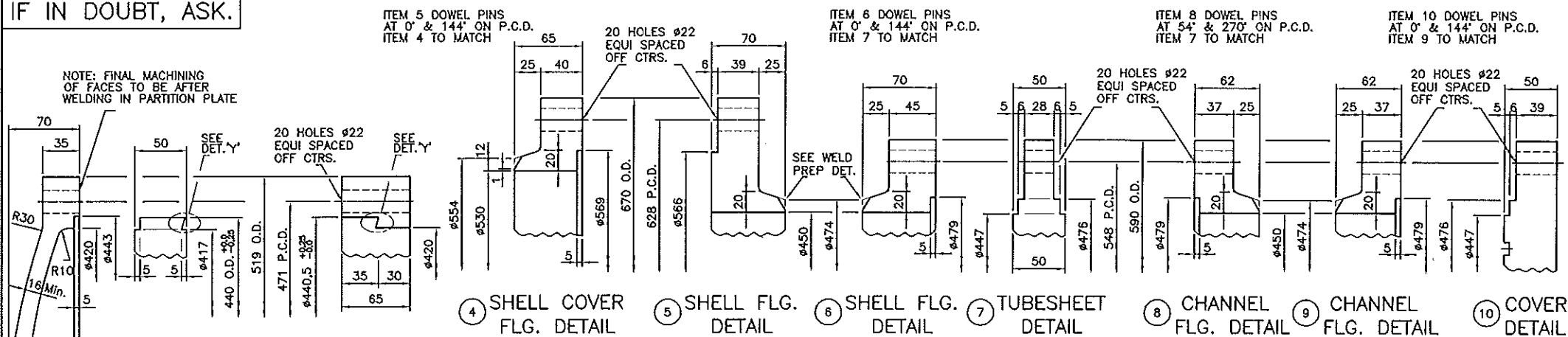


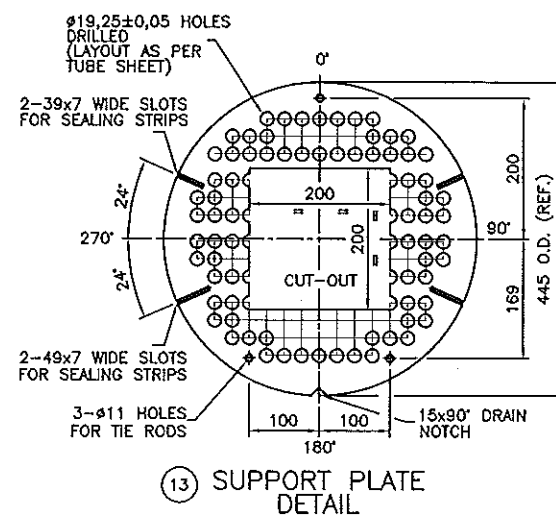
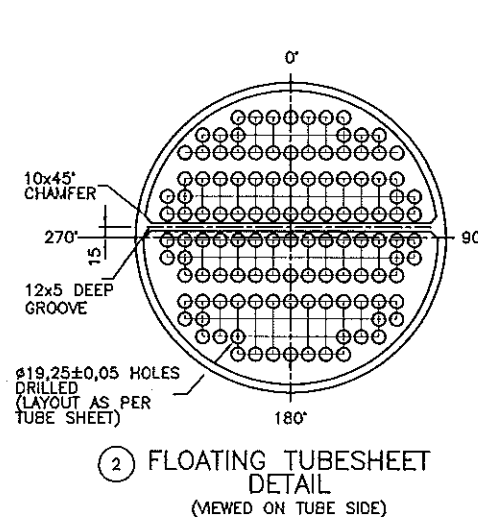
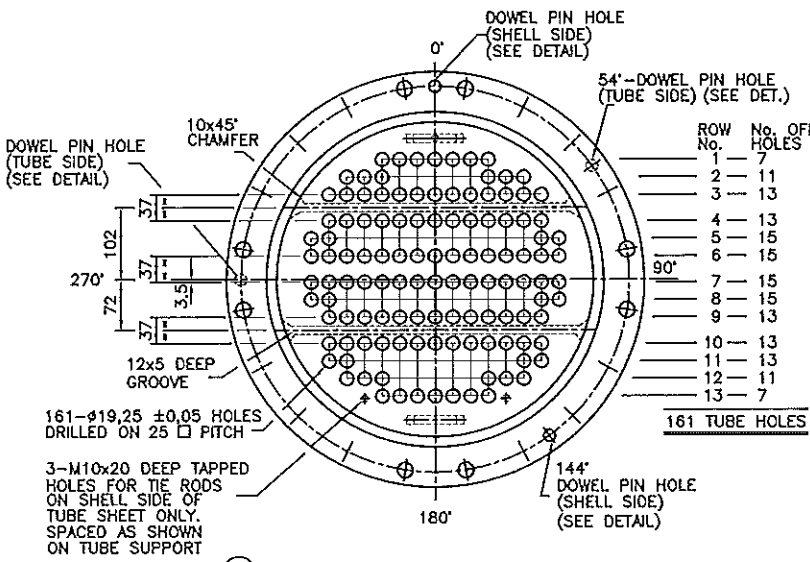
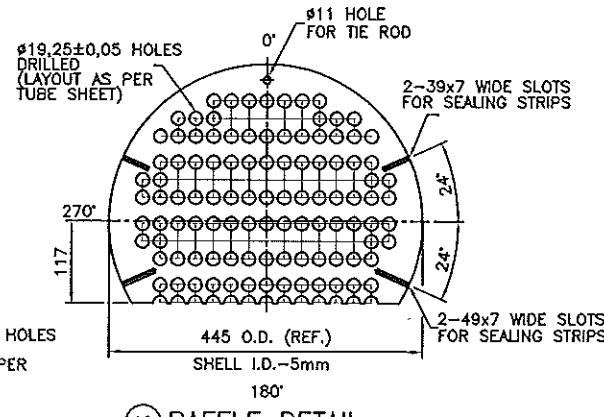
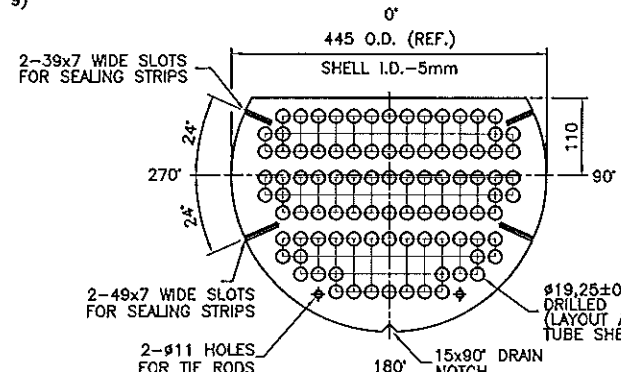
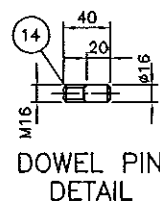
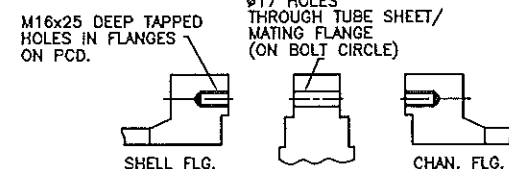
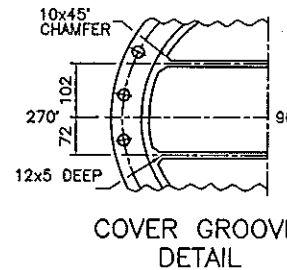
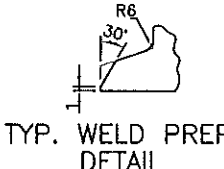
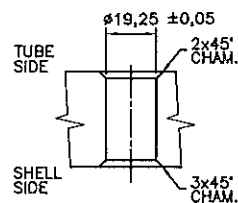
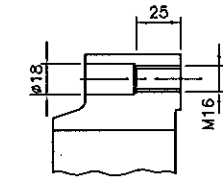
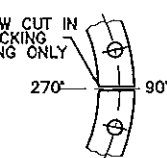
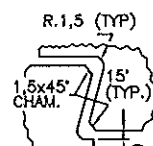
IF IN DOUBT, ASK.



MACHINE 6,3 - 12,5 µm Ra ALL OVER
GASKET FACE 3,2-6,3 µm Ra Max.

