

3RD ANGLE PROJECTION

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FLUOR

CONTRACT NO. 05-62112-B

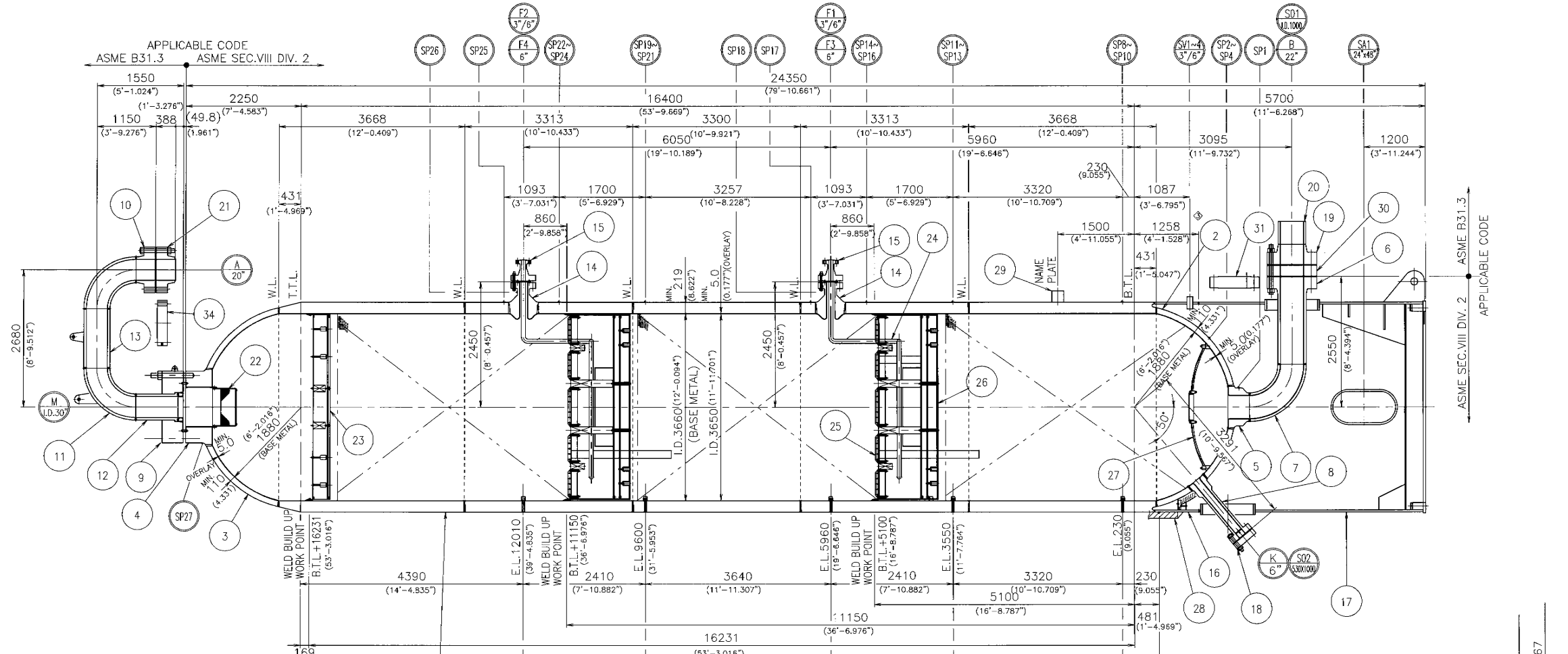
PROJECT NO. 3102-R-002

DATE: 18/JAN/2010

SCALE: 1:50

REVISIONS:

