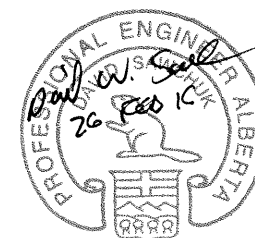
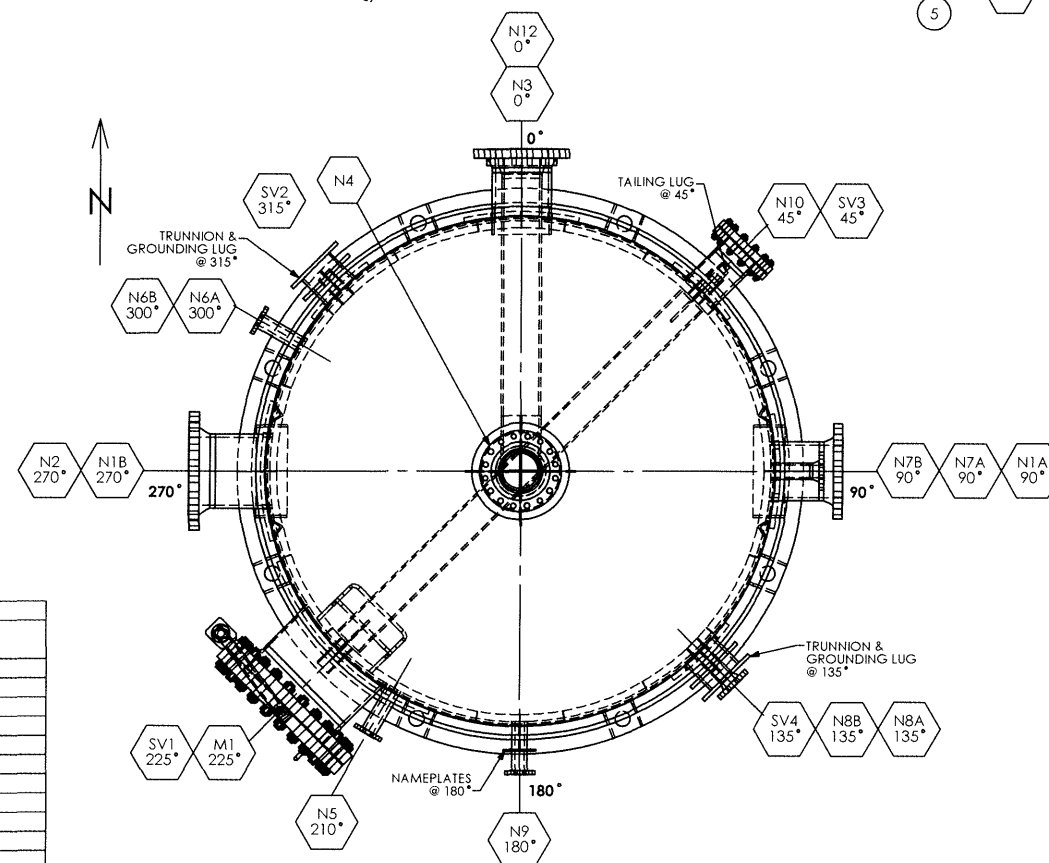


SECTION A-A
SKIRT BASE PLATE
DETAILS



CORR
COMPL. AUG
01/04

AS BUILT

NOZZLE SCHEDULE										
ITEM	QTY	SIZE	RATING	TYPE	SCH	EXTERNAL PROJ.		ORIENTATION		DESCRIPTION
						DESIGN	ACTUAL	DESIGN	ACTUAL	
N1A	1	12"	300#	RFWN	80	368.3	-	90	-	STEAM INLET
N1B	1	16"	300#	RFWN	60	419.1	-	270	-	STEAM INLET
N2	1	16"	300#	RFWN	60	419.1	-	270	-	STEAM OUTLET
N3	1	8"	300#	RFWN	80	SEE 6720006-NOZ	-	0	-	LIQUID OUT
N4	1	10"	300#	RFWN	80	SEE 6720006-NOZ	-	SEE DWG	-	VENT/SPARE
N5	1	2"	300#	RFLWN	-	266.7	-	210	-	TI
N6A	1	2"	300#	RFLWN	-	266.7	-	300	-	LG
N6B	1	2"	300#	RFLWN	-	266.7	-	300	-	LG
N7A	1	3"	300#	RFWN	160	266.7	-	90	-	LIT
N7B	1	3"	300#	RFWN	160	266.7	-	90	-	LIT
N8A	1	3"	300#	RFWN	160	266.7	-	135	-	LIT
N8B	1	3"	300#	RFWN	160	266.7	-	135	-	LIT
N9	1	2"	300#	RFLWN	-	266.7	-	180	-	PG
N10	1	8"	300#	RFWN	80	317.5	-	45	-	INSPECTION/VENT W / BLIND
N12	1	12"	300#	RFWN	80	368.3	-	0	-	MAKE UP STEAM
M1	1	24"	300#	RFWN	XS	419.1	-	225	-	MANWAY W / BLIND



MAKING ENERGY SAFE,
EFFICIENT, AND CLEAN

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CUSTOMER		MEG ENERGY CORP.	
PROJECT NAME		CHRISTINA LAKE REGIONAL PROJECT - PHASE 3A	
P.O. NO.		EQUIP. NO. 3A-V-326	
		MP STEAM SEPARATOR GENERAL ARRANGEMENT	
DRAWN: 25/11/16	DESIGNED: 25/11/16	JOB NO. 6720006	DRAWING NO. 6720006-GA
CHECKED: 25/11/16	APPROVED: 16-02-25	UNITS: MILLIMETERS	SHEET: 1 OF 2 REV. 04

DESIGN DATA

DESIGN CODEASME SECTION VIII, DIVISION 1 2010 ED. A11U STAMP REQUIRED

CODE CASES

TAG NO.3A-V-326ASSET NO.

SERVICEP&ID NO.

DESCRIPTIONSEPARATORCUSTOMER PO.

MANUFACTURERHITACHI POWER SYSTEMS CANADA LTD.MODEL NO.

NO. REQUIREDONEITEM NO.

ITEM NAMEMP STEAM SEPARATORHPSCA SERIAL NO.6720006

DESIGN CALC.REV 4TOTAL CAPACITY78 m³VESSEL

FLUIDSTEAM

DESIGN PRESSURE (INT.)1950 kPag @ 214°C

DESIGN PRESSURE (EXT.)F.V. @ 214°C

OP. PRESSURE (INT.)1461 kPag @ 200°C

OP. PRESSURE (EXT.)UNKNOWN

LIQUID LEVEL (HULL)8544

LIQUID SP. GRAVITY1.0 (DESIGN FULL OF LIQUID)

MDMT-29°C @ 2000 kPag

CORROSION ALLOW.3.2 mm

TEST PRESSURE (SHOP)2600 kPag @ 5°C MIN.

TEST PRESSURE (CORRODED)2535 kPag @ 5°C MIN.