THE VESSEL ITEM No. TO BE STAMPED ON THE OUTER PERIPHERY OF ALL REMOVABLE FLANGES & THE TUBESHEETS

① FL. HEAD DETAIL



PARTS LIST

MK	QTY	DESCRIPTION	MATERIALS	REMARKS
1	1	FLOATING HEAD DOME 519 O.D.x70 THK.	SA.266-GR.2	SEE DETAIL
2	1	FLOATING TUBESHEET 440 O.D.x50 THK.	SA.266-GR.2	
3	1	BACKING RING 519 O.D.x420 I.D.x65 THK.	SA.266-GR.2	
4	1	COVER GIRTH FLANGE 670 O.D.x530 I.D.x65 THK.	SA.266-GR.2	
5	1	SHELL GIRTH FLANGE 670 O.D.x450 I.D.x70 THK.	SA.266-GR.2	SHELL COVER END
6	1	SHELL GIRTH FLANGE 590 O.D.x450 I.D.x70 THK.	SA.266-GR.2	CHANNEL END
7	1	FIXED TUBESHEET 590 O.D.x50 THK.	SA.266-GR.2	
8	1	CHANNEL GIRTH FLANGE 590 O.D.x450 I.D.x62 THK.	SA.266-GR.2	TUBESHEET END
9	1	CHANNEL GIRTH FLANGE 590 O.D.x450 I.D.x62 THK.	SA.266-GR.2	COVER END