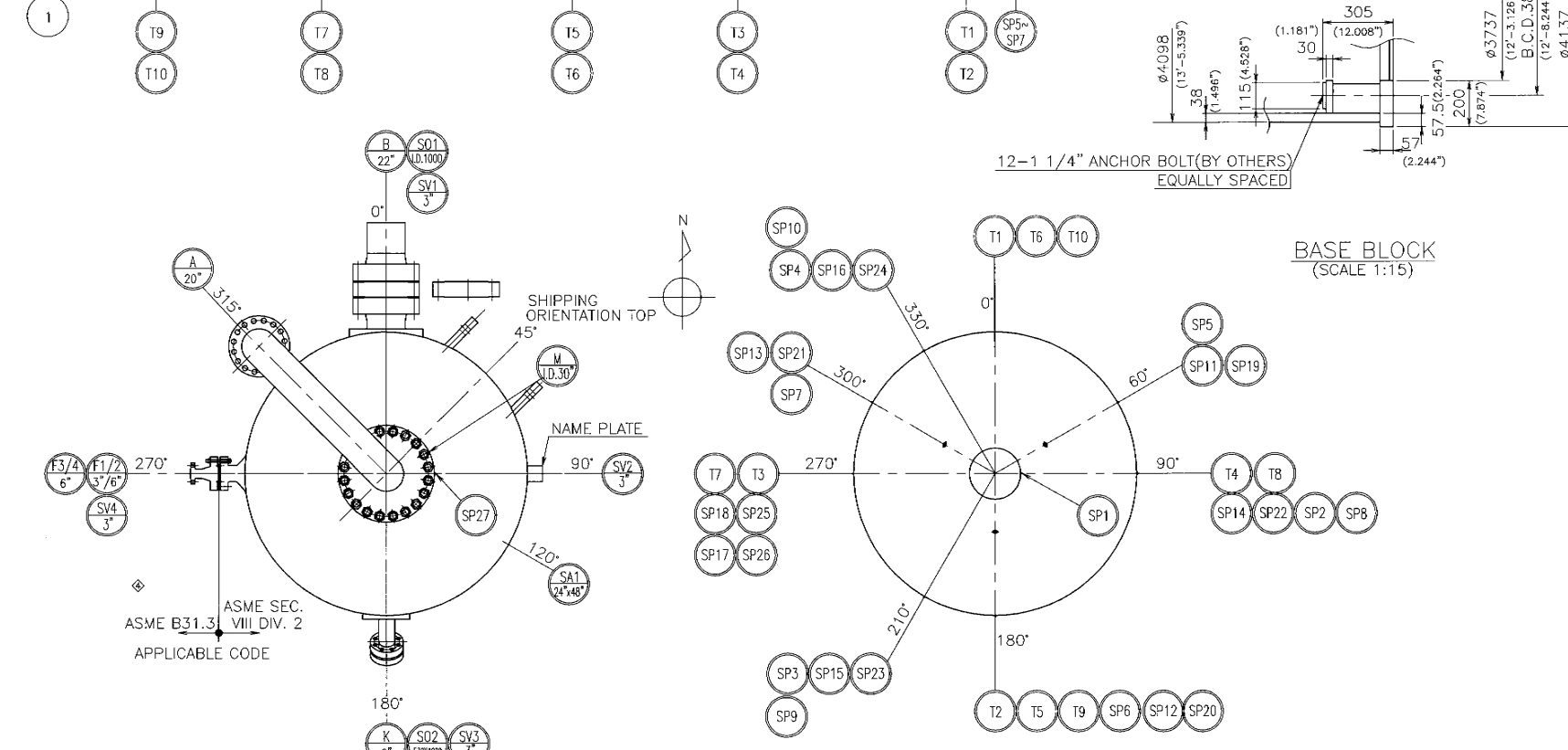
NO.	DATE	DESCRIPTION
1		ISSUED FOR CONSTRUCTION
2		ISSUED FOR CONSTRUCTION
3		ISSUED FOR CONSTRUCTION
4		ISSUED FOR CONSTRUCTION
5		ISSUED FOR CONSTRUCTION
6		ISSUED FOR CONSTRUCTION
7		ISSUED FOR CONSTRUCTION