MAWP (HOT & CORRODED)2000 kPag @ 214°C

MAP (COLD & NEW)2410 kPag @ 5°C

RADIOGRAPHY100%

JOINT EFFICIENCY

SHELLS1.0

HEADS1.0

NOZZLES1.0

SOUR SERVICENO

LETHAL SERVICENO

PWHTNO

IMPACT TESTNONE

MATERIALS

HEADSSA-516-70N

SHELLSSA-516-70N

PIPINGSA-106-B

TAILING/LIFTING LUGSSA-516-70N

FITTINGS SA-234-WPB

FORGINGS SA-105N

REINF. PADS SA-516-70N

BOLTING SA-193-B7

NUTS SA-194-2H

ATTACHMENTS SA-516-70N

SUPPORTS SA-516-70N

GASKETS SPIRAL WOUND, 316L S.S. w/ GRAPHITE FILLER, S.S 316L INNER RING AND C.S OUTER RING

EXTERNALS

JACKETNO

INSULATION TYPECALCIUM SILICATE

INSUL. SUPPORTSYES

LIFTING/TAILING LUGSYES

MANWAY DAVIT/RUNGSYES

TOP DAVITNO

FIREPROOFING TYPEUNKNOWN

FIREPROOFING CLIPSNO

PLATFORMSYES

PLATFORM CLIPSYES

PIPE SUPT CLIPSYES

LADDERSYES

LADDER CLIPSYES

VESSEL SUPT TYPESKIRT

HEATING COILNO

GROUNDING LUGYES

CATHODIC PROTNO

VACUUM RINGSNO

BASE RINGYES

INTERNALS

TRAYS/PACKINGNO

TRAYS/PACKING TYPENO

VANE PACKYES

INLET BAFFLEYES

VORTEX BREAKERYES

INTERNAL COATINGNO

AGITATORNO

COILNO

SHOP PAINTYES

FIELD PAINTUNKNOWN

INSULATION/FIREPROOFINGYES/ NO

SEISMIC LOADYES

WIND LOADYES

ESTIMATED WEIGHTS

FABRICATION31,000 kg

SHIPPING33,000 kg

LIFTING33,000 kg

OPERATING134,000 kg

FULL OF WATER134,000 kg

REFERENCE DOCUMENTS (GENERAL)

(*) = PROPRIETARY/NOT SUBJECT TO CUSTOMER REVIEW

TITLE

NUMBER

REV

PRESSURE VESSELS

085354-3010-PV-10

1

EQUIPMENT WELDING

085354-3010-EW-20

1

ALLOWABLE NOZZLE LOADS FOR MECH. EQUIP.

085354-4060-PS-001

1

GENERAL SPEC. FOR INSULATION

085354-3010-IN-00

2

SPEC. FOR PAINTING & PROTECTIVE COATING

085354-3010-PC-50

2

PROTECTION OF GOODS DURING SHIPMENT

085354-3010-PG-10

0

STRUCTURAL ENGINEERING CRITERIA

085354-3010-5000CS01

2

DESIGN OF STEEL STRUCTURES

085354-5010-5400CS01

2

FABRICATION OF STEEL STRUCTURES

085354-5010-5400CS02

2

ERECTION OF STEEL STRUCTURES

085354-5010-5400CS03

2

ELECTRICAL HEAT TRACING INSTALLATION

085354-6010-6118-02

1

WORK SITE STORAGE & EQUIPMENT PROTECTION

085354-3010-WS-15

1

SITE SPECIFIC ENVIRONMENTAL DATE

SP-CL03A-Q-050-0001

0

DOCUMENT LIST

TITLE

DWG.#

DESCRIPTION

VESSEL DETAILS

6720006-DE

VESSEL FABRICATION

NOZZLE ASSEMBLY

6720006-NOZ

NOZZLE SUB-ASSEMBLY FABRICATION

MANWAY DAVIT C

6720000-MD-C

24" MANWAY DAVIT FABRICATION

SKIRT

6720006-SK

SKIRT FABRICATION

SHIPPING SADDLE

6720006-SS

SHIPPING SADDLE FABRICATION

WELD PROCEDURE

6720006-WPS

WELD PROCEDURE SCHEDULE

PAINT CARD

6720006-STR

PAINTING PROCESS CARD

HEAT TRACE

6720006-EHT

HEAT TRACING DETAILS

HYDROTEST

6720006-HTC01

HYDROTEST PROCESS CARD

ALLOWABLE NOZZLE LOADS

NOZZLE

FLANGE RATING

Pr (N)

Vc, Vt (N)

Mt (Nm)

Mc, Ml (Nm)

N3

300

6060

7425

8075

5710

N1A,N12

300

10665

13065

18830

13315

N1B,N2

300

16495

20200

31700

22415

MAXIMUM MOMENT AND SHEAR FORCE AT BASE

SEISMIC N-m MOMENT

1,717,100

SEISMIC N SHEAR

156,600

MAXIMUM MOMENT AND SHEAR FORCE AT BASE

WIND N-m MOMENT

562,600

WIND N SHEAR

52,150

GENERAL NOTES:

- ALL BUTT WELDS SHALL BE DOUBLE WELDED AND FULL PENETRATION WELDS UNLESS OTHERWISE SPECIFIED.
- ALL NOZZLE ATTACHMENT WELDS TO SHELL OR HEADS SHALL BE FULL PENETRATION WELDS AND WHERE ACCESSIBLE, BACK-GOUGING IS REQUIRED.
- ALL NOZZLE BOLT HOLES TO STRADDLE PRINCIPAL VESSEL CENTRELINES.
- ALL INTERNAL CONNECTIONS SHALL BE ROUNDED TO A 3.2 mm MINIMUM RADIUS.
- THE EXTERNAL PROJECTION OF A NOZZLE SHALL BE MEASURED FROM THE VESSEL OD TO THE FLANGE FACE.
- FABRICATION TOLERANCES SHALL COMPLY WITH ASME SECTION VIII, DIV. 1, AND SPEC 085354-3010-PV-27
- GASKETS SHALL BE 1/8" THICK 316SS SPIRAL WOUND, GRAPHITE FILLED WITH CARBON STEEL CENTERING RING AND 316L INNER RING.
- AFTER HYDROTEST, VESSEL SHALL BE THOROUGHLY DRAINED AND DRIED.
- ALL FLANGE FACES SHALL BE COVERED WITH 12 mm THICK WOOD, SECURED WITH A MINIMUM OF FOUR BOLTS AND SEALED WITH DUCT TAPE. ALL BUTT WELD FACES SHALL BE COVERED WITH A POLYURETHANE SHEET (SHRINK WRAP) AND SEALED WITH DUCT TAPE.
- SHOP INSTALL 2.5" (63.5mm) THICK CALCIUM SILICATE INSULATION WITH 0.5mm THK X 32mm (PITCH) X 6mm (DEPTH) CORRUGATED ALUMINUM CLADDING PER 085354-3010-IN-00.
- LADDER AND PLATFORM SUPPORTS AS PER CUSTOMER DESIGN.
- VESSEL TO BE CLEANED INSIDE AND OUTSIDE PRIOR TO SHIPMENT.
- BOTTOM HALF OF THE SEPARATOR AND BLOWDOWN LIQUID LINE SHALL BE ELECTRICAL HEAT TRACED FOR A HOLDING TEMPERATURE OF 10°C.
- SUPPLIED & SHIPPED LOOSE ANCHOR BOLT TEMPLATE, TO BE MARKED WITH TAG NUMBER AND LOCATIONS OF 0°, 90°, 180° & 270°.
- STRAIGHT LIFT IS REQUIRED ON TRUNNIONS.

NDE REQUIREMENTS:

- 100% RADIOGRAPHY IN ACCORDANCE WITH ASME SEC VIII DIV 1, UW-51 ON ALL PRESSURE CONTAINING BUTT WELDS.
- 100% MT OF ALL SKIRT, SHELL, TRUNNION, TAIL LUG ATTACHMENT WELDS.

WPS SCHEDULE:

- FOR WELD NUMBERS AND PROCEDURES REFER TO WELD MAP 6720006-WPS.

