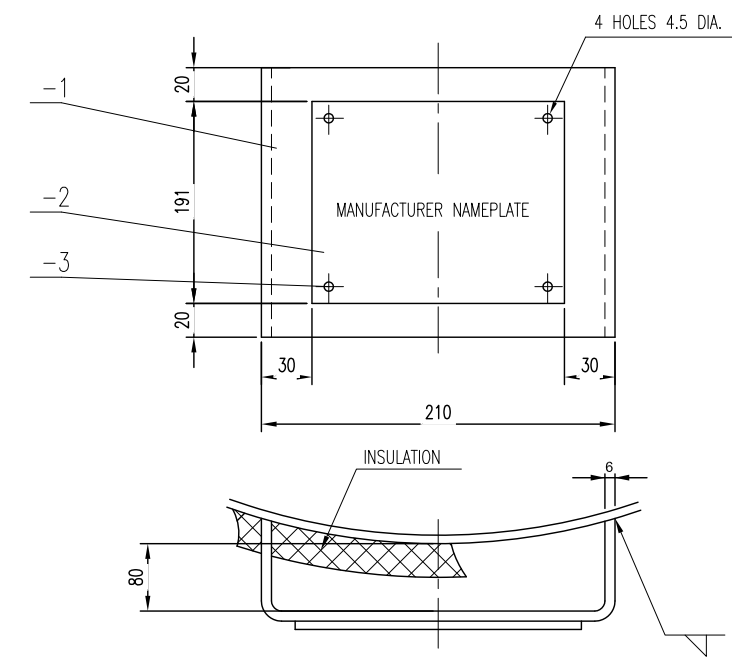
OWNER DWG NO: MKP-VD-8500-237-307-A1

技术要求 GENERAL NOTES

- 铭牌上的字符、外框和铆印框应凸起，其表面抛光。其余部位蚀刻深度1mm，且背景漆成黑色。
CHARACTERS, FRAME AND STAMPING SQUARES IN THE NAME PLATE SHALL BE EMBOSSED AND THEIR FACES SHALL BE POLISHED BY BUFFING. THE OTHER PART SHALL BE ETCHED 1mm IN DEPTH, BACKGROUND PAINTED BLACK.
- 规范标志及日期用钢印打印在铭牌上，其余标志以蚀刻方法标志在铭牌上。
NAMEPLATE MAY HAVE MARKINGS PRODUCED BY ETCHING, EXCEPT THAT THE CERTIFICATION MARK AND DATA SHALL BE STAMPED ON THE NAMEPLATE.
- 采用罗马字体，且应明显易读。
ALL THE CHARACTERS SHALL BE ROMANS STYLE AND ALSO SHALL BE LEGIBLE AND READABLE.
- 铭牌上的各种标志，其字符高度不小于4mm。
ALL THE CHARACTERS IN THE NAMEPLATE SHALL BE NOT LESS THAN 4mm HEIGHT.
- 编号和制造年份终检之后填写。
MANUF. SERIAL NO. AND YEAR BUILT TO BE PUNCHED AT WORKSHOP AFTER FINAL INSPECTION.



SECTION A-A




NAME PLATE MOUNTING BRACKET

3	铆钉 4X10 RIVET	4	304 S.S	0.04	0.16		
2	铭牌 t=3 NAMEPLATE	1	304 S.S		0.4		
1	铭牌架 t=3 NAMEPLATE BRACKET	1	SA-516 Gr.70		2.6		
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	单重 SINGLE MASS (kg)	总重 TOTAL MASS (kg)	备注 REMARKS
14	铭牌及支架 NAMEPLATE & BRACKET	组合件 ASSEMBLY	3.5	1:1	17013D85000EQ01-07	17013D85000EQ01-07	
件号 PARTS NO.	名称 PARTS NAME	材料 MAT'L	质量(kg) MASS	比例 SCALE	所在图号 DWG. NO.	装配图号 G.A DWG. NO.	
△	Final Issue	11.30.2018	N Zhao		Q Tu	CD Fu	
△	Final Issue	11.09.2018	N Zhao		Q Tu	CD Fu	
△	Final Issue	10.30.2018	N Zhao		Q Tu	CD Fu	
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OWNER:



Middle East
Kimiaye Pars Company

LICENSOR: HALDOR TOPSØE A/S
COPENHAGEN DENMARK

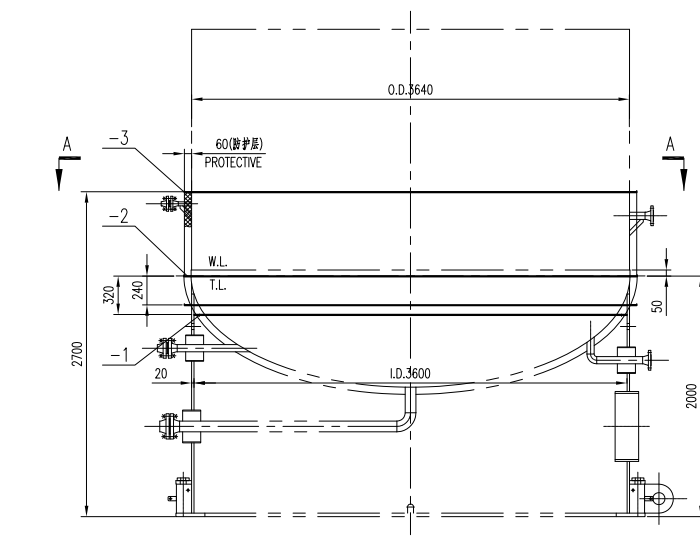
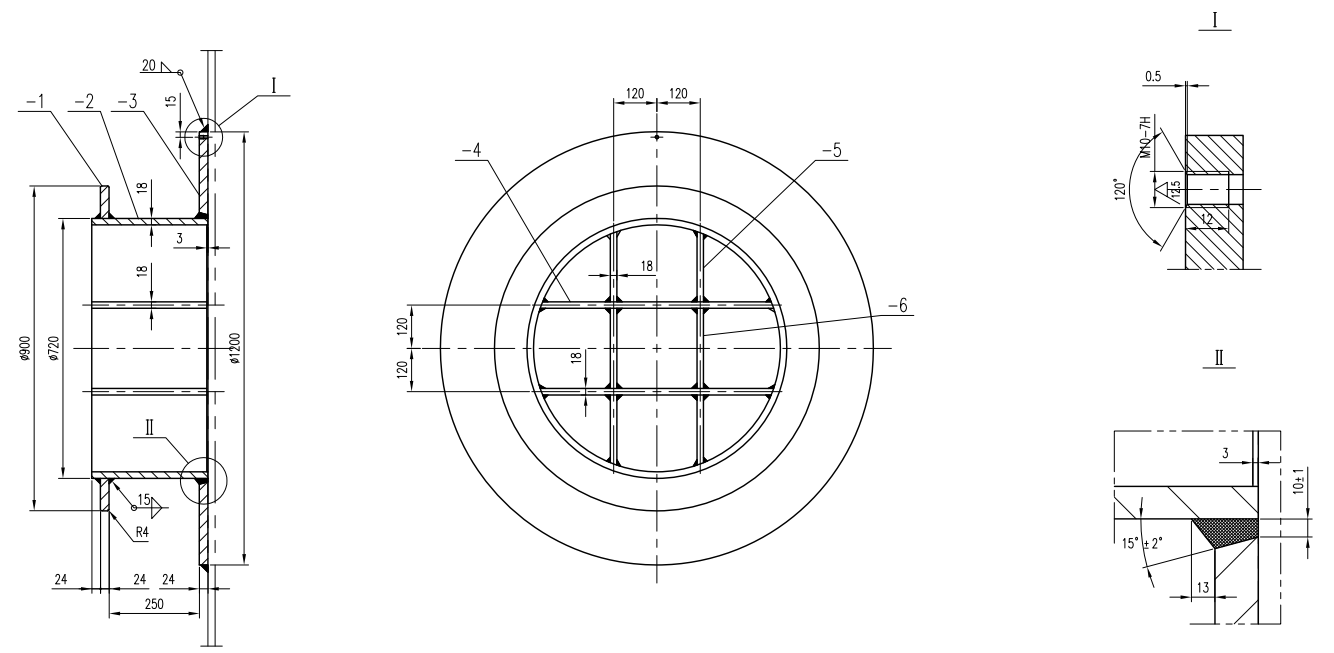
CONTRACTOR: **TCC 中国天辰工程有限公司**
CHINA TIANCHEN ENGINEERING CORPORATION