- NOTES
- ALL INSIDE SURFACES OF PRESSURE PARTS SHALL HAVE MINIMUM 3.0MM(0.118") THICK UNDILUTED TP347L WELD OVERLAY.
  - DETAILS OF NOZZLE ASSEMBLIES ARE SHOWN IN DWG. NO. 80652-01S1.
  - UNLESS OTHERWISE SPECIFIED, TOLERANCE SHALL BE IN ACCORDANCE WITH QUALITY PLAN (S. No. 4656377).
  - FULL VACUUM (0.102 MPa) AT 404°C (750°F) SHALL ALSO BE CHECKED THROUGH FULL VACUUM CONDITION EXCLUDING IN ASME CODE BOUNDARY (SEE PARA. AG-121(h) OF ASME SEC. VIII DIV. 2).
  - APPLICABLE CODE, STANDARD AND SPECIFICATION ARE LISTED IN QUALITY PLAN (S. No. 4656377).
  - LENGTH AND NUMBER OF SHELL COURSES MAY VARY. HOWEVER TOTAL SHELL LENGTH SHALL BE MAINTAINED AVOIDING INTERSECTION WITH OTHER MAJOR WELDED JOINTS.
  - SPECIFIC REQUIREMENTS FOR MATERIALS ARE DESCRIBED IN MATERIAL PROCUREMENT SPEC. (S. No. 4656381).
  - MATE FLANGES (ITEM 19, 20 AND 21) WILL NOT BE SUBJECT TO HYDROSTATIC TEST AT FABRICATOR'S SHOP. HYDROSTATIC TEST FOR THESE ITEMS SHALL BE PERFORMED AT SITE BY CLIENT AFTER PIPING CONNECTION.

NO.	DESCRIPTION	BY	REMARKS
SO2	SKIRT OPENING FOR "A"		
SO1	SKIRT OPENING FOR "B"		
SV1-4	3" SKIRT VENT		
SA	24" SKIRT ACCESS		
SP1-27	SKIN PAD		
T1-10	THERMOWELL	BY OTHERS	
M	MANWAY		
K	2500# R.F. CATALYST DUMP	W/BLIND FL'G	
F3-4	2500# R.T.J. QUENCH GAS INLET HOUSING	W/RED. FL'G	
F1-2	2500# R.F. QUENCH GAS INLET		
B	22" JAL. R.F. OUTLET	W/MATE FL'G	
A	20" JAL. R.F. INLET	W/MATE FL'G	
NOZZLE	NOZZLE MARK SIZE I.D.		
ANG	ANG		
ATING	ATING		

TYPE	RTICAL	NO. REQ'D	1
CODE STAMP	YES	FULL WATER (WEIGHT) kg	717,900
CORR. ALLOWANCE	OVERLAY	OPERATION (WEIGHT) kg	653,000
JOINT EFFICIENCY	1.0 (100%)	EMPTY (WEIGHT) kg	518,800
STRESS RELIEVE	YES (REQUIRED)	SHIPPING (WEIGHT) kg	475,700 (NET)
RADIOGRAPHED	FULL	OVERTURNING MOMENT AT BASE	6,712
PHENUM. TEST PRESS.	MPaG	SHEAR LOAD	459
HYDR. TEST PRESS. (INTERNAL)	MPaG	MINIMUM DESIGN METAL TEMP.	VESSEL: -29°C (-20°F) SKIRT: -45°C (-49°F)
DESIGN TEMP.	°C	LETHAL SERVICE	NO
DESIGN PRESS. (INTERNAL)	MPaG	OVER PRESSURE PROTECTION	BY CLIENT
EXTERNAL DESIGN PRESSURE	MPaG	FIRE PROOF (INSIDE & OUTSIDE)	50 (2") (BY OTHERS)
OPER. TEMP.	°C	INSULATION	125 (5") (BY OTHERS)
OPER. PRESS.	MPaG	PAINT	SKIRT: INORGANIC ZINC BODY: NONE
CODE	ASME SEC. VIII DIV. 2 2004 EDITION WITH 2005 ADDENDA	SURFACE FINISH	SPCC-SP6 (SKIRT)
		VOLUME	199.1 (7031) m³
		APPLICABLE CODE CASE	1489-2,2235-9
			2306,2523