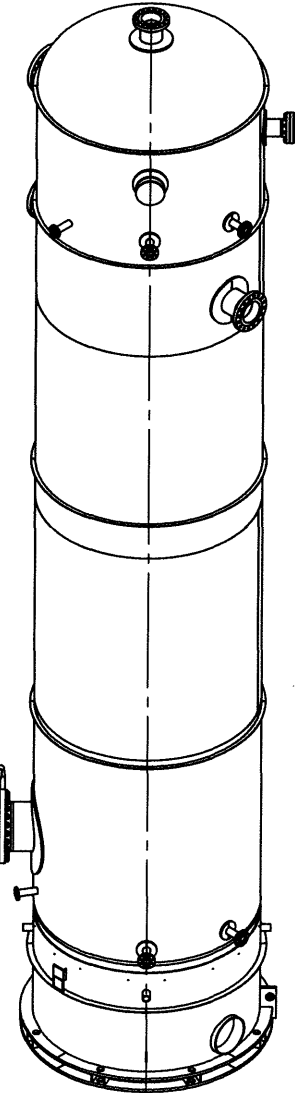
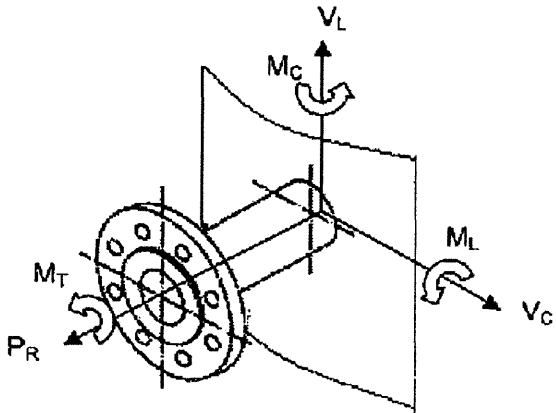
ASSUMPTIONS & NOTES:

- LIFTING TRUNNIONS ARE USED AT THE TOP OF THE VESSEL. DUE TO LIMITATIONS IN THE SOFTWARE, THE TRUNNIONS HAVE LUGS ATTACHED TO THEM; THE ACTUAL TRUNNIONS WILL BE SHOWN IN THE DRAWINGS WITHOUT THE LUG. THEREFORE ALL TRUNNION LUG CALCULATIONS ARE TO BE IGNORED.
- PRESSURE GRADIENT THROUGH THE VANE PACK IS UNKNOWN. ASSUME DESIGN PRESSURE WILL ACCOUNT FOR THE PRESSURE GRADIENT.
- LADDER AND PLATFORM WEIGHTS ARE CALCULATED USING THE FOLLOWING VALUES: GRATINGS AT 730 kg/m² (TO ACCOUNT FOR NBC LOADINGS), RAILING AT 175N/m AND NO LADDERS. AS PLATFORMS WILL INTERFERE WITH TAIL LUG RIGGING, ASSUME VESSEL IS LIFTED WITHOUT PLATFORMS.
- INSULATION DENSITY IS ASSUMED TO BE 200 kg/M³ WITH CLADDING. ASSUME NO FIREPROOFING.
- FOR WIND LOAD CALCULATIONS: ASSUME BASE IS AT GRADE. PRESSURE COEFFICIENT USED IS (AS SUPPLIED BY CUSTOMER). EXPOSURE CATEGORY A WITH IMPORTANCE FACTOR (Iw) OF 1.15.
- VESSEL DESIGNED FULL OF LIQUID. LIQUID SPECIFIC GRAVITY IS 1.0.
- FOR SEISMIC CALCULATIONS: SA(0.2)=0.12, SA(0.5)=0.056, SA(1.0)=0.023, SA(2.0)0.006, LE=1.3, SITE CLASS=D, RD=1, RO=1, FA=1.3, FV=1.4
- AS TAIL IS ATTACHED TO BASE RING, WRC CALCULATION IS TURNED OFF. AS IT WILL NOT TAKE INTO ACCOUNT THE BASE RING. BENDING STRESS OF THE BASE RING IS CHECKED INSTEAD.
- AS VANE PACK WEIGHT IS UNKNOWN, IT IS ASSUMED TO BE 2000KG FOR LOADING PURPOSES.
- SPEC CALLS FOR ONE ADDITIONAL VESSEL DIAMETER TO BE ADDED TO THE TOP OF THE VESSEL FOR WIND LOADING. AS OUR SOFTWARE DOES NOT ALLOW THIS WITHOUT CHANGING THE PHYSICAL DIMENSIONS AND WEIGHT OF THE VESSEL, THE EXTRA AREA WAS ADDED AS DIAMETER.

MATERIAL NOTE:

SA-516-70N-H7 DENOTES THE FOLLOWING SPECIAL MATERIAL REQUIREMENTS:

- MATERIAL MUST CONFORM TO SA-516-70.
- MATERIAL SHALL BE IMPACT TESTED AT -45 DEG C (-49 DEG F) TO CSA W59.
- MATERIAL SHALL BE NORMALIZED.



MAKING ENERGY SAFE,
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CERTIFIED BY:
**Mitsubishi Hitachi Power
Systems Canada, Ltd.**

MAWP **2000** kPag @ **214** DEG C
MAEP **FV** kPag @ **214** DEG C
MDMT **-29** DEG C @ **2000** kPag

SERIAL NO. **6720006** YEAR BUILT **2016**

CRN **W2315.2**
TAG. NO. **3A-V-326** P.O. NO.
SERVICE NAME **MP STEAM SEPARATOR**
SHELL MTL. **SA-516-70N** SHELL THK. **25.4** mm
HEAD MTL. **SA-516-70N** HEAD THK. **25.4** mm
CORR. ALLOW. **3.2** mm VOLUME **78** m³
A#

NAMEPLATE

ITEM	QTY	DESCRIPTION	MATERIAL	PART ID	DWG NO.
1	1	VESSEL DETAILS			6720006-DE
2	1	24" 300# MANWAY DAVIT			6720000-MD-C
3	24	STUD 1-1/2"-8 UN X 9-1/4" LG	SA-193-B7	0601-03026	0601-03026
4	48	NUT HEX 1-1/2" UN	SA-194-2H	0604-01008	0604-01008
5	1	GASKET 24" 300# CG 316SS		0803-02049	0803-02049
6	1	BLIND FLG 8" 300# ANSI B16.5 RF	SA-105N	0302-042013	0302-042013
7	12	STUD 7/8" UNC X 5-3/4" LG	SA-193-B7	0601-03014	0601-03014
8	24	NUT HEX 7/8" UNC	SA-194-2H	0604-01004	0604-01004
9	1	GASKET 8" 300# CG 316SS		0803-02041	0803-02041
10	1	HCI NAMEPLATE, 3.2 THK.	SA-240-316L	6720006-NP	6720006-NP
11	1	PEERLESS NAMEPLATE	SA-240-316L		PEERLESS-NP