VENDOR: **江苏中圣高科技产业有限公司**
JIANGSU SUNPOWER TECHNOLOGY CO., LTD

CONTRACTOR DRAWING NO. MKP-11-BE-9000-FE-REQ-237
SHEET 01 TOTAL 01

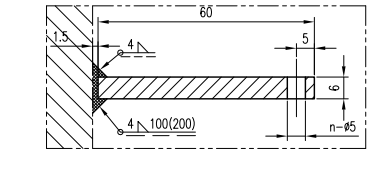
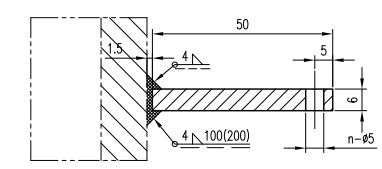
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SHEET - TOTAL -

Counter Signing	Sign	Date	SCALE 1:1	SHEET 07	TOT. 10	SIZE A2	OWNER DWG NO. MKP-VD-8500-237-307-A1
PROJECT MKP Methanol Project							
UNIT Flare							
PHASE Detail Engineering							



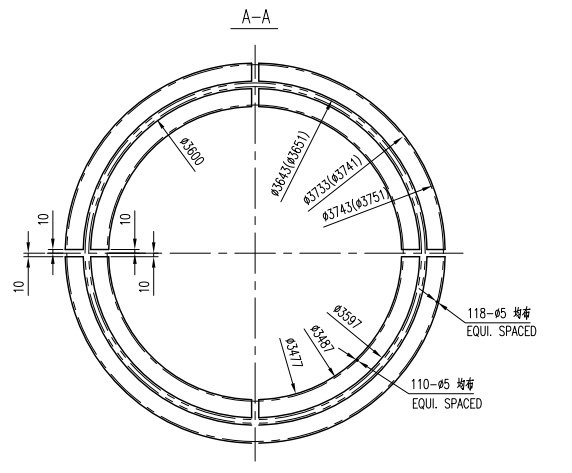
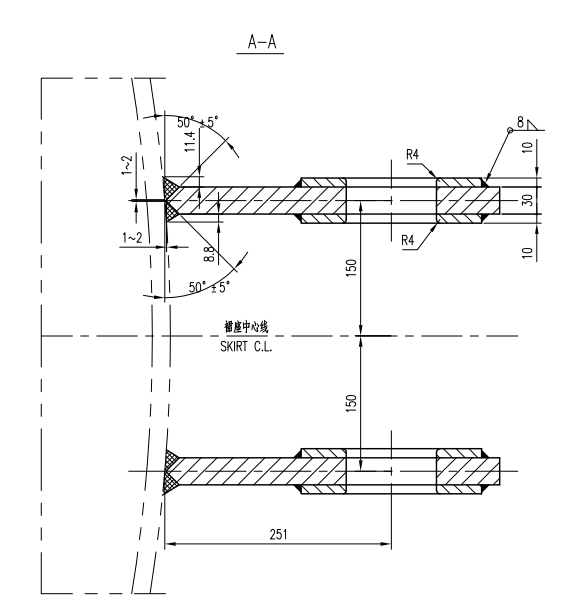
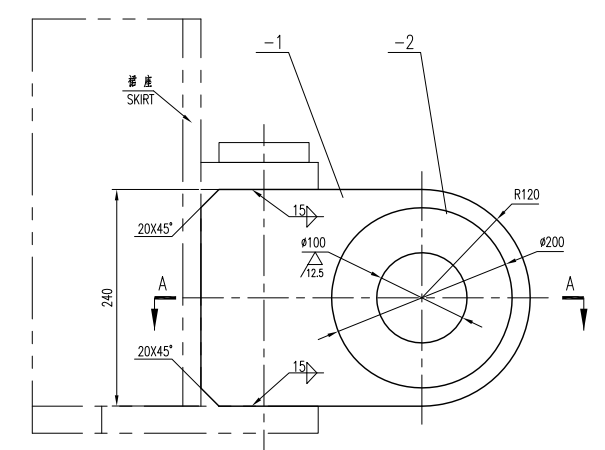
筒体保温支撑焊接详图
DETAIL FOR SHELL INSULATION SUPPORT

裙座内保温支撑焊接详图
DETAIL FOR SKIRT INNER INSULATION SUPPORT



件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL.	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-6		筋板II t=18	2	SA-516 Gr.70	10.9	21.8	
-5		筋板I t=18	4	SA-516 Gr.70	9	36	
-4		筋板I t=18	2	SA-516 Gr.70	30.7	61.4	
-3		筋板 O.D.1200/L.D.740 t=24	1	SA-516 Gr.70		130	
-2		筒壳 O.D.720X18	1	SA-516 Gr.70		108	
-1		排环 t=24	1	SA-516 Gr.70		42.6	
12		吊耳 LIFTING LUG	400	1/			
件号	名称	材料	质量(kg)	比例	所在图号	装配图号	
PARTS NO.	PARTS NAME	MATL.	MASS	SCALE	DWG. NO.	G.A. DWG. NO.	

其余
OTHERS ✓
切边
CUT 25 ✓



件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL.	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-2		加筋板 t=10	4	SA-516 Gr.70	1.8	7.2	
-1		筋板 t=36	2	SA-516 Gr.70	17	34	
16		尾端吊耳 TAILING LUG	41.2	1/4			
件号	名称	材料	质量(kg)	比例	所在图号	装配图号	
PARTS NO.	PARTS NAME	MATL.	MASS	SCALE	DWG. NO.	G.A. DWG. NO.	

件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL.	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-3		筒体保温支撑II t=6	1	SA-516 Gr.70		27	
-2		筒体保温支撑I t=6	1	SA-516 Gr.70		27	
-1		裙座内保温支撑 t=6	1	SA-516 Gr.70		31	
13		保温支撑	85	SA-516 Gr.70	1:30		
件号	名称	材料	质量(kg)	比例	所在图号	装配图号	
PARTS NO.	PARTS NAME	MATL.	MASS	SCALE	DWG. NO.	G.A. DWG. NO.	
Final Issue	11.30.2018	N Zhao		Q Tu	CD Fu		
Final Issue	11.09.2018	N Zhao		Q Tu	CD Fu		
Final Issue	10.30.2018	N Zhao		Q Tu	CD Fu		
Final Issue	03.02.2018	N Zhao		Q Tu	CD Fu		
Final Issue	11.14.2017	N Zhao		Q Tu	CD Fu		
Issued For Approval	09.21.2017	N Zhao		Q Tu	CD Fu		
Issued For Approval	07.22.2017	N Zhao		Q Tu	CD Fu		

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OWNER: Middle East Kimiaye Pars Company