REV. NO.	REVISION NOTE	DRAWN	DESIGNED	CHECKED	APPROVED	APPROVED
1	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2009	12/16	K. ITOU	2/16	T. SUZUKI	1/16
2	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2010	6/5	K. ITOU	6/5	T. SUZUKI	6/5
3	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2010	1/8	K. ITOU	1/8	T. SUZUKI	1/8
4	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2009	12/26	K. ITOU	2/26	T. SUZUKI	12/26
5	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2009	7/28	A. ISHIO	3/28	T. SUZUKI	7/28

ITEM NO.	DESCRIPTION	QTY	MATERIAL	REMARKS
80652-08S1	34 A BLIND FLANGE	1	SA-105	
80652-08S1	31 B MAINTENANCE BLIND FILLER FLANGE	1	SA-105	
80652-08S1	30 B FILLER FLANGE	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-10S	29 NAME PLATE	1	JIS S5338 (SA-347 WP-30)	
80652-11S	28 INSULATION SUPPORT	15	JIS S5400 (EQ.A36)	
80652-30S	27 BOTTOM CATALYST SUPPORT	15	TP347S.S.	
80652-27S	26 INTERBED BUBBLE CAP TRAY	25	TP347S.S.	
80652-23S	25 GRID TRAY	25	TP347S.S.	
80652-25S	24 QUENCH RING	25	TP347S.S.	
80652-21S	23 TOP BUBBLE CAP TRAY	15	TP347S.S.	
80652-20S	22 INLET BASKET	15	TP347S.S.	
80652-08S1	20 B MATE FLANGE PIPE	1	SA-182 F347	
80652-08S	19 B MATE FLANGE	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-06S	17 LOWER SKIRT	15	SA-5.6-65(NOR.)	
80652-05S	16 UPPER SKIRT	15	SA-387-22-CL.2	
80652-08S	15 F1,F2 CONN.FLANGE	2	SA-182 F347	
80652-02S1	14 F3,F4 NOZZLE	2	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-07S	13 A PIPE	1	SA-182 F347	
80652-07S	12 A SLEEVE	1	SA-182 F347	
80652-07S	11 A ELBOW	2	SA-403-347 WP-5	
80652-07S	10 A FLANGE	1	SA-182 F347	
80652-03S	9 M MANWAY COVER	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-03S	8 K NOZZLE	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-03S	7 B ELBOW	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-03S	6 B FLANGE	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-04S	5 B NOZZLE	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-04S	4 M MANWAY	1	SA-336 F22V	W/TP309S.S.O/L +TP347S.S.O/L
80652-03S	3 TOP HEAD	1	SA-542-5-CL.4	W/TP347S.S.OVERLAY
80652-03S	2 BOTTOM HEAD	1	SA-542-5-CL.4	W/TP347S.S.OVERLAY
80652-02S	1 SHELL	15	SA-336 F22V	W/TP347S.S.OVERLAY

Purchaser : Fluor Canada Ltd.  
 Customer : OPTI Canada Ltd.  
 Project Name / No. : Long Lake Upgrader Phase 2 Project / A2RW  
 Fluor P.O.No. : A2RW-42B02-01H/A2RW100001  
 Equipment (tag(s)) : 3102-R-002  
 Equipment Name : ICR Second Reactor  
 KSL Order No. : 05-62112-B

REV. NO.	REVISION NOTE	DRAWN	DESIGNED	CHECKED	APPROVED	APPROVED
1	ISSUED FOR CONSTRUCTION	12/16	K. ITOU	2/16	T. SUZUKI	1/16
2	ISSUED FOR CONSTRUCTION	6/5	K. ITOU	6/5	T. SUZUKI	6/5
3	ISSUED FOR CONSTRUCTION	1/8	K. ITOU	1/8	T. SUZUKI	1/8
4	ISSUED FOR CONSTRUCTION	12/26	K. ITOU	2/26	T. SUZUKI	12/26
5	ISSUED FOR CONSTRUCTION	7/28	A. ISHIO	3/28	T. SUZUKI	7/28



