

**MEG ENERGY****CHRISTINA LAKE REGIONAL PROJECT  
Phase 3A EPC for Central Plant Facilities****SLI Project No. 511036****SNC • LAVALIN****SNC • LAVALIN**Vendor's drawing review for  
conformity with specifications  
and design drawing.This review does not relieve  
the vendor of his responsibility  
for errors in design and detailing  
as detailed in his contract.

- ☐ A1 Not suitable to initiate fabrication. modify as noted, resubmit for review
- ☐ B1 Suitable to initiate fabrication as noted. modify as noted, resubmit for review
- ☐ C1 Suitable to fabricate to completion as noted. submit final documents including as-builts as required
- ☒ D1 Suitable to fabricate to completion. submit final documents including as-built documents as required
- ☐ E1 Not suitable as final documents as noted. modify as noted and resubmit.
- ☐ F1 Suitable as final documents. no further resubmittal required (unless revised by vendor)
- ☐ VX Vendor document cancelled.

Vendor: Sewon Cellontech Co. Ltd. - P00007

No.:E0351-3AE325-D-02

Rev:5

Doc.  
Title:

H00.01 - GENERAL ASSEMBLY (2/3) - Tag:3A-E-325A/B

Client Code:

Project No: 511036

Date Rec'd: 2014/08/14

Reviewed by: **SS**Date: **26-Aug-2014**

Document No:

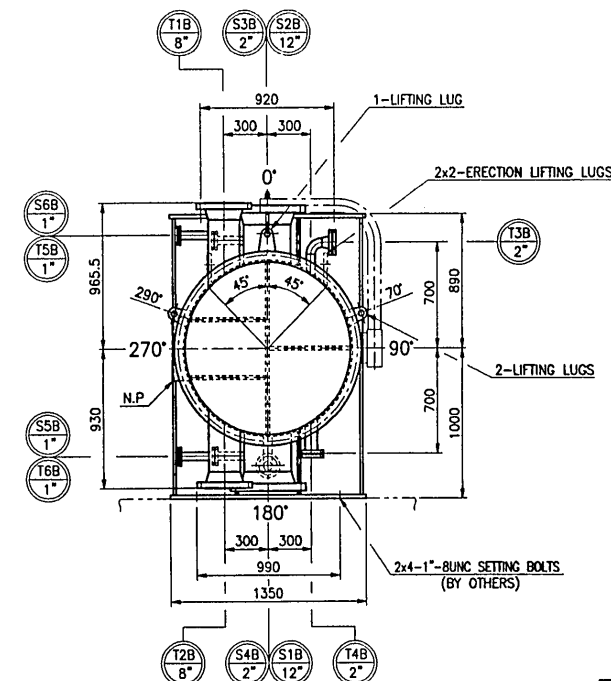
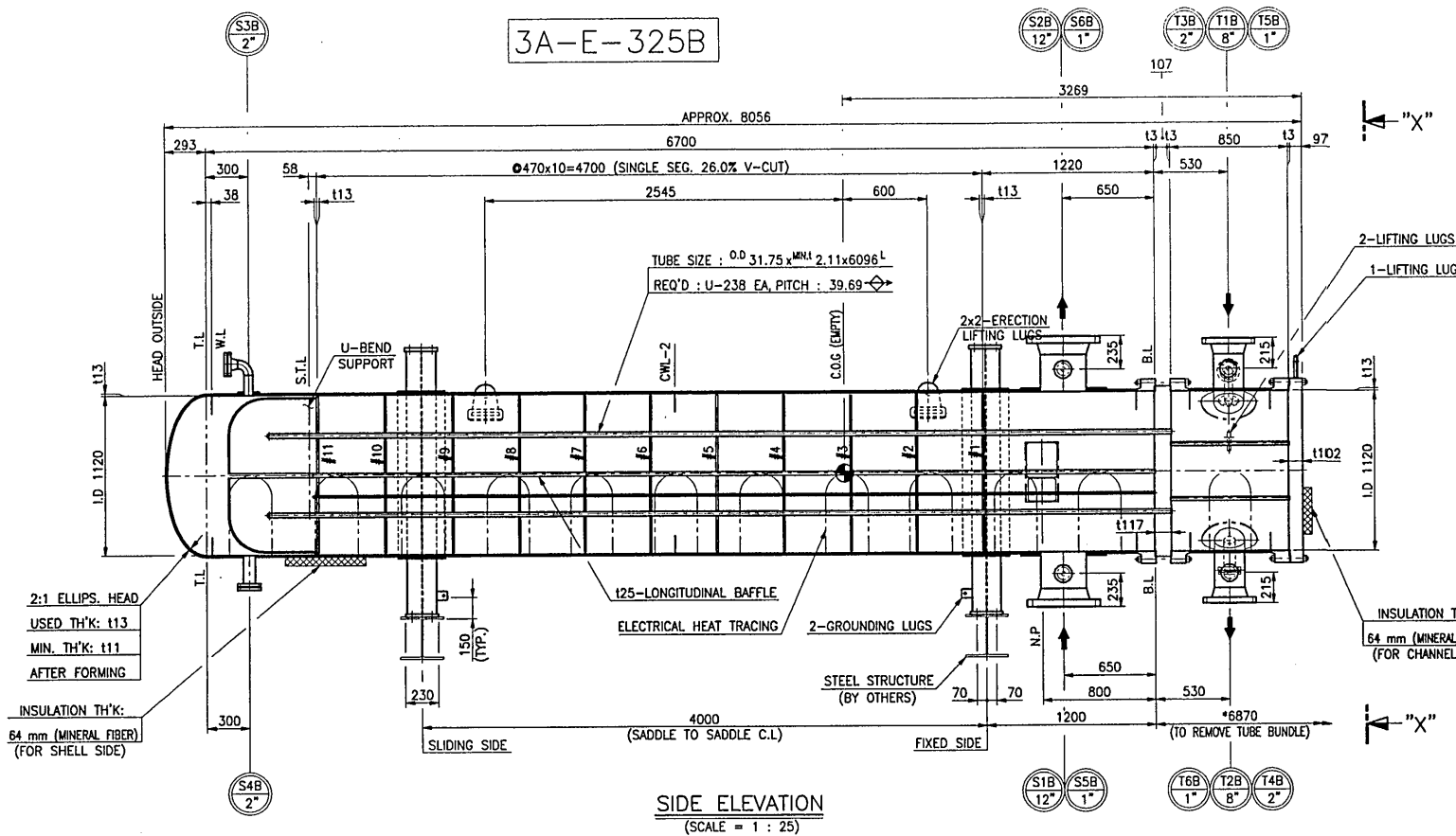
P-5310-01-0024