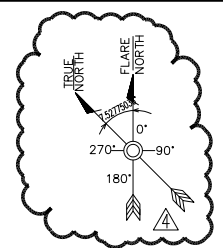
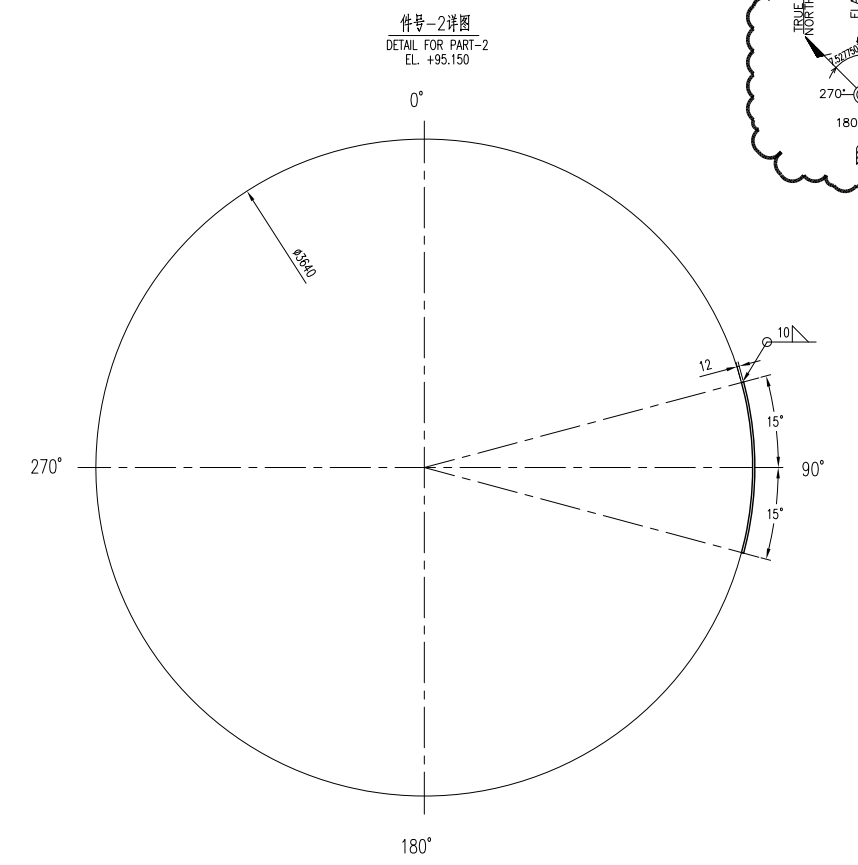
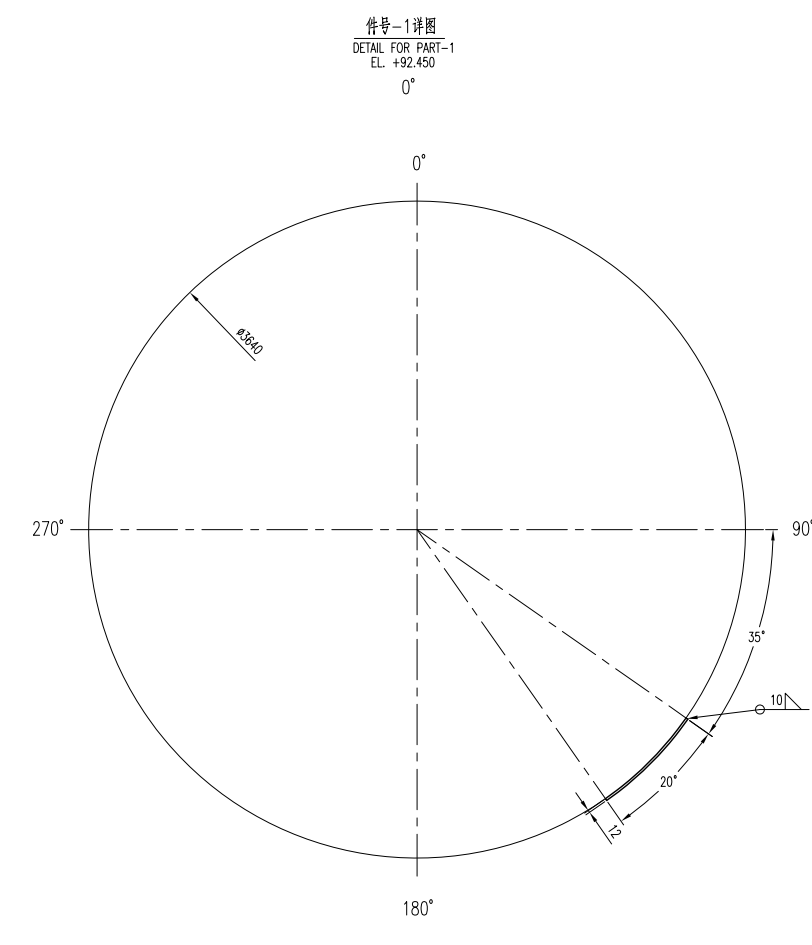
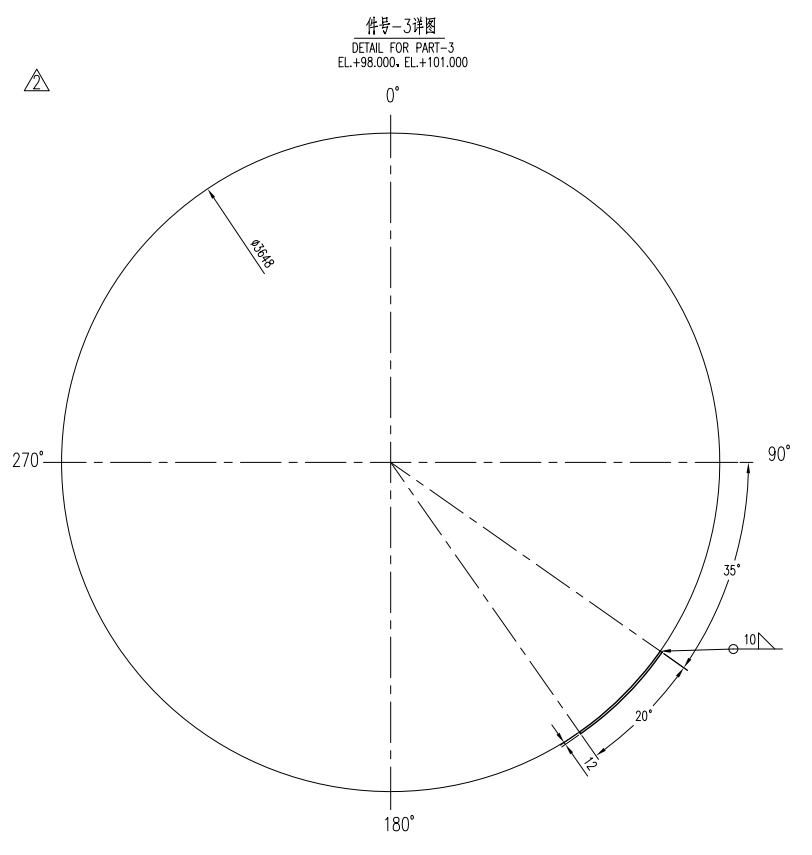
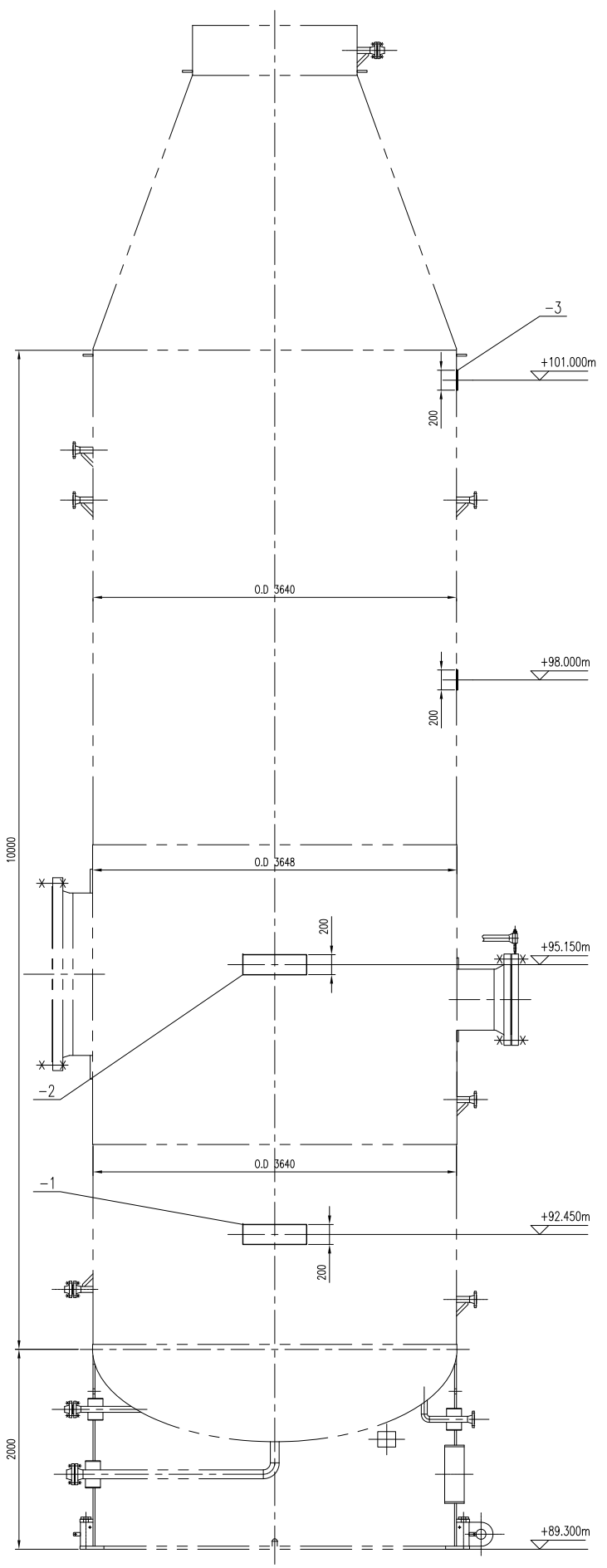
HALDOR TOPSØE A/S
TCC 中国天辰工程有限公司
CHINA TIANCHEN ENGINEERING CORPORATION
江苏中圣高科技产业有限公司
JIANGSU SUNPOWER TECHNOLOGY CO., LTD