3RD ANGLE PROJECTION

表面粗さ SURFACE ROUGHNESS

Ra (μm)	Rmax (μm)	JIS B0031	旧JIS ISO 1302	Expired JIS
25	100	▽	▽	
12.5	50	▽	▽	
6.3	25	▽	▽	
3.2	12.5	▽	▽	
1.6	6.3	▽	▽	
0.8	3.2	▽	▽	
0.4	1.6	▽	▽	
0.2	0.8	▽	▽	

COMMERCIAL TOLERANCE (MACHINING)

DIVISION OF DIM.	MEDIUM
0.5	±0.1
0.6	±0.1
30	±0.2
120	±0.3
400	±0.5
1000	±0.8
2000	±1.2

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Doc No. 42B02-01H-0183-3

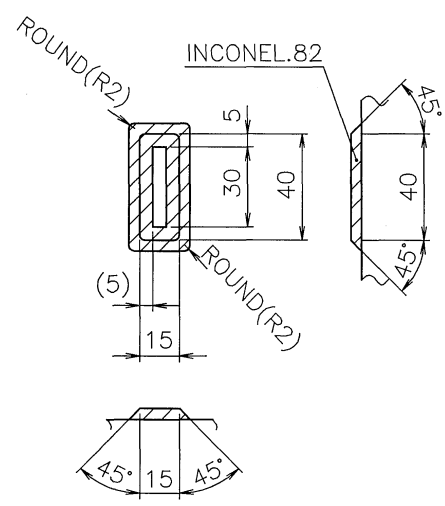
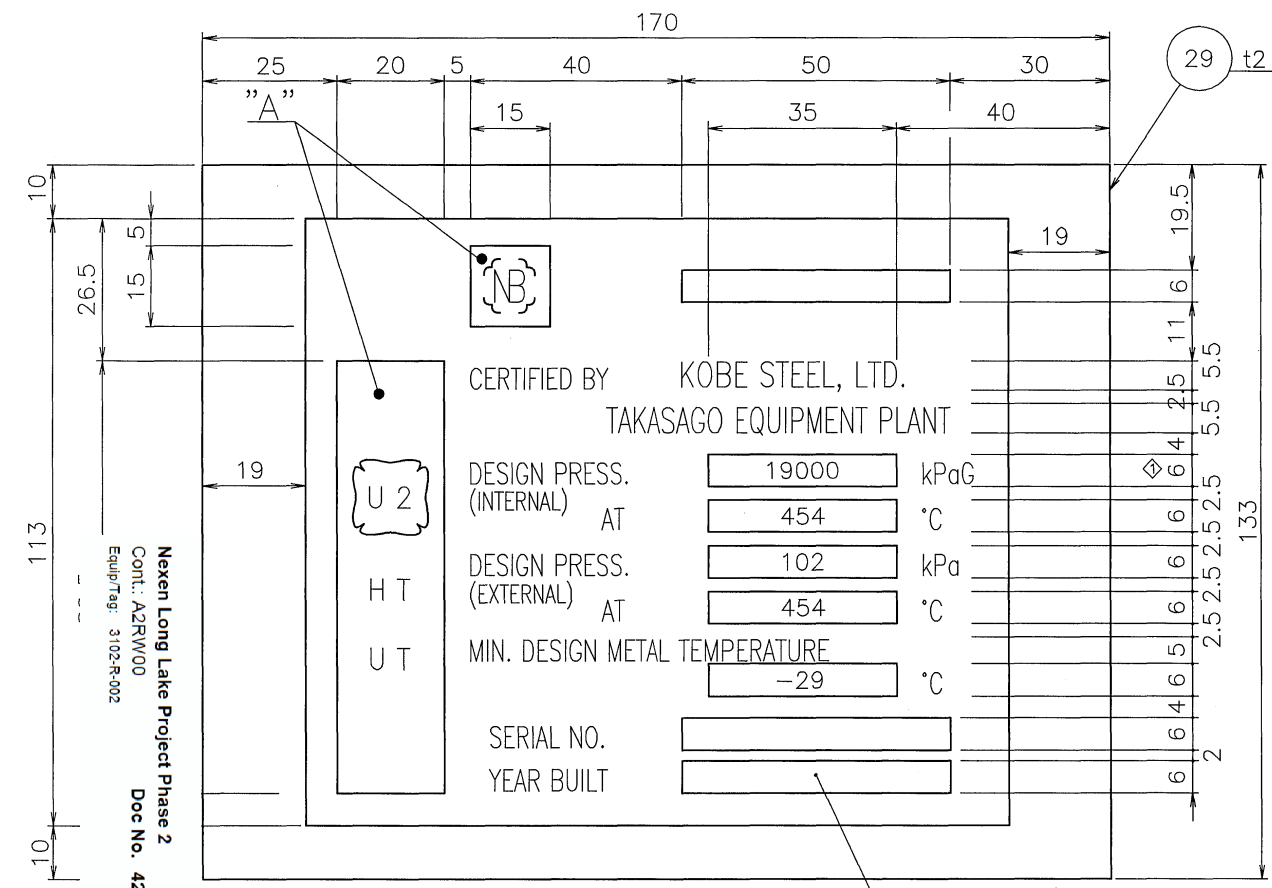
11/19/2009