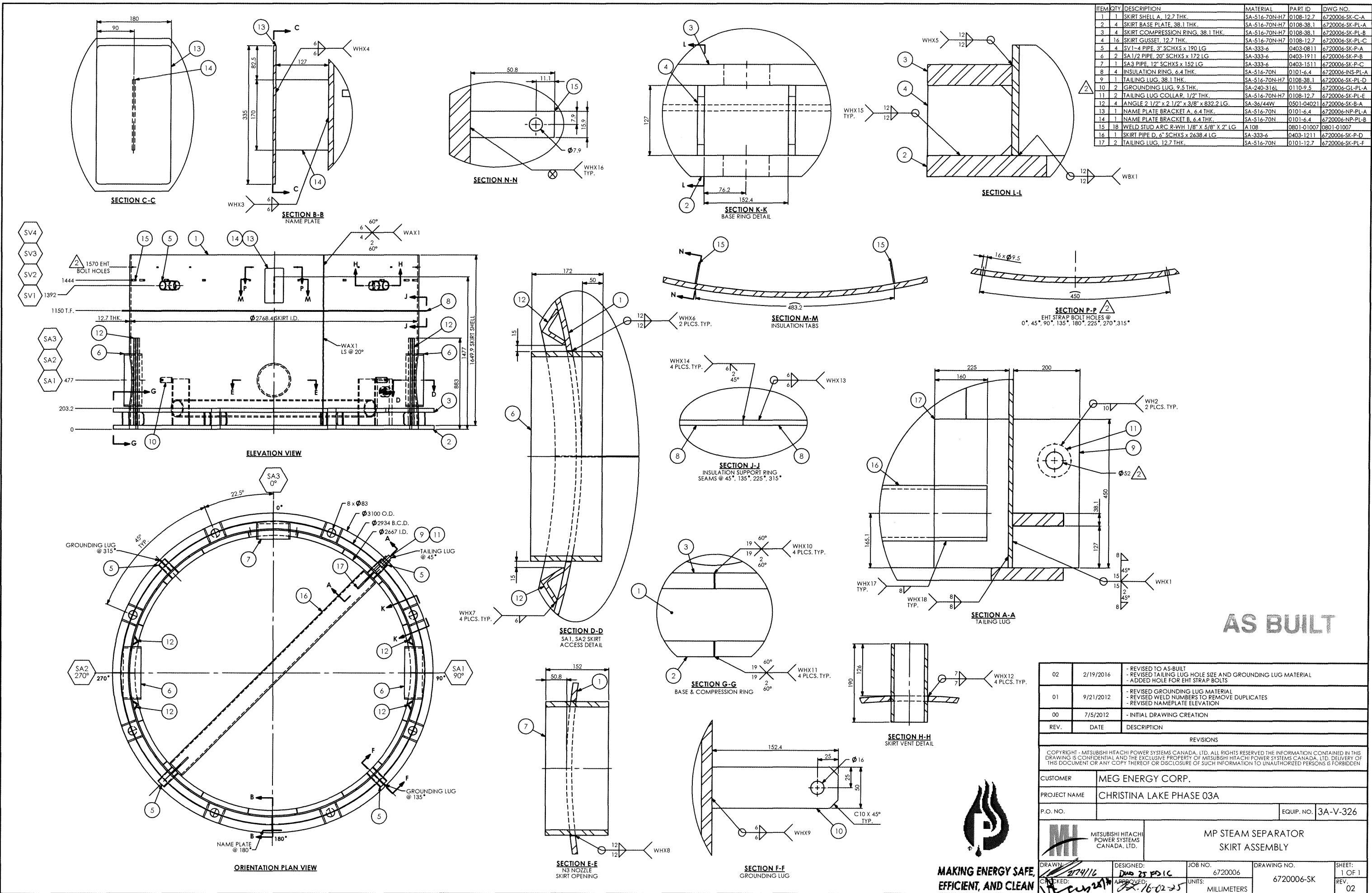
AS BUILT

04	2/22/2016	- REVISED TO AS-BUILT - REVISED NAME PLATE DETAILS
03	11/27/2012	- UPDATED CALCS REV NUMBER IN DESIGN DATA - UPDATED NAME PLATE - REVISED GENERAL NOTE 13
02	9/21/2012	- ADDED DRAWING NUMBERS TO NOZZLE SCHEDULE - REVISED NAMEPLATE ELEVATION AND MANWAY DAVIT HINGE LOCATION - REVISED REFERENCE DOCUMENTS TABLE - UPDATED GENERAL NOTE 14, NDE NOTES AND ADDED H7 MATERIAL NOTES - REVISED NAMEPLATE
01	8/19/2012	- REVISED ANCHOR BOLT SIZE - ADDED PROCESS NOZZLE LOAD CHART - ADDED WIND AND SEISMIC LOAD CHART - REVISED WEIGHTS AND NAME PLATE - ADDED GENERAL NOTE 15 AND ASSUMPTIONS NOTES - ADDED REV NUMBER TO REFERENCE DOCUMENT LIST
00	05/16/2012	- INITIAL DRAWING CREATION
REV	DATE	DESCRIPTION

REVISION HISTORY

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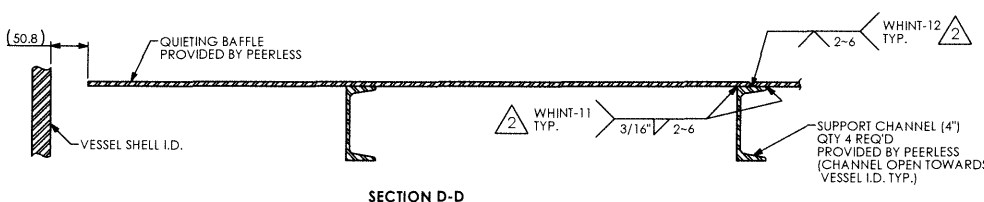
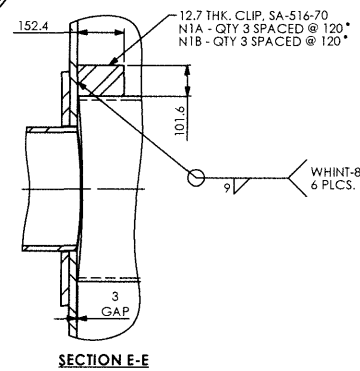
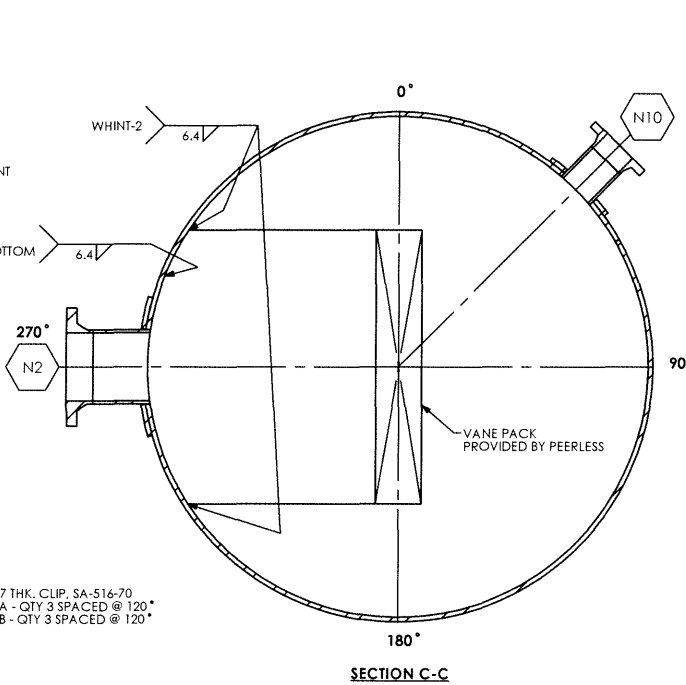
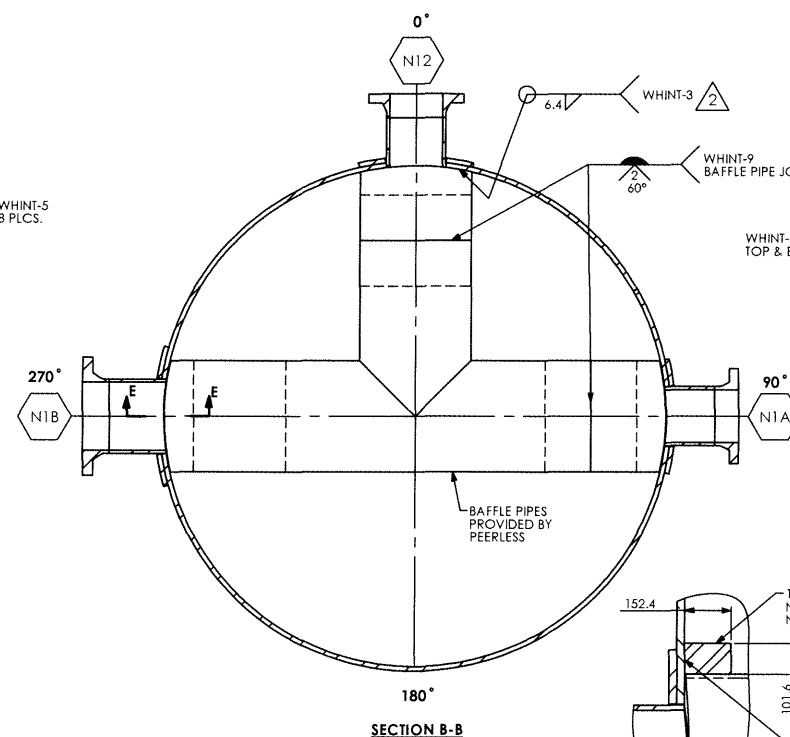
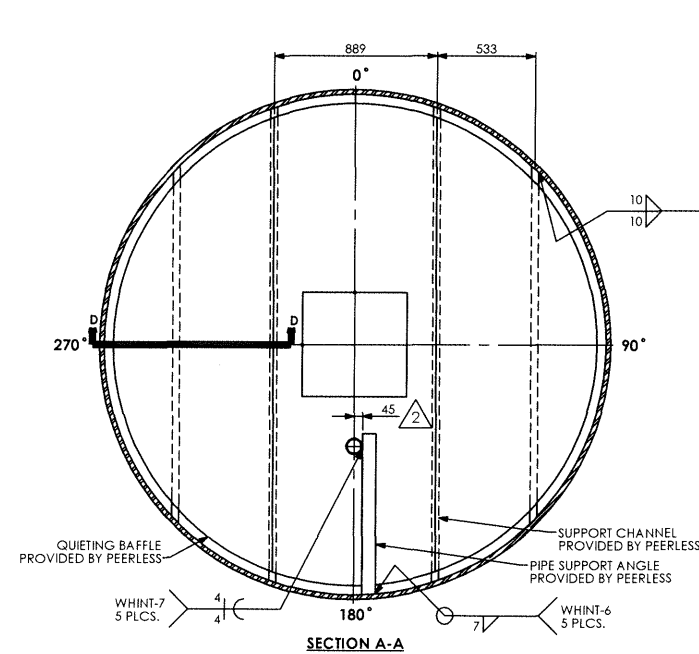
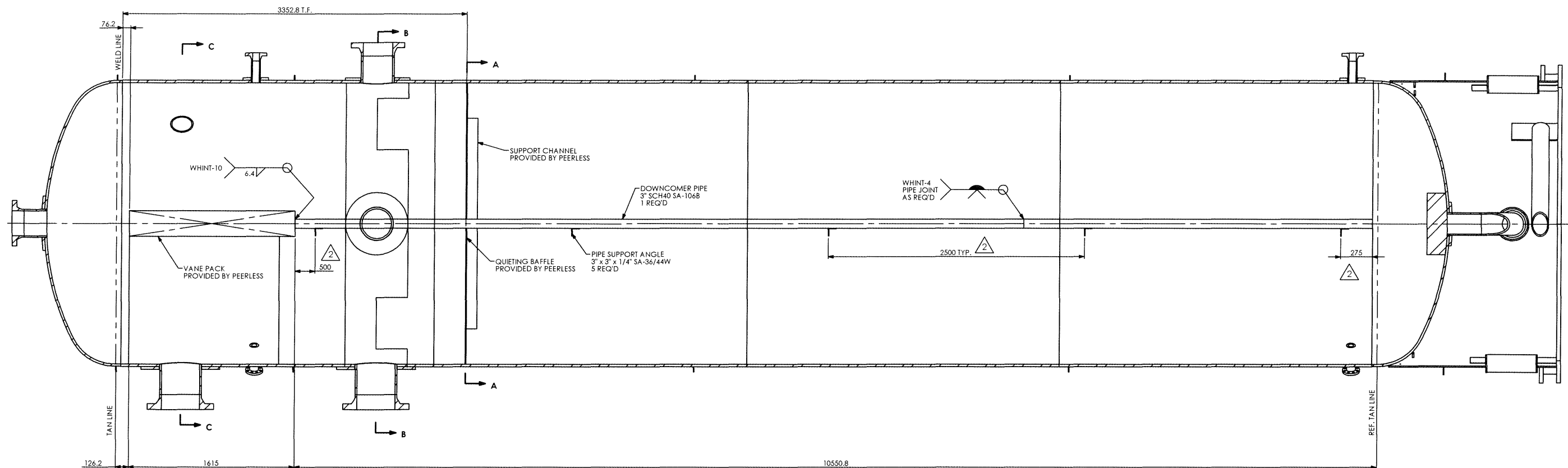
CUSTOMER	MEG ENERGY CORP.		
PROJECT NAME	CHRISTINA LAKE REGIONAL PROJECT - PHASE 3A		
P.O. NO.		EQUIP. NO.	3A-V-326
		MP STEAM SEPARATOR GENERAL ARRANGEMENT	
DRAWN:	DESIGNED:	JOB NO.	6720006
CHECKED:	APPROVED:	DRAWING NO.	6720006-GA
		UNITS:	MILLIMETERS
		SHEET:	2 OF 2
		REV.	04