CONTRACTOR DRAWING NO.
MKP-11-DE-9000-FE-REQ-237
SHEET 01 TOTAL 01

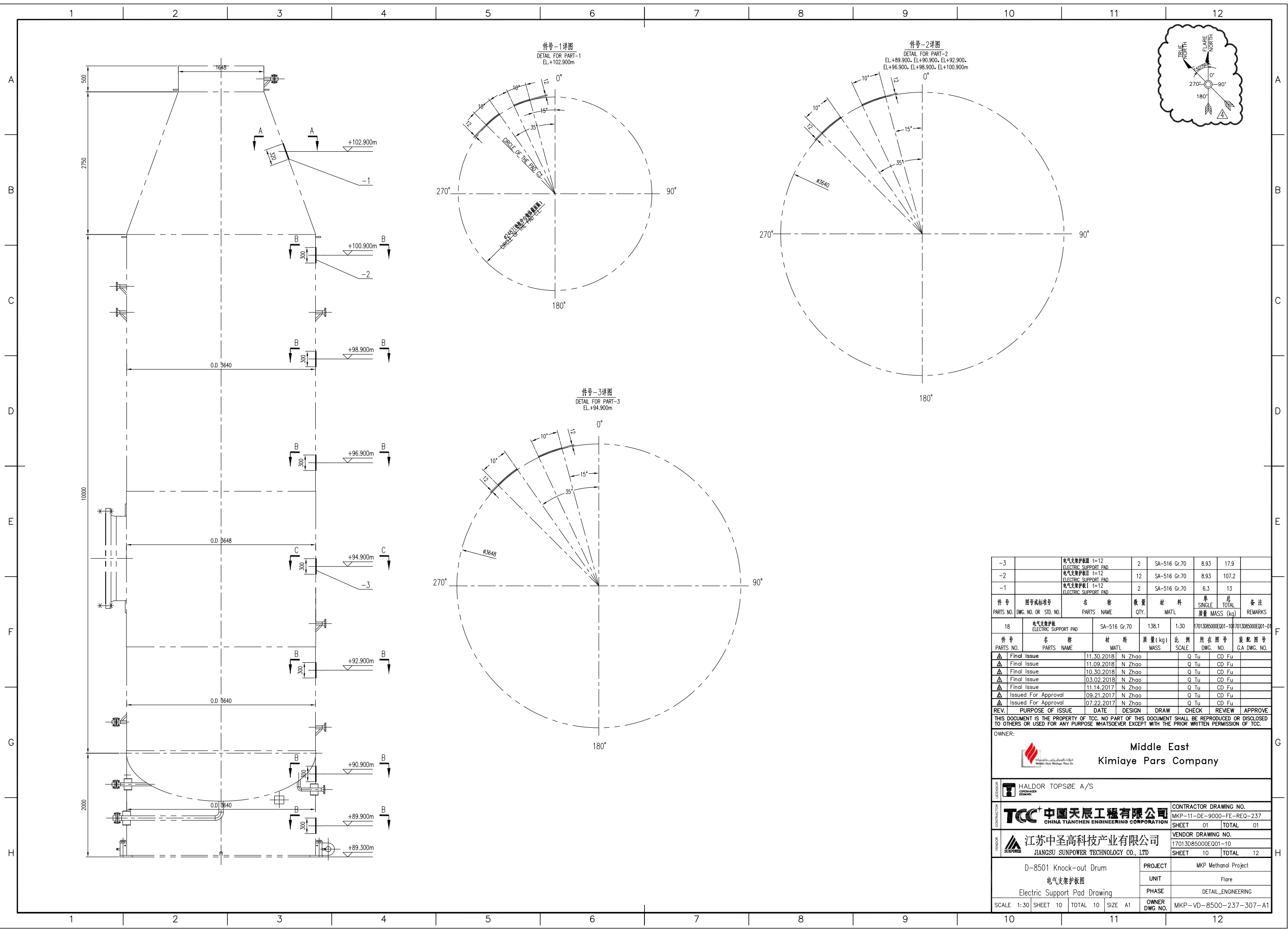
VENDOR DRAWING NO.
17013085000EQ01-08
SHEET 08 TOTAL 12