ASME CODE NAME

SECTION "C"-"C"

0° 270° 180° 90°

11/19/2009

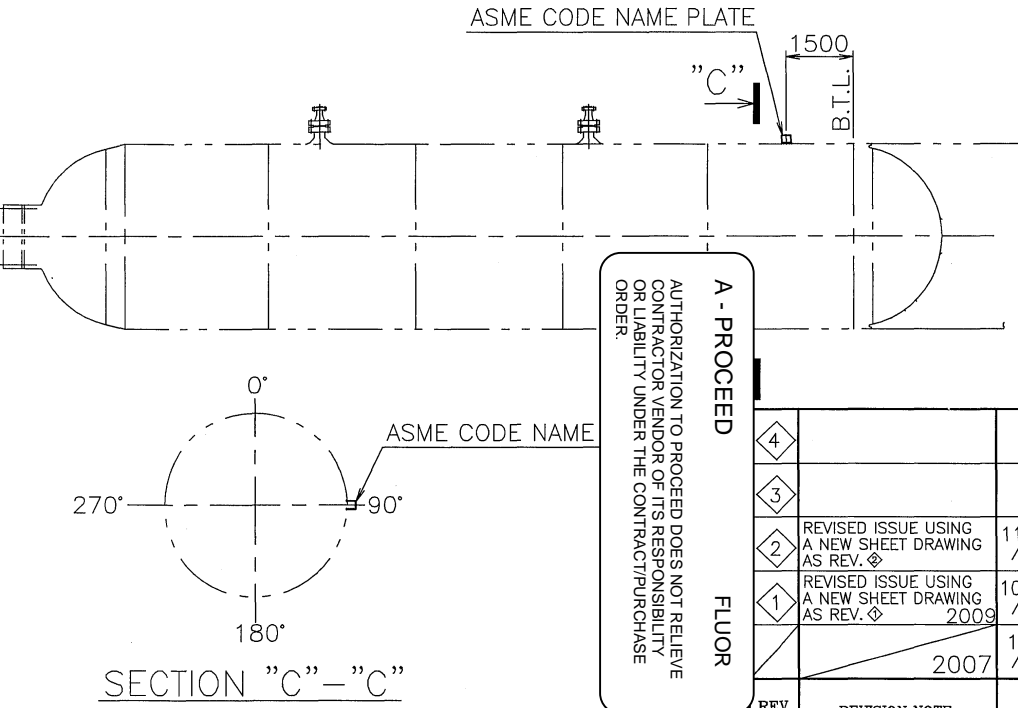


- NOTES
- ALL LETTERING TO BE RAISED AND POLISHED FACES.  
文字は全て彫出し、浮出しのこと。
  - ALL EDGES TO BE RAISED AND POLISHED FACES.  
輪郭部は全て彫出し、浮出しのこと。
  - BACKGROUND TO BE BLACK.  
地は黒色のこと。
  - BLOCKS TO BE RAISED POLISHED FACES FOR STAMPING.  
刻印用の□部は全て彫出し、浮出しのこと。
  - REQUIRED DATA TO BE IN CHARACTERS AT LEAST 4mm HIGH.  
銘板上の文字高さは全て4mm以上のこと。
  - NAME PLATE TO BE WELDED TO NAME PLATE BRACKET.  
本銘板は銘板取付台に溶接により、取付けるものである。
  - BLOCK "A" TO BE STAMPED WITH THE OFFICIAL CODE U2-SYMBOL AND HT MARK, THE TYPE OF POSTWELD HEAT TREATMENT, ETC. IN ACCORDANCE WITH AS-110 OF ASME SEC. VIII. DIV. 2.  
□部 "A" 内の表示 (U2), HT及びマークは ASME SEC. VIII. DIV. 2 AS-110に準拠し、耐圧試験後及びその他の要求された試験検査に合格後、検査官の承認の上で、実施するものであり、銘板製作者による刻印は不要である。
  - NAT'L BD.NO., SERIAL NO. AND YEAR BUILT TO BE STAMPED.  
NAT'L BD.NO., SERIAL NO. 及び YEAR BUILT は、QAにて刻印のこと。その他の□部の文字は銘板製作者にて表示のこと。
  - YEAR BUILT TO BE STAMPED BY KSL QA SECTION AFTER HYDROSTATIC TEST IS PERFORMED.  
YEAR BUILT を耐圧試験終了後にQAにて刻印のこと。(耐圧試験実施年)

ITEM	PART NAME	MATERIAL	QTY	SPA	kg	PRO	REMARKS	TEST