ITEM	QTY	DESCRIPTION	MATERIAL	PART ID	DWG NO.
1	1	SKIRT SHELL A, 12.7 THK.	SA-516-70N-H7	0108-12.7	6720006-SK-C-A
2	4	SKIRT BASE PLATE, 38.1 THK.	SA-516-70N-H7	0108-38.1	6720006-SK-PL-A
3	4	SKIRT COMPRESSION RING, 38.1 THK.	SA-516-70N-H7	0108-38.1	6720006-SK-PL-B
4	16	SKIRT GUSSET, 12.7 THK.	SA-516-70N-H7	0108-12.7	6720006-SK-PL-C
5	4	SV1-4 PIPE, 3" SCHXS x 190 LG	SA-333-6	0403-0811	6720006-SK-P-A
6	2	SA1/2 PIPE, 20" SCHXS x 172 LG	SA-333-6	0403-1911	6720006-SK-P-B
7	1	SA3 PIPE, 12" SCHXS x 152 LG	SA-333-6	0403-1511	6720006-SK-P-C
8	4	INSULATION RING, 6.4 THK.	SA-516-70N	0101-6.4	6720006-INS-PL-A
9	1	TAILING LUG, 38.1 THK.	SA-516-70N-H7	0108-38.1	6720006-SK-PL-D
10	2	GROUNDING LUG, 9.5 THK.	SA-240-316L	0110-9.5	6720006-GL-PL-A
11	2	TAILING LUG COLLAR, 1/2" THK.	SA-516-70N-H7	0108-12.7	6720006-SK-PL-E
12	4	ANGLE 2 1/2" x 2 1/2" x 3/8" x 832.2 LG.	SA-36/44W	0501-04021	6720006-SK-B-A
13	1	NAME PLATE BRACKET A, 6.4 THK.	SA-516-70N	0101-6.4	6720006-NP-PL-A
14	1	NAME PLATE BRACKET B, 6.4 THK.	SA-516-70N	0101-6.4	6720006-NP-PL-B
15	18	WELD STUD ARC R-WH 1/8" x 5/8" x 2" LG	A108	0801-01007	0801-01007
16	1	SKIRT PIPE D, 6" SCHXS x 2638.4 LG	SA-333-6	0403-1211	6720006-SK-P-D
17	2	TAILING LUG, 12.7 THK.	SA-516-70N	0101-12.7	6720006-SK-PL-F

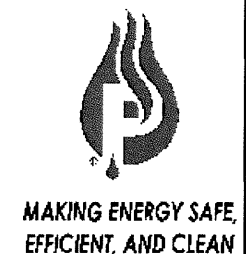
AS BUILT

02	2/19/2016	- REVISED TO AS-BUILT - REVISED TAILING LUG HOLE SIZE AND GROUNDING LUG MATERIAL - ADDED HOLE FOR EHT STRAP BOLTS
01	9/21/2012	- REVISED GROUNDING LUG MATERIAL - REVISED WELD NUMBERS TO REMOVE DUPLICATES - REVISED NAMEPLATE ELEVATION
00	7/5/2012	- INITIAL DRAWING CREATION
REV.	DATE	DESCRIPTION
REVISIONS		
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CUSTOMER	MEG ENERGY CORP.	
PROJECT NAME	CHRISTINA LAKE PHASE 03A	
P.O. NO.		EQUIP. NO. 3A-V-326
		MP STEAM SEPARATOR SKIRT ASSEMBLY
DRAWN: 9/24/16	DESIGNED: DUD 25 P21C	JOB NO. 6720006
CHECKED: PWS 2/17/17	APPROVED: PWS 2/17/17	DRAWING NO. 6720006-SK
MAKING ENERGY SAFE, EFFICIENT, AND CLEAN		SHEET: 1 OF 1 REV. 02

