



ISSUED FOR CONSTRUCTION

PURCH SHOP QC STICK

Signature: *[Signature]* Date: Feb 11, 2013
6 J 1 3 1 2 7 0

EQUINOX ENGINEERING DOCUMENT CONTROL

PO #: 201-09-00-0010

SEQ #: 0009

SUB #: 0003

DATE: 2013-02-21

☐ V1 - Correct & Resubmit
Manufacturing may NOT proceed

☐ V2 - Correct & Resubmit
Manufacturing MAY proceed subject to incorporated changes

☐ V3 - Review Not Required
Accepted for information purposes only

☐ V4 - Submit Final Documentation

☒ V5 - Manufacturing May Proceed
No further submissions are required

☐ V6 - Rejected
See e-mail for comments

SIGNATURE:

DATE:

[Signature]
March 5, 2013

REVISION TABLE

REV.	DESCRIPTION	DATE	APPROVED
1	NOZZLES MOVED TO SAME SIDE AS MANWAY	16/01/2013	EA
2	DESIGN NOTES ADDED AS PER CNRL SPEC, MANWAY BOLT HOLES ON CENTRELINE, MOVED NOZZLE N8 CLOSER TO VESSEL	31/01/2013	EA
3	REPAD ADDED TO MANWAY OPENING, WELD SIZES AND DETAIL CHANGED	11/02/2013	EA

TAG	SIZE (IN)	CLASS	SERVICE	PROJECTION (IN)	WELD DETAIL	WELD SIZE (IN)
				INSIDE	OUTSIDE	A B C
M1	20	150	MANWAY	1"	AS	15 1/2" 3/8" 1/2"
N1	18	150	INLET	1.25"	AS	15 3/8" 3/8" 3/8"
N2	18	150	GAS OUTLET	1.25"	AS	15 3/8" 3/8" 3/8"
N3	4	150	WASH/PURGE	SF	AS	8 3/8" BW
N4	4	150	WASH/PURGE	SF	AS	8 3/8" BW
N5	2	150	PV/DP	SF	AS	8 3/8" BW
N6	2	150	PV/DP	CF	AS	11 3/8" -
N7	3	150	PSV	SF	AS	8 3/8" BW
N8	4	150	DRAIN	CF	AS	11 3/8" -
N9	4	150	DRAIN	CF	AS	11 3/8" -

AS= AS SHOWN, CF= COUNTER CUT FLUSH, SF= SQUARE CUT FLUSH, BW= BACKWELD, *-MINIMUM DIMENSION (2" EXCESS IS ACCEPTABLE)

DYNACORP
FABRICATORS INC
8600 92nd Street
Grande Prairie, AB
T8V 7S3
Phone: (780) 539-0037
www.dynacorp.ca

5152 74th Ave SE
Calgary, AB
T2C 3C9
Phone: (403) 720-9811

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF DYNACORP FABRICATORS INC. ANY REPRODUCTION OR TRANSMISSION OF THIS INFORMATION WITHOUT THE WRITTEN PERMISSION OF DYNACORP IS PROHIBITED.

HORIZONTAL SAND FILTER
285PSI, 9.8M3
UMBACH COMPRESSOR STATION UPGRADE
PROJECT NUMBER: 201-09-00
JOB# 6J131270
CNRL C/O EQUINOX ENGINEERING
SCALE: -
DWG. NO.: 5300-21 REV3
1 OF 1

MATERIAL SUBSTITUTION
SA-350-LF2-1 MAY SUB. FOR SA-105N
SA-516-70N MAY SUB. FOR SA-36/44W
SA-320-L7M MAY SUB. FOR SA-193-B7M
SA-194-7M MAY SUB. FOR SA-194-2HM

DESIGN DATA			
CODE:	CONSTRUCTION IN ACCORDANCE WITH ASME B&PV CODE SEC. VIII DIV. 1 2010ED 2011a ADD.	MAWP:	285 PSI
CORROSION ALLOW.:	0.125"	DESIGN TEMP.:	100°F
HYDROTEST:	371 PSI	RADIOGRAPHY:	RT-1 & 100% OF NOZZLE BUTT WELDS
VOLUME:	9.83 m3 (2600 USGAL)	INSPECTION BY:	PROVINCIAL BOILER INSPECTOR
PWHT:	90 MINUTES @ 1150 ± 50°F.	WEIGHT:	10,500 LBS
		MDMT:	-50°F