PROJECT	UNIT
MKP Methanol Project	Flare
PHASE	DETAIL_ENGINEERING

SCALE	SHEET	TOTAL	SIZE	OWNER DWG NO.
1:16	8	10	A1	MKP-VD-8500-237-307-A1



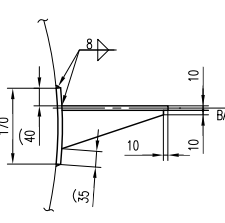
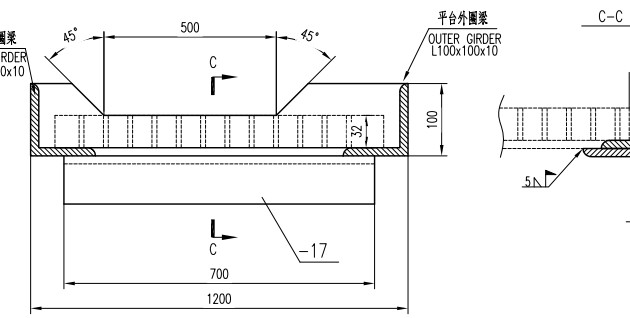
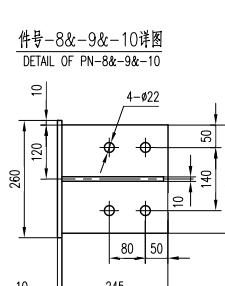
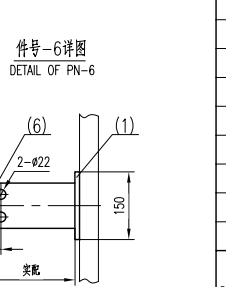
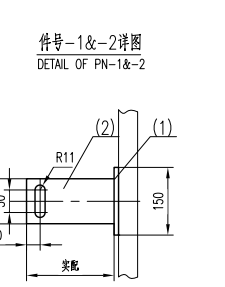
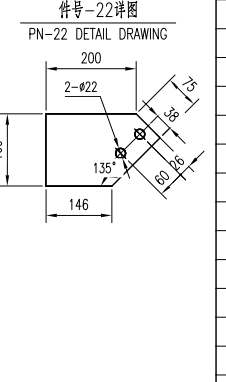
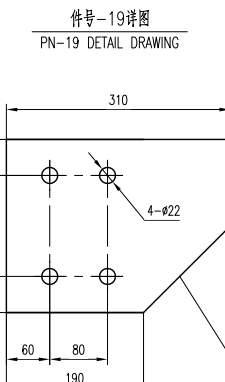
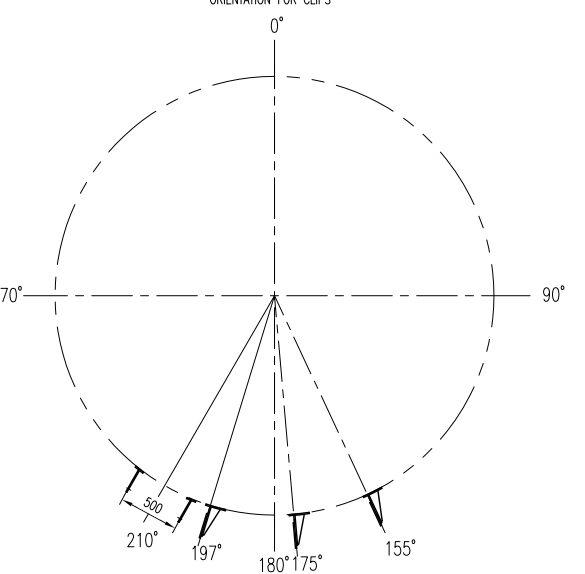
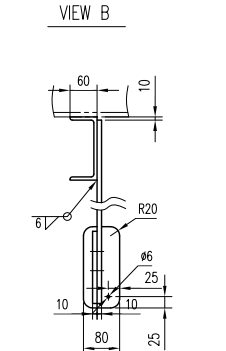
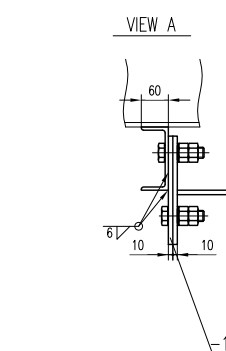
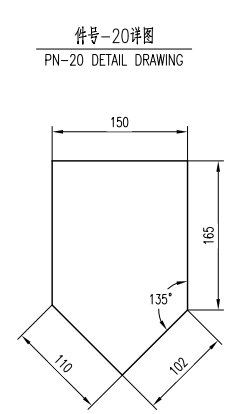
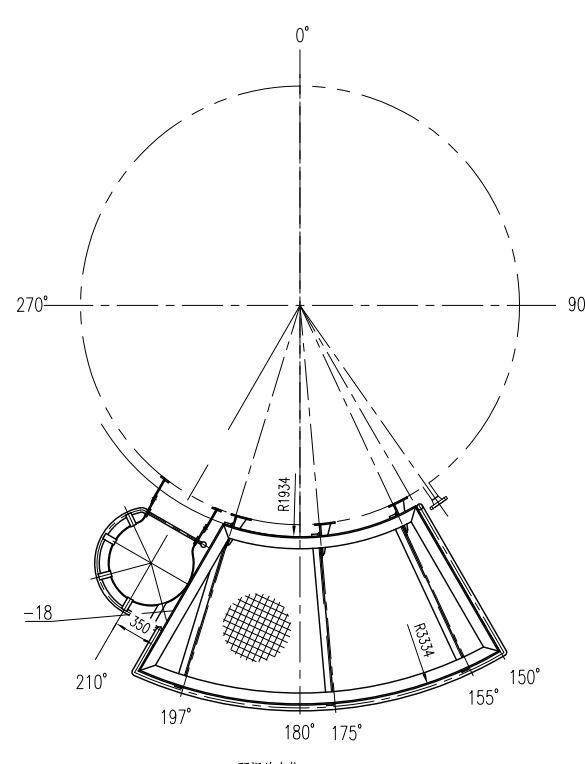
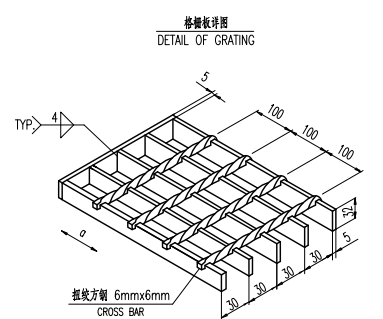
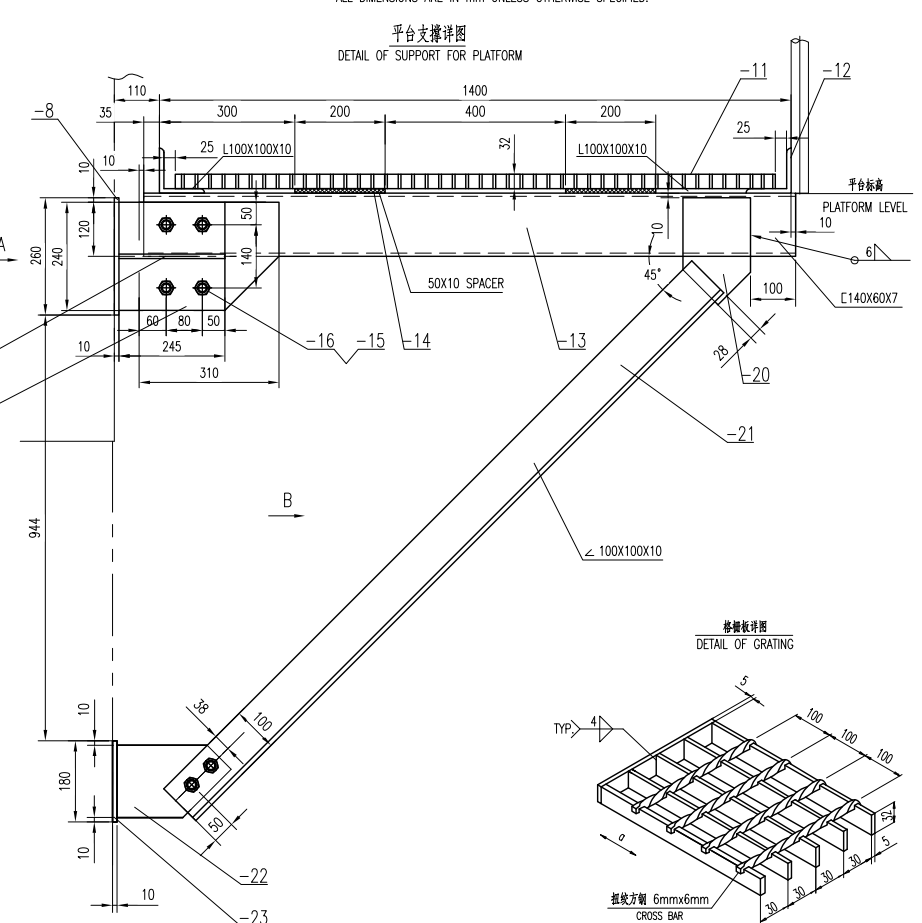
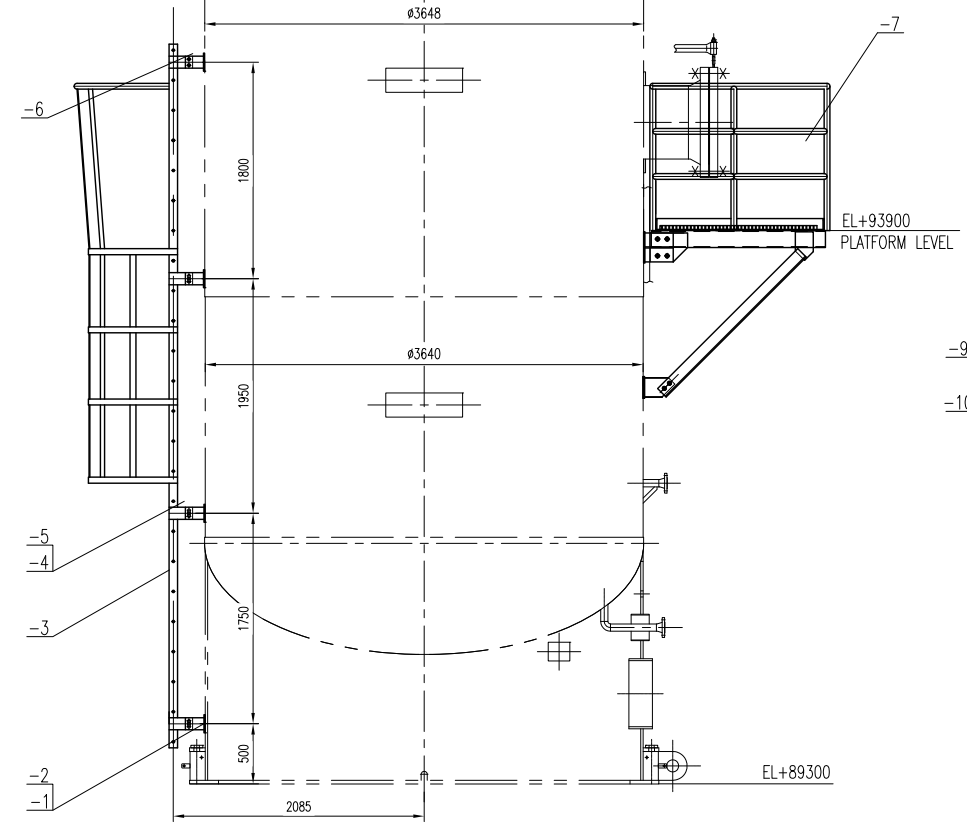
-3	管道支撑板II t=12 PIPE SUPPORT PAD	2	SA-516 Gr.70	18	36	
-2	管道支撑板II t=12 PIPE SUPPORT PAD	1	SA-516 Gr.70		12	
-1	管道支撑板I t=12 PIPE SUPPORT PAD	1	SA-516 Gr.70		12	
17	管道支撑板 PIPE SUPPORT PAD		SA-516 Gr.70	60	1:30	17013085000EQ01-09/7013085000EQ01-01
件号	图号或标准号	名称	材料	数量	质量	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	MATL	QTY.	MASS (kg)	REMARKS
					单重 SINGLE MASS	总重 TOTAL MASS
					比例 SCALE	所在图号 G.A. DWG. NO.
						装配图号 G.A. DWG. NO.
▲	Final Issue	11.30.2018	N Zhao		Q Tu	CD Fu
▲	Final Issue	11.09.2018	N Zhao		Q Tu	CD Fu
▲	Final Issue	10.30.2018	N Zhao		Q Tu	CD Fu
▲	Final Issue	03.02.2018	N Zhao		Q Tu	CD Fu
▲	Final Issue	11.14.2017	N Zhao		Q Tu	CD Fu
▲	Issued For Approval	09.21.2017	N Zhao		Q Tu	CD Fu
▲	Issued For Approval	07.22.2017	N Zhao		Q Tu	CD Fu
REV.	PURPOSE OF ISSUE	DATE	DESIGN	DRAW	CHECK	REVIEW APPROVE
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LICENSOR: HALDOR TOPSØE A/S						
CONTRACTOR: 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION						
CONTRACTOR DRAWING NO. MKP-11-DE-9000-FE-REQ-237						
SHEET 01 TOTAL 01						
VENDOR: 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD						
VENDOR DRAWING NO. 17013085000EQ01-09						
SHEET 09 TOTAL 12						
D-8501 Knock-out Drum 管道支撑板图 Pipe Support Pad Drawing				PROJECT MKP Methanol Project		
				UNIT Flare		
				PHASE DETAIL_ENGINEERING		
SCALE 1:30	SHEET 9	TOTAL 10	SIZE A1	OWNER DWG NO.	MKP-VD-8500-237-307-A1	