29A	BRACKET	JIS SUS304 (EQ.SA-240IP 304)	1		7033	t5		
29	NAME PLATE	JIS SUS304 (EQ.SA-240IP 304)	1		362	t2		

MATERIAL LIST

Purchaser : Fluor Canada Ltd.  
Customer : OPTI Canada Ltd.  
Project Name / No. : Long Lake Upgrader Phase 2 Project / A2RW  
Fluor P.O.No. : A2RW-42B02-01H/A2RW100001  
Equipment (tag(s)) : 3102-R-002  
Equipment Name : ICR Second Reactor  
KSL Order No. : 05-62112-B



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2	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2009	11/10 K.ITOU	11/10 K.ITOU	11/10 T.SUZUKI		
1	REVISED ISSUE USING A NEW SHEET DRAWING AS REV. 2009	10/21 K.ITOU	10/21 K.ITOU	10/21 T.SUZUKI	10/21 F.HARADA	10/21 T.TERAKAWA
		1/30 K.ITOU	1/30 K.ITOU	1/30 T.SUZUKI	1/30 F.HARADA	1/30 S.KUSHIDA

ENGINEERING DEPARTMENT QA DEPARTMENT

MAR	SEQ.	COMP'D.DWG.NO.	T.NO.	ITEM	PART NAME	MATERIAL	QTY	SPA	kg	PRO	REMARKS	TEST
					3102-R-002 ICR SECOND REACTOR ASME CODE NAME PLATE							
ASME										7395		
KOBELCO										80652-10S		
SCALE 1:1										REV 2		
DWG. NO. 80652-10S										O.N.O. 05-62112-B		
T.N.O. 447295												