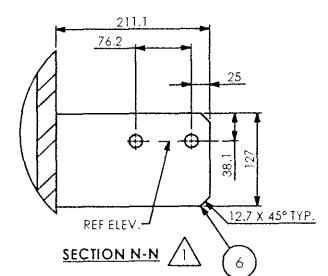
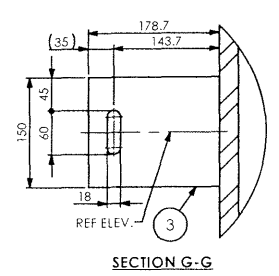
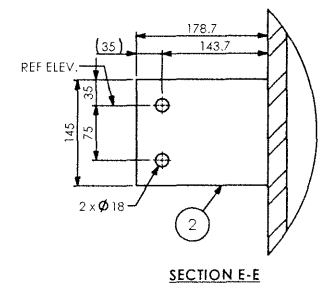
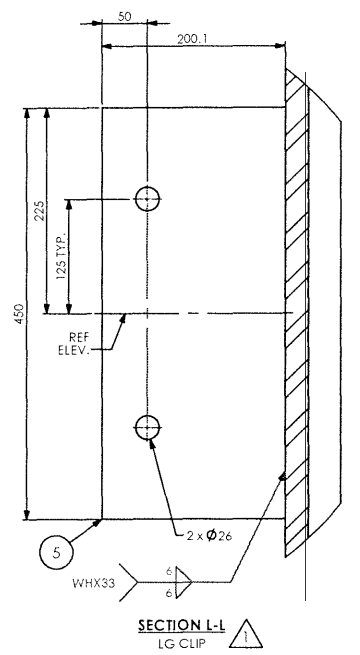
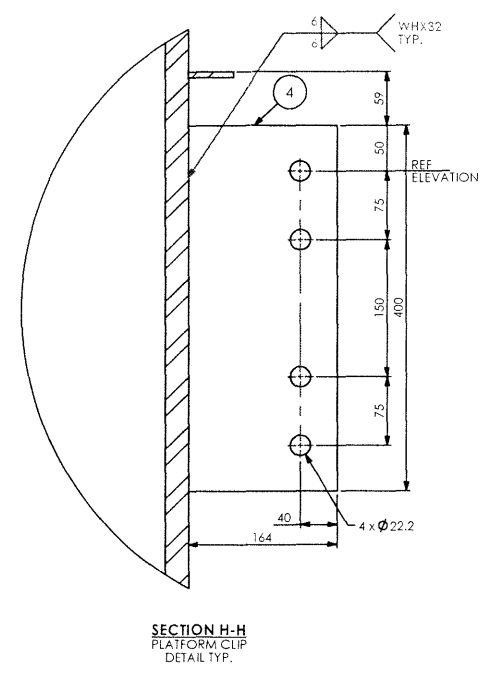
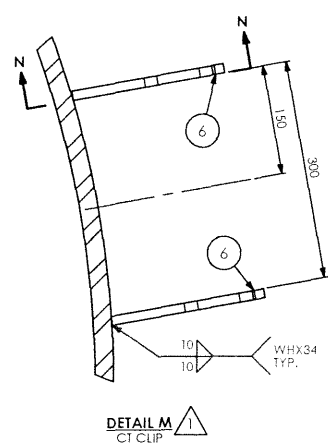
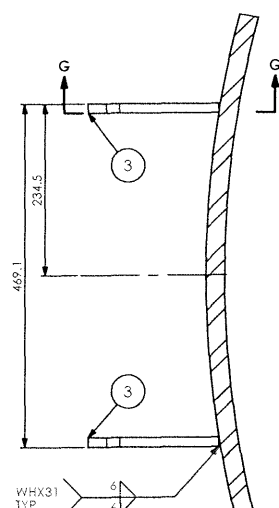
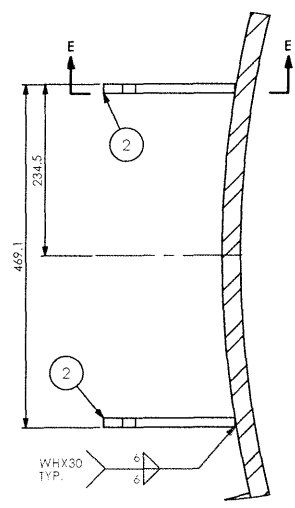
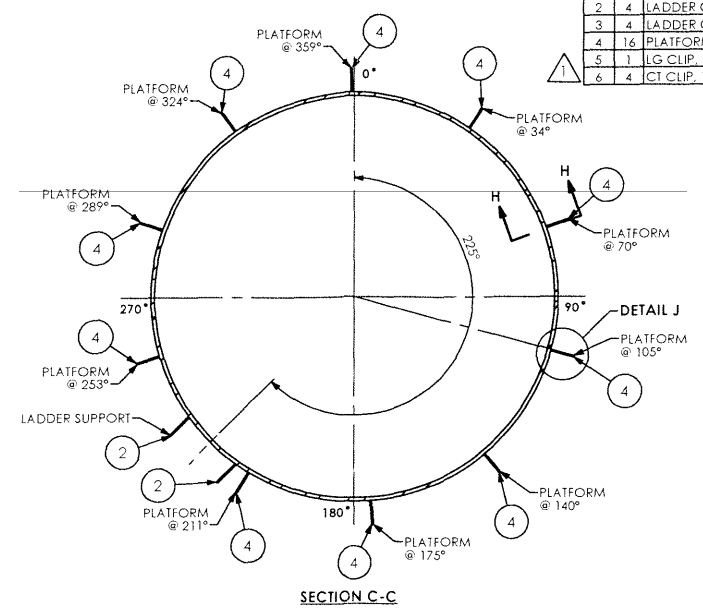
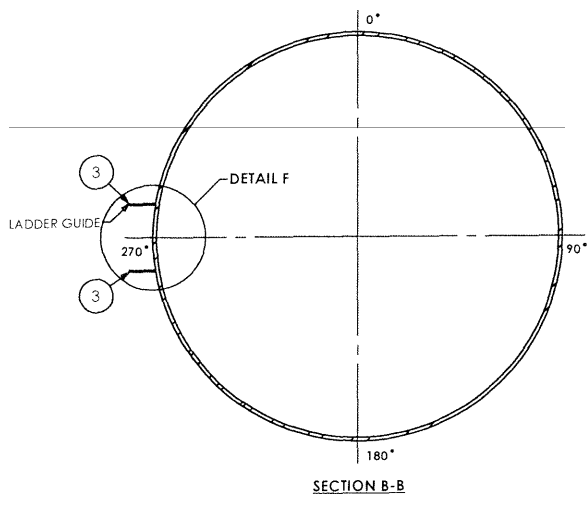
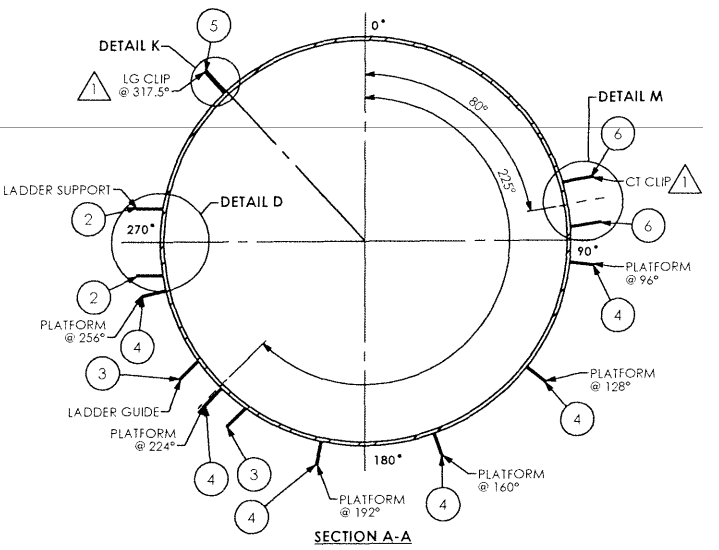
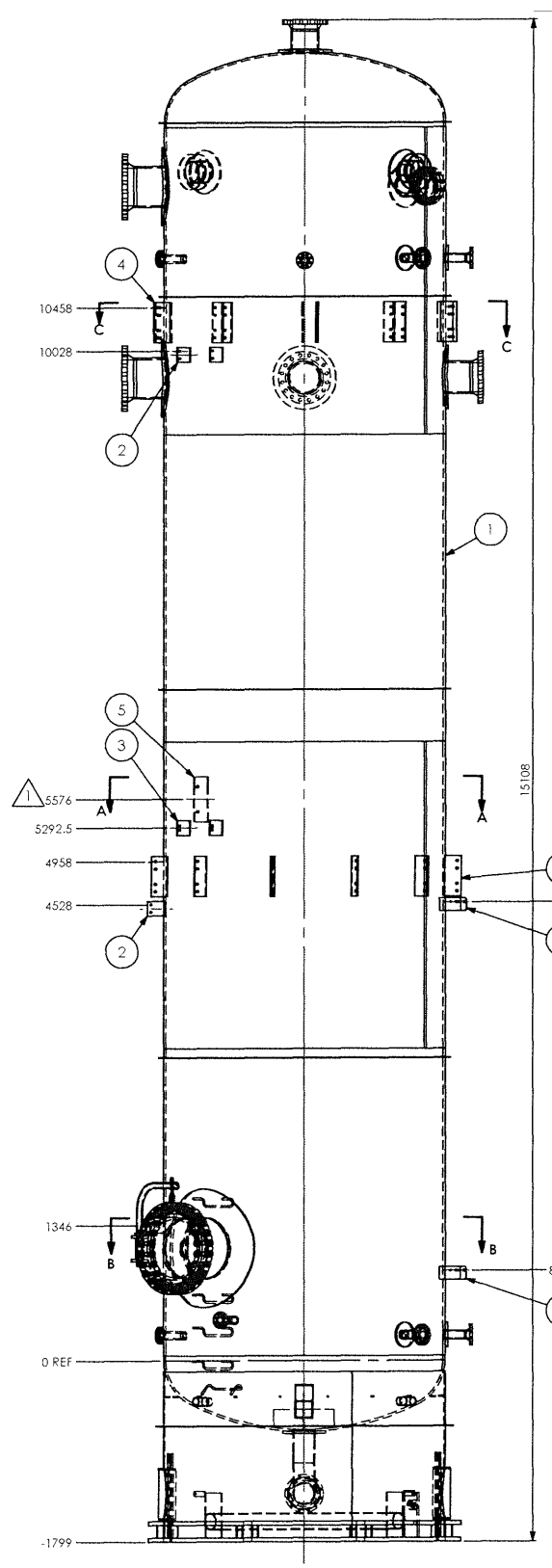