Submittal:

06

3A-E-325B

FOR APPROVAL ASME-U



## REFERENCE DRAWINGS

1. GENERAL ASSEMBLY (2/3) [FOR 3A-E-325B]	E0351-3AE325-D-02
2. GENERAL ASSEMBLY (3/3)	E0351-3AE325-D-03
3. DETAIL OF BODY (1/2)	E0351-3AE325-D-04
4. DETAIL OF BODY (2/2)	E0351-3AE325-D-05
5. DETAIL OF TUBE BUNDLE (1/2)	E0351-3AE325-D-06
6. DETAIL OF TUBE BUNDLE (2/2)	E0351-3AE325-D-07
7. DETAIL OF LONGI. BAFFLE	E0351-3AE325-D-08
8. DETAIL OF U-BEND SUP'T	E0351-3AE325-D-09
9. DETAIL OF SUP'T SADDLE	E0351-3AE325-D-10
10. DETAIL OF INSUL. SUP'T	E0351-3AE325-D-11
11. DETAIL OF CHANNEL COVER DAVIT	E0351-3AE325-D-12
12. NOZZLE DETAIL "S1A,S1B,S2A"	E0351-3AE325-D-13
13. NOZZLE DETAIL "S2B"	E0351-3AE325-D-14
14. NOZZLE DETAIL "S3A,S4B"	E0351-3AE325-D-15
15. NOZZLE DETAIL "S3B,S4A"	E0351-3AE325-D-16
16. NOZZLE DETAIL "T1A,T2A,T2B"	E0351-3AE325-D-17
17. NOZZLE DETAIL "T1B"	E0351-3AE325-D-18
18. NOZZLE DETAIL "T3A,T4B"	E0351-3AE325-D-19
19. DETAIL OF EHT GENERAL ASSEMBLY (1/2)	E0351-3AE325-D-20
20. DETAIL OF NAME PLATE	E0351-3AE325-D-21
21. NOZZLE DETAIL "T3B,T4A"	E0351-3AE325-D-22
22. NOZZLE DETAIL "S5A/B,S6A/B & T5A/B,T6A/B"	E0351-3AE325-D-23
23. DETAIL OF EHT GENERAL ASSEMBLY (2/2)	E0351-3AE325-D-24
24. DETAIL OF EHT WITING(1/2)	E0351-3AE325-D-25
25. DETAIL OF EHT WITING(2/2)	E0351-3AE325-D-26