IMPACT TEST SUMMARY:
HEADS & SHELL: IMPACT EXEMPT PER UCS-66(a)
NOZZLES: IMPACT EXEMPT PER UCS-66(b)(1)(ii)
DESIGN NOTES:
*FOR WELD DETAIL INFO SEE DYN-WD-01 REV 4
*FOR TOLERANCE INFO SEE ECIL-FI-01 REV 1
*FOR UNSPECIFIED WELD SIZES USE 3/8" FILET WELD OR MATCH MATERIAL
*THICKNESS IF LESS THAN 3/8": WOM-2 REV-3
*COUPLINGS AS PER B16.11 2009
*MARK "POST WELD HEAT TREATED - DO NOT WELD" ON BOTH SIDES OF THE VESSEL AFTER PWHT
*MPI ALL NOZZLES INSIDE & THE OUTSIDE AFTER PWHT
*PNEUMATIC TEST REPAIRS TO 1/2" USING SOAP SUDS OR EQUIVALENT FOR LEAK DETECTION

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION	LENGTH	MATERIAL
1	1	5300-21-001	FIXED SADDLE ASSEMBLY		
2	1	5300-21-001	SLOTTED SADDLE ASSEMBLY		
3	4	5300-21-201	CHANNEL C6X8.2	55 1/2"	SA-36/44W
4	4	5300-21-202	BAR 1/4" X 2" FLAT	12"	SA-36/44W
5	2	5300-21-301	REPAD 1/2" THK X 26" FINISHED OD X 20" ID DISHED TO FIT HEAD OD - 12" OFF CENTRE		SA-516-70N
6	1	5300-21-400	NAMEPLATE BRACKET		SA-36
7	1	5300-21-500	REPAD 1/2" THK X 2" WIDE X 22" ID ROLLED TO FIT SHELL OD		SA-516-70N
8	1	8503-57 20150	DAVIT ARM FOR 20" 150		
9	1	FLA2150RFLWNX7	2" NPS CLASS 150 X 7" LG. RF LONG WELD NECK FLANGE (0.53" THK.)		SA-105N
10	1	FLA2150RFLWNX9	2" NPS CLASS 150 X 9" LG. RF LONG WELD NECK FLANGE (0.53" THK.)		SA-105N
11	1	FLA3150RFLWNX9	3" NPS CLASS 150 X 9" LG. RF LONG WELD NECK FLANGE (0.625" THK.)		SA-105N
12	4	FLA4150RFLWNX9	4" NPS CLASS 150 X 9" LG. RF LONG WELD NECK FLANGE (0.75" THK.)		SA-105N
13	2	FLA18150RFLWNX18	18" NPS CLASS 150 X 18" LG. RF LONG WELD NECK FLANGE (1" THK.)		SA-105N
14	1	FLA20150RFLBLND	20" NPS CLASS 150 RAISED FACE BLIND FLANGE		SA-105N
15	1	FLA20150RFLWNX12	20" NPS CLASS 150 X 12" LG. RF LONG WELD NECK FLANGE (1" THK.)		SA-105N
16	1	GAS20150FC316	20" NPS CLASS 150 RAISED FACE FLEX GASKET TYPE CG		316-FC
17	2	HEAD54ID.625THK	54" ID X 5/8" THK (0.5625" MIN) 2:1SE 2'SF 30DEG O/S BEVEL NO LAND		SA-516-70N
18	40	NUT1.1252HM	1-1/8" HEAVY SERIES HEX NUT		SA-194-2HM
19	2	SHELL 54 ID X 0.625 THK X 120 LG	ROLLED SHELL 54" ID X 5/8" THK X 120" LG 1/8" GAP 30DEG O/S BEVEL NO LAND		SA-516-70N
20	20	STU1.125X6.7587M	1-1/8" STUD X 6-3/4" LG		SA-193-B7M