AS BUILT

02	2/25/2016	- REVISED TO AS-BUILT - REVISED WELD SYMBOLS AND ADDED DIMENSIONS
01	---	- GENERAL REVISION AS PER CUSTOMER MARKUPS
REV	DATE	DESCRIPTION
REVISION HISTORY		
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CUSTOMER	MEG ENERGY CORP.	
PROJECT NAME	CHRISTINA LAKE REGIONAL PROJECT - PHASE 3A	
P.O. NO.		EQUIP. NO. 3A-V-326
		MP STEAM SEPARATOR INTERNAL DETAILS
DRAWN: 1/25/16	DESIGNED: Dno 26 D3 16	JOB NO. 6720006
CHECKED: 1/25/16	APPROVED: 1/25/16	DRAWING NO. 6720006-INT
UNITS: MILLIMETERS		SHEET: 1 OF 1
		REV. 02



ITEM	QTY	DESCRIPTION	MATERIAL	PART ID	DWG NO.
1	1	GENERAL ARRANGEMENT		0101-12.7	6720006-GA
2	4	LADDER CLIP A, 1/2" THK.	SA-516-70N	0101-12.7	6720006-EC-PL-A
3	4	LADDER CLIP B, 1/2" THK.	SA-516-70N	0101-12.7	6720006-EC-PL-B
4	16	PLATFORM CLIP A, 1/2" THK.	SA-516-70N	0101-12.7	6720006-EC-PL-C
5	1	LG CLIP, 1/2" THK.	SA-516-70N	0101-12.7	6720006-EC-PL-E
6	4	CT CLIP, 1/2" THK.	SA-516-70N	0101-12.7	6720006-EC-PL-D