## NOZZLE ORIENTATION

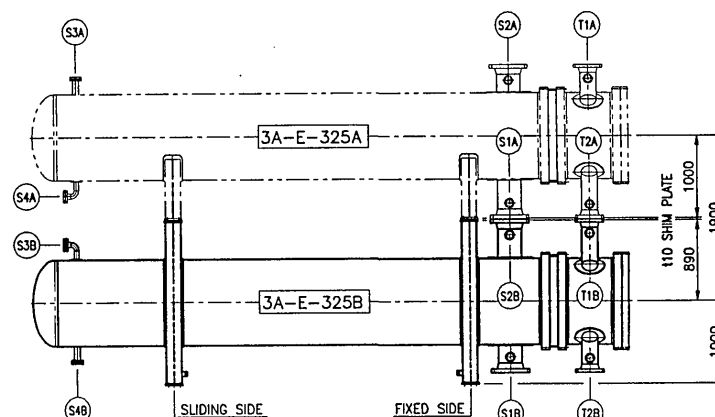
(VIEW "X-X" (SCALE = 1 : 25))

ASME STAMP

## DESIGN &amp; TEST DATA

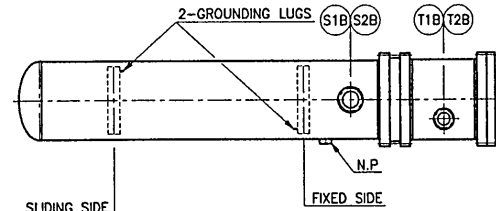
QTY TO BE MANUFACTURED	1 (ONE)
CODE	ASME SEC. VIII DIV.1 2010 ED.+2011 ADD. & TEMA CLASS "R" 9TH ED.-2007 + API 660 8TH ED.
ASME CODE STAMP	YES
CRN. NO.	TBD
NATIONAL BOARD REGISTRATION	YES
TYPE	H-AFU
EFFECTIVE SURFACE AREA (PER SHELL) (m <sup>2</sup> )	929.5
SPECIAL SERVICE	NO
FLUID CIRCULATED	HEAVY OIL (W/CL) HP BLOWDOWN
DENSITY (LIQ./VAP.) kg/m <sup>3</sup> (LBS/FT <sup>3</sup> )	1078/- / 1044/- 962/- / 963/-
NO. OF PASS	2 (TWO) 8 (EIGHT)
DESIGN (W/ EX) (Kpag)	1500/F.V 1950/F.V
OPERATING (Kpag)	900 1361
TEMPERATURE (°C)	DESIGN 214 214
OPERATING (°C)	40/85 95/60
TEST PRESS. (Kpag)	HYDRO. 2020 2609
PNEUM. (SPR/ FELD)	- -
M.A.W.P. (HOT&CORRODED) (Kpag)	1554 2007
M.A.W.P. LIMITING COMPONENT	SHELL ORTH FLANGE CHANNEL SHELL
M.A.P. (NEW&COLD) (Kpag)	2240 2131
M.A.E.W.P. (Kpag)	F.V F.V
P.W.H.T	NO YES
STRESS RELIEVE AFTER FORMING	NO NO
RADIOGRAPHY (S/H)	SPOT/FULL SPOT/-
JOINT EFFICIENCY	SHELL 0.85 0.85
HEAD	1.0 -
CORR. ALLOW. (MM)	3.2 3.2
M.D.M.T (°C)	-29 -29
IMPACT TEST	SEE NOTE 14. SEE NOTE 14.
INSULATION (MM)	64 64
FIRE PROOFING (MM)	NONE
PAINTING SPECIFICATION	SEE NOTE 26.
TOLERANCE	SEE NOTE 13.
TUBE TO TUBE SHEET JOINT	ROLLED (TWO GROOVES) AND EXPANDED
WIND CODE	NBC 2005, IMPORTANCE FACTOR = 1.15
SEISMIC CODE	NBC 2005, IMPORTANCE FACTOR = 1.3
FABRICATION	12960
ERECTION	13370
EMPTY	13370
OPERATING	28560
TEST (SHR/FLD)	20650/20,650
BUNDLE	6590
WEIGHT (KG)	