-3	电气支撑板 t=12 ELECTRIC SUPPORT PAD	2	SA-516 Gr.70	8.93	17.9		
-2	电气支撑板 t=12 ELECTRIC SUPPORT PAD	12	SA-516 Gr.70	8.93	107.2		
-1	电气支撑板 t=12 ELECTRIC SUPPORT PAD	2	SA-516 Gr.70	6.3	13		
件号 PARTS NO.	图号或标准号 DWG. NO. OR STD. NO.	名称 PARTS NAME	数量 QTY.	材料 MATL	单 SINGLE 质量 MASS (kg)	总 TOTAL 质量 MASS (kg)	备注 REMARKS
18	电气支撑板 ELECTRIC SUPPORT PAD	SA-516 Gr.70	138.1	1:30	17013085000EQ01-10	17013085000EQ01-01	
件号 PARTS NO.	名称 PARTS NAME	材料 MATL	质量(kg) MASS	比例 SCALE	所在图号 DWG. NO.	装配图号 G.A. DWG. NO.	
▲	Final Issue	11.30.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	11.09.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	10.30.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	03.02.2018	N Zhao		Q Tu	CD Fu	
▲	Final Issue	11.14.2017	N Zhao		Q Tu	CD Fu	
▲	Issued For Approval	09.21.2017	N Zhao		Q Tu	CD Fu	
▲	Issued For Approval	07.22.2017	N Zhao		Q Tu	CD Fu	
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OWNER:  Middle East Kimiaye Pars Company							
CONTRACTOR	HALDOR TOPSØE A/S			CONTRACTOR DRAWING NO. MKP-11-DE-9000-FE-REQ-237			
CONTRACTOR	TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION			SHEET 01 TOTAL 01			
VENDOR	江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD			VENDOR DRAWING NO. 17013085000EQ01-10			
				SHEET 10 TOTAL 12			
D-8501 Knock-out Drum 电气支撑板图 Electric Support Pad Drawing				PROJECT MKP Methanol Project			
				UNIT Flare			
				PHASE DETAIL_ENGINEERING			
SCALE 1:30	SHEET 10	TOTAL 10	SIZE A1	OWNER DWG NO.	MKP-VD-8500-237-307-A1		

技术要求 GENERAL NOTES

1. 未注角焊缝或搭接焊缝的焊角高度按相焊件中较薄板的厚度。
THE WELD SIZE OF THE TWO PARTS JOINED BY A FILLET OR A LAP SHALL BE THE SIZE OF THE THINNER PART.
2. 设备裙座底板上表面标高为EL+89300。平台标高以支撑梁上表面为基准。
THE ELEVATION OF BOTTOM SURFACE OF SKIRT(S) IS EL+89300. THE PLATFORM ELEVATION IS THE TOP SURFACE OF SUPPORT BEAM.
3. 所有格栅SA-36须按ASTM A123喷镀锌且不少于800g/m²。其余注明除外。
ALL GRATING SA-36 SHALL BE HOT DIP GALVANIZED WITH COATING NOT LESS THAN 800 gr/m² IN ACCORDING WITH ASTM A123 UNLESS NOTED OTHERWISE.
4. 除注明外，垫板倒角R20，最低点开φ6通气孔。
CHAMFERING R20 FOR PAD UNLESS OTHERWISE SPECIFIED AND φ6 VENT HOLES IN THE BOTTOM.
5. 如无特殊说明，所有单位为mm。
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.



件号	图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-23	SEE DWG.	垫板 180x80x10	3	SA-516 Gr.70	1.2	3.6	
-22		连接板 6 t=10	3	SA-516 Gr.70	0.2	0.6	
-21		支撑梁 L100x100x10	3	SA-36	26	78	
-20		连接板 5 t=10	3	SA-516 Gr.70	1.9	5.7	
-19		连接板 4 t=10	3	SA-516 Gr.70	0.2	0.6	
-18	17013085000E001-12	安全门	1	组合件		16	
-17		加劲角钢 L100x100x10	1	ST-37		6	
-16	GB/T6170-2015	螺母 M20	36	Grade 8	0.1	3.6	
-15	GB/T5783-2016	螺栓 M20x95	18	Grade 8.8	0.3	5.4	
-14		垫板 200x50x10	0.6	SA-516 Gr.70	0.2	1.2	
-13		支撑梁 C140x60x7 L=1445	3	SA-36	29	87	
-12		侧梁 L100x100x10	1	SA-36		120	
-11	SEE DWG.	格栅	~3.5m ²	SA-36		~200	见技术要求3
-10		连接板 3 t=10	3	SA-516 Gr.70	0.2	0.6	
-9		垫板 t=10	3	SA-36	0.8	2.4	
-8		垫板 t=10	3	SA-516 Gr.70	3.5	10.5	
-7	17013085000E001-12	组合件	1	组合件		160	
-6		连接板 2 t=10	2	SA-516 Gr.70	1.5	3	
-5	GB/T6170-2015	螺母 M20	10	Grade 8	0.1	1	
-4	GB/T5783-2016	螺栓 M20x70	10	Grade 8.8	0.2	2	
-3	17013085000E001-12	梯子	1	组合件		206.6	
-2	SEE DWG.	连接板 1 t=10	6	SA-516 Gr.70	1.5	9	
-1	SEE DWG.	垫板 150x80x10	8	SA-516 Gr.70	0.9	7.2	

件号	名称	材料	质量(kg)	比例	所在图号	装配图号
PARTS NO.	PARTS NAME	MATL	MASS	SCALE	DWG. NO.	GA DWG. NO.
	平台及梯子	组合件	930	1:1	17013085000E001-11	17013085000E001-01
	PLATFORM & LADDER	ASSEMBLY	930	1:1	17013085000E001-11	17013085000E001-01
Final Issue					Q Tu	CD Fu
Final Issue					Q Tu	CD Fu
Final Issue					Q Tu	CD Fu
Final Issue					Q Tu	CD Fu
Issued For Approval					Q Tu	CD Fu