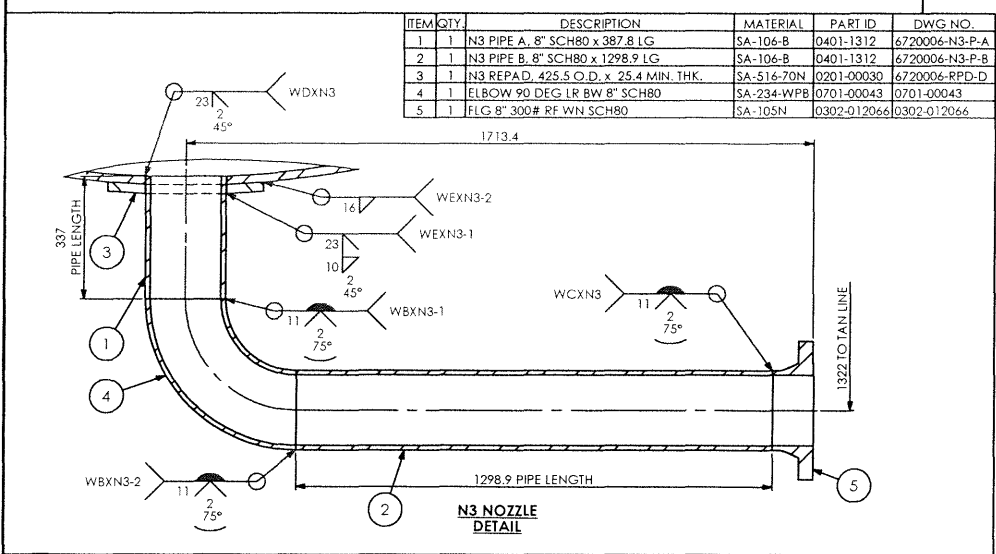
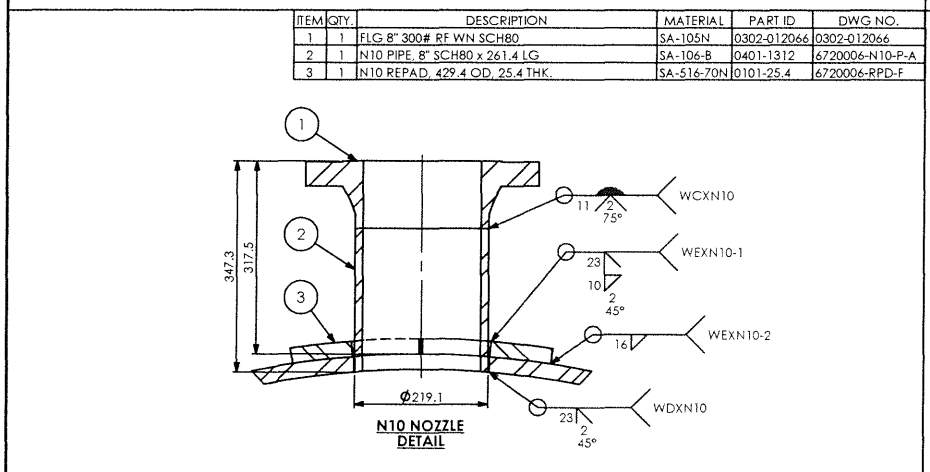
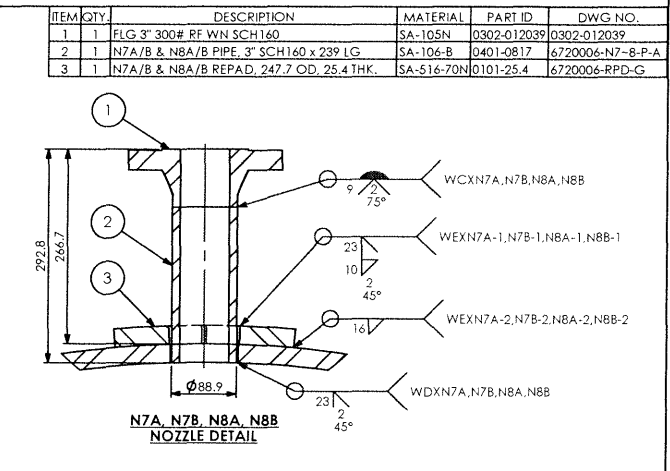
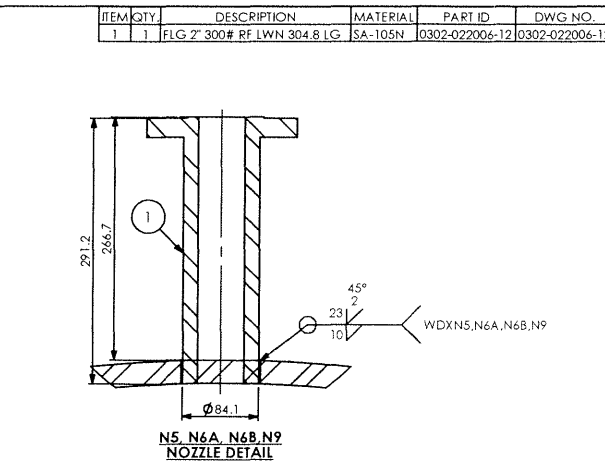
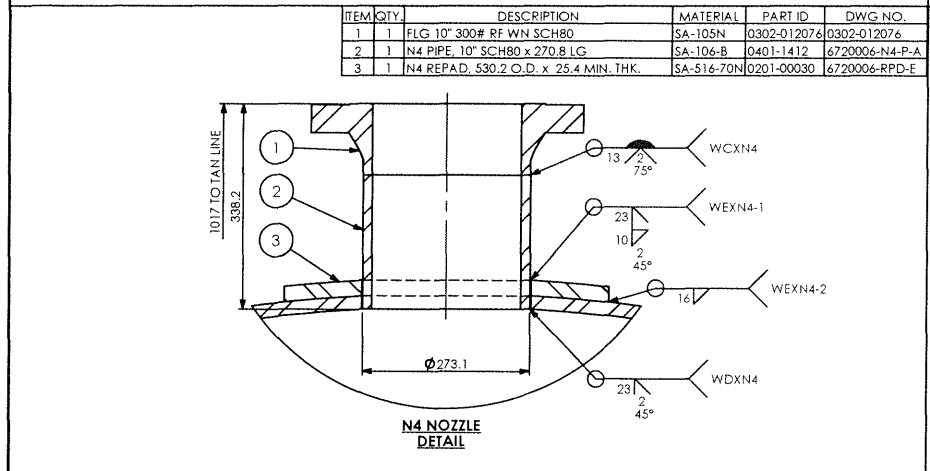
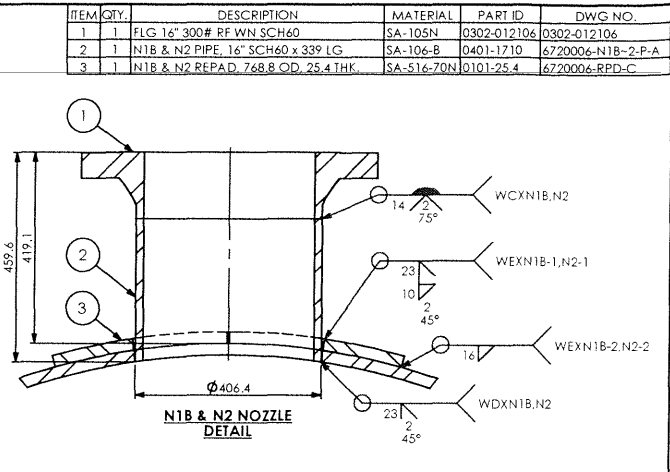
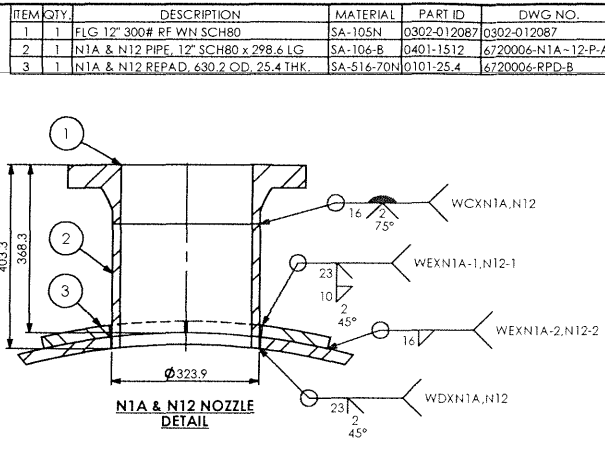
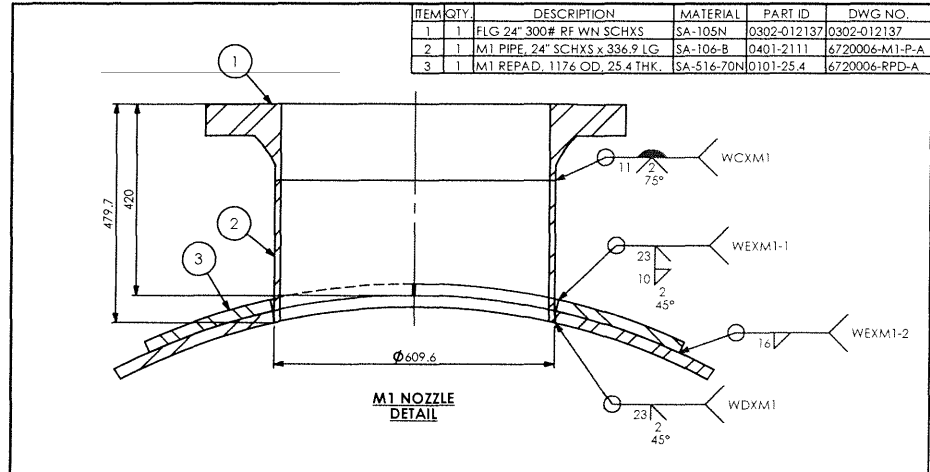


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QA Release *AB* Feb 12/13

01	1/4/2013	- ADDED CT AND LG CLIPS	
00	9/27/2012	- INITIAL DRAWING CREATION	
REV.	DATE	DESCRIPTION	
REVISIONS			
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CUSTOMER	MEG ENERGY CORP		
PROJECT NAME	CHRISTINA LAKE REGIONAL PROJECT - PHASE 3A		
MATERIAL REQ. NO.		EQUIP. NO.	3A-V-326
HITACHI Inspire the Next		MEG STEAM SEPARATOR LADDER & PLATFORM CLIPS	
DRAWN: <i>1/10/13</i>	DESIGNED: <i>DS</i>	JOB NO. 6720006	DRAWING NO. 6720006-EC
CHECKED: <i>1/10/13</i>	APPROVED: <i>1/10/13</i>	UNITS: MILLIMETERS	SHEET: 1 OF 1 REV. 01





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QA Release *[Signature]* Oct 18/12

00	7/4/2012	- INITIAL DRAWING CREATION
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REVISIONS		
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CUSTOMER	MEG ENERGY CORP.	
PROJECT NAME	CHRISTINA LAKE REGIONAL PROJECT - PHASE 3A	
MATERIAL REQ. NO.	EQUIP. NO.	3A-V-326
HITACHI Inspire the Next		MP STEAM SEPARATOR NOZZLE ASSEMBLY
DRAWN: <i>[Signature]</i>	DESIGNED: <i>[Signature]</i>	JOB NO. 6720006
CHECKED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	DRAWING NO. 6720006-NOZ
UNITS: MILLIMETERS		SHEET: 1 OF 1
		REV. 00



MAKING ENERGY SAFE,
EFFICIENT, AND CLEAN