## STACKING ARRANGEMENT

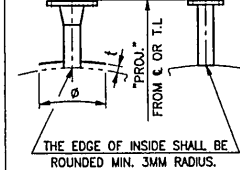


MARK	NOM SIZE	NO.	RATING	TYPE	FACING	THICK	PROJ.	REF. PAD	SERVICE & REMARKS
T4B	2"	1	ASME 300	L.W.N	R.F	-	SEE DWG.	-	DRAIN (W/B.F)
T3B	2"	1	ASME 300	W.N	R.F	SCH 160	SEE DWG.	113x150	VENT (W/B.F)
T5B,T6B	1"	2	ASME 300	L.W.N	R.F	-	315	-	FIELD HYDROTEST (W/B.F)
S5B,S6B	1"	2	ASME 300	L.W.N	R.F	-	365	-	FIELD HYDROTEST (W/B.F)
T2B	8"	1	ASME 300	W.N	R.F	SCH 80	SEE DWG.	113x400	TUBE SIDE OUTLET
T1B	8"	1	ASME 300	W.N	R.F	SCH 80	SEE DWG.	113x400	TUBE SIDE INLET
S4B	2"	1	ASME 300	L.W.N	R.F	-	780	-	DRAIN (W/B.F)
S3B	2"	1	ASME 300	W.N	R.F	SCH 160	SEE DWG.	113x150	VENT (W/B.F)
S2B	12"	1	ASME 300	W.N	R.F	SCH 80	SEE DWG.	945.5	SHELL SIDE OUTLET
S1B	12"	1	ASME 300	W.N	R.F	SCH 80	SEE DWG.	950	SHELL SIDE INLET

## NOZZLE SCHEDULE

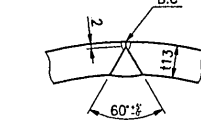


## KEY PLAN

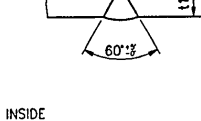
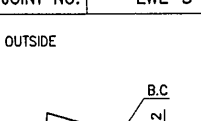


## TYPICAL NOZZLE ASSEMBLY

## OUTSIDE

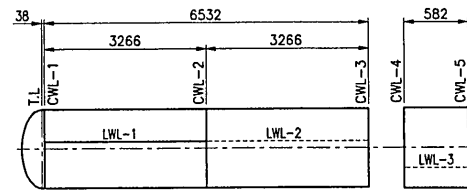


## INSIDE

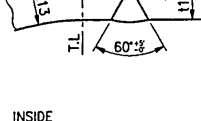
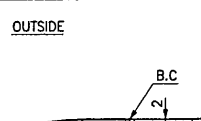


## JOINT NO.

LWL-3

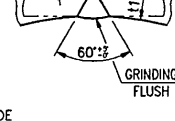
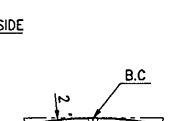


## SEAM PLAN



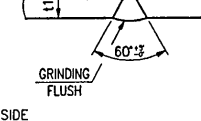
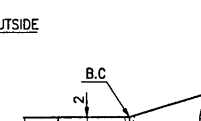
## JOINT NO.

CWL-1



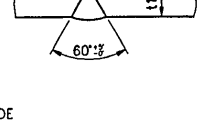
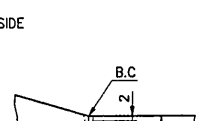
## JOINT NO.

LWL-1,2 CWL-2



## JOINT NO.

CWL-3



## JOINT NO.

CWL-4,5