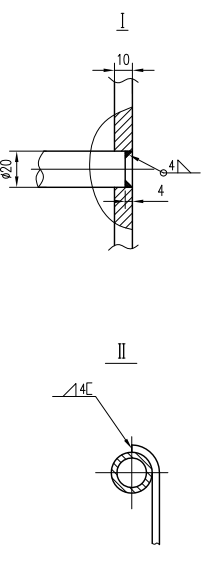
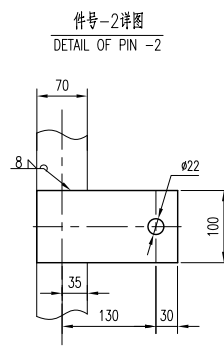
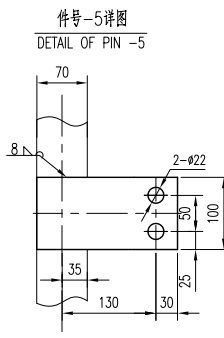
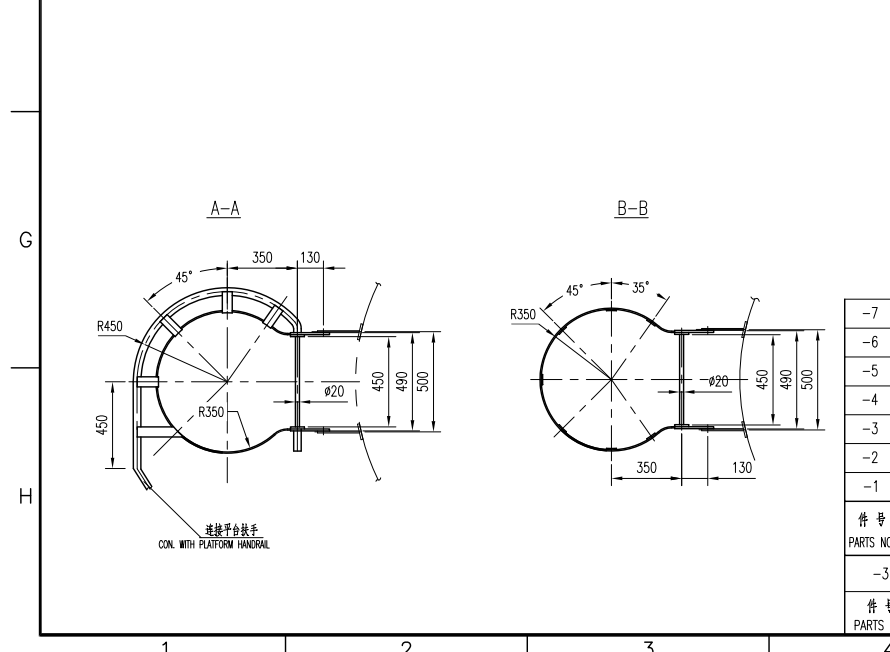
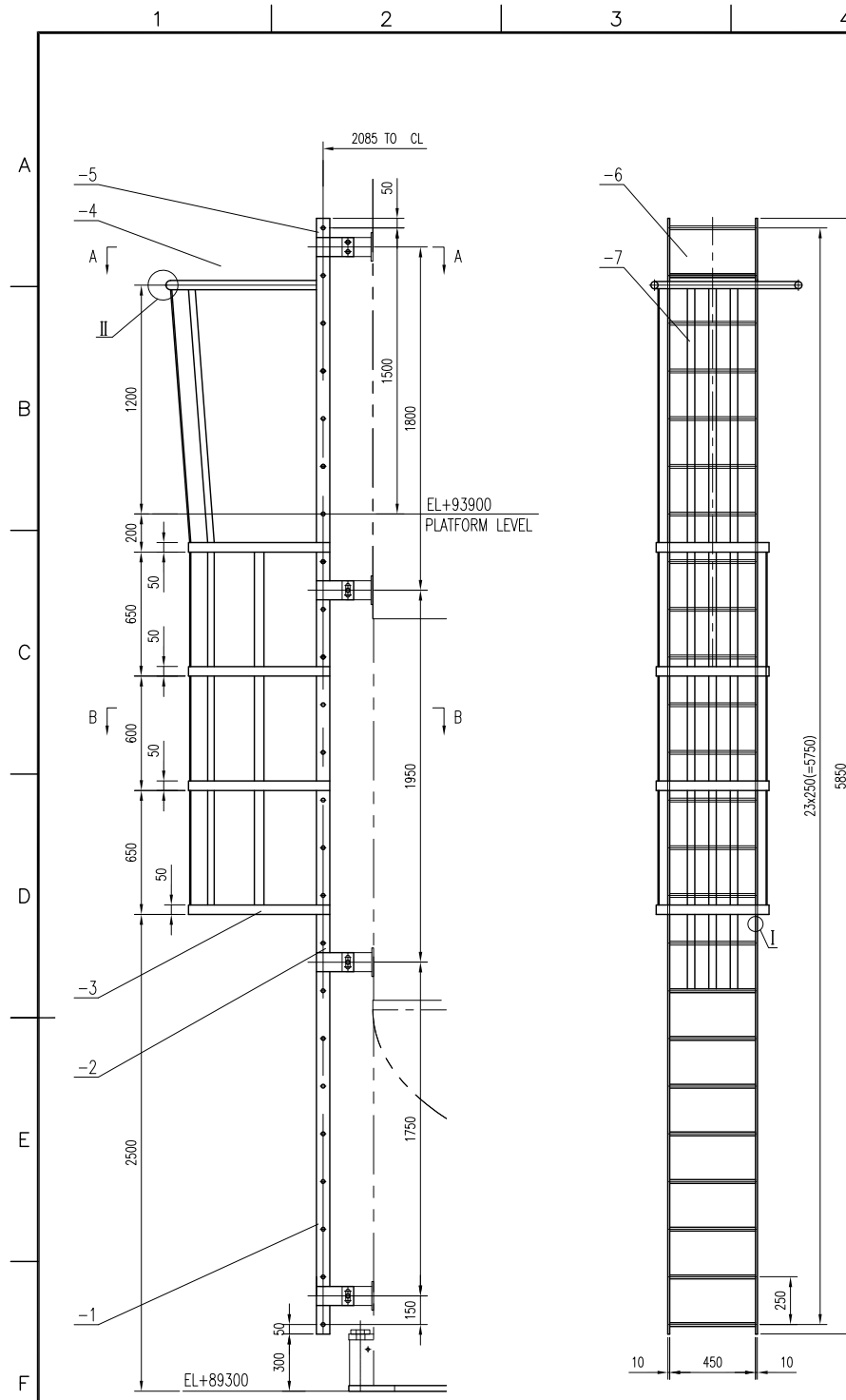
REV.	PURPOSE OF ISSUE	DATE	DESIGN	DRAW	CHECK	REVIEW	APPROVE

OWNER: Middle East Kimiaye Pars Company

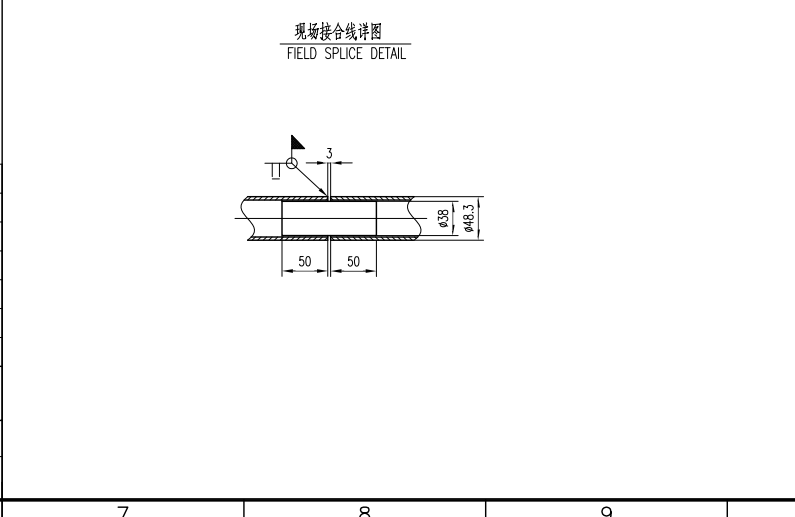
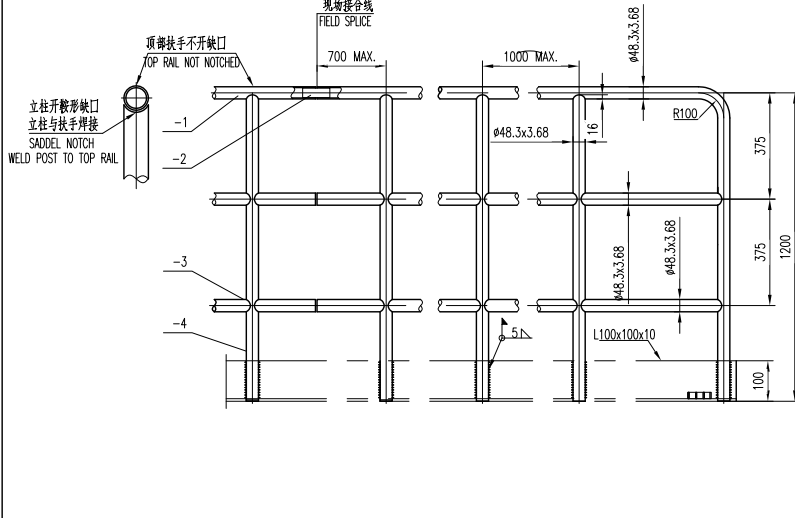
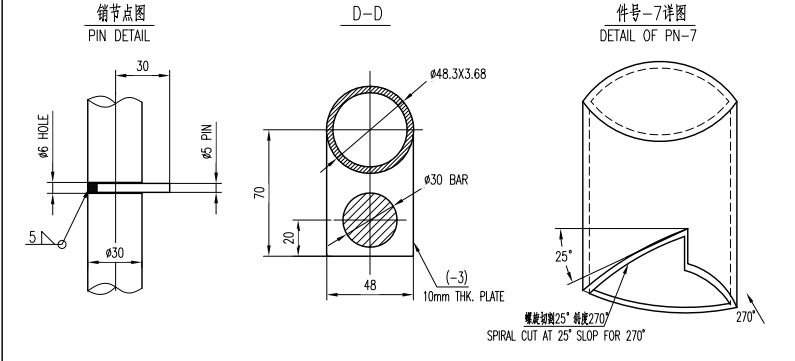
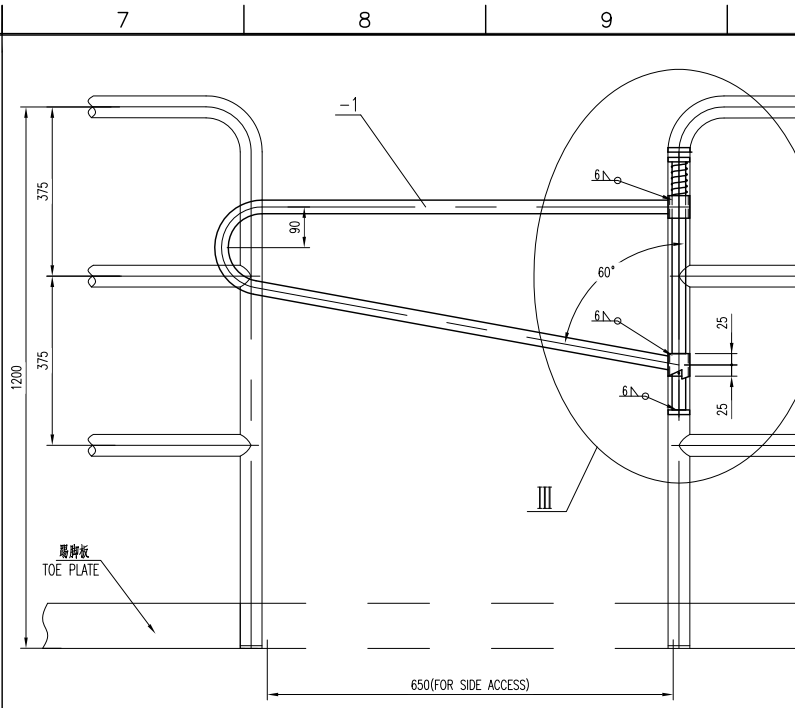
CONTRACTOR	HALDOR TOPSØE A/S	CONTRACTOR DRAWING NO.	MKP-11-DE-9000-FE-REQ-237
CONTRACTOR	TCC 中国天辰工程有限公司	SHEET	01 TOTAL 01
VENDOR	江苏中圣高科技产业有限公司	VENDOR DRAWING NO.	17013085000E001-11
VENDOR	JIANGSU SUNPOWER TECHNOLOGY CO., LTD	SHEET	11 TOTAL 12

PROJECT	MKP Methanol Project
UNIT	Flare
PHASE	DETAIL_ENGINEERING
OWNER DWG. NO.	MKP-VD-8500-237-307-A1

Counter Signing Sign Date



件号	图号或标准号	名称	数量	材料	单重	总重	备注	
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS	
-7		梯梁 #20 L=462 RING	24	SA-36	2.1	50.4		
-6		安全罩 50x6 SAFETY HOOP	~22m	SA-36		51.2		
-5	SEE DWG.	连接板 I=10 CONNECT PLATE	2	SA-36	1.5	3		
-4		梯杆 #48.3x3.68 HANDRAIL	1	SA-106 Gr.B		8		
-3		梯梁 50x6 STRIPP CAGE	4	SA-36	5.2	20.8		
-2	SEE DWG.	连接板 I=10 CONNECT PLATE	6	SA-36	1.5	9		
-1		梯梁 70x10x5850 LADDER BEAM	2	SA-36	32.1	64.2		
件号		图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.		DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-3		梯子 LADDER	组合件 ASSEMBLY	206.6	1:18	17013085000E001-12	17013085000E001-11	
件号		名称	材料	质量(kg)	比例	所在图号	装配图号	
PARTS NO.		PARTS NAME	MATL	MASS	SCALE	DWG. NO.	G.A DWG. NO.	



件号	图号或标准号	名称	数量	材料	单重	总重	备注	
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS	
-8		安全罩 #5x40 SPLIT PIN	1	SA-36		0.1		
-7	SEE DWG.	梯杆 #48.3x3.68 STEEL ROD	1	SA-106 Gr.B		0.2		
-6		梯梁 #30 STEEL ROD	1	SA-36		3.1		
-5		梯杆 #48.3x3.68 STEEL ROD	1	SA-106 Gr.B		0.2		
-4		梯梁 SPRING	1	/				
-3		梯梁 I=10	2	SA-516 Gr.70	0.3	0.6		
-2	SEE DWG.	梯板 I=10 PLATE CAP	1	SA-516 Gr.70		0.3		
-1		梯梁 #30 STEEL ROD	1	SA-36		11.2		
件号		图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.		DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-18		安全门 SAFE GATE	组合件 ASSEMBLY	16	1:1	17013085000E001-12	17013085000E001-11	
件号		名称	材料	质量(kg)	比例	所在图号	装配图号	
PARTS NO.		PARTS NAME	MATL	MASS	SCALE	DWG. NO.	G.A DWG. NO.	

件号	图号或标准号	名称	数量	材料	单重	总重	备注	
PARTS NO.	DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS	
-4		立柱 #48.3x3.68 L=1200 POST	8	SA-106 Gr.B	4.9	39.2		
-3		中梯梁 #48.3x3.68 MID. RAIL	2	SA-106 Gr.B	30	60	L=7.6m	
-2		梯梁 #30 STEEL BAR	n	SA-36		28.4	L=112.4mm	
-1		扶手 #48.3x3.68 HANDRAIL	1	SA-106 Gr.B		30	L=7.6m	
件号		图号或标准号	名称	数量	材料	单重	总重	备注
PARTS NO.		DWG. NO. OR STD. NO.	PARTS NAME	QTY.	MATL	SINGLE MASS (kg)	TOTAL MASS (kg)	REMARKS
-7		栏杆 HANDRAILING	组合件 ASSEMBLY	160	1:1	17013085000E001-12	17013085000E001-11	
件号		名称	材料	质量(kg)	比例	所在图号	装配图号	
PARTS NO.		PARTS NAME	MATL	MASS	SCALE	DWG. NO.	G.A DWG. NO.	

REV.	PURPOSE OF ISSUE	DATE	DESIGN	DRAW	CHECK	REVIEW	APPROVE
Final Issue		11.30.2018	N Zhao		Q Tu	CD Fu	
Final Issue		11.09.2018	N Zhao		Q Tu	CD Fu	
Final Issue		10.30.2018	N Zhao		Q Tu	CD Fu	
Final Issue		03.02.2018	N Zhao		Q Tu	CD Fu	
Issued For Approval		01.22.2018	N Zhao		Q Tu	CD Fu	

OWNER: Middle East Kimiaye Pars Company

CONTRACTOR: HALDOR TOPSØE A/S

CONTRACTOR: TCC 中国天辰工程有限公司 CHINA TIANCHEN ENGINEERING CORPORATION

VENDOR: 江苏中圣高科技产业有限公司 JIANGSU SUNPOWER TECHNOLOGY CO., LTD

PROJECT: D-8501 Knock-out Drum

UNIT: Flare

PHASE: DETAIL_ENGINEERING

PARTS OF LADDER & PLATFORM DRAWING

SCALE 1:16 SHEET 12 TOTAL 12 SIZE A1

OWNER DWG NO. MKP-VD-8500-237-307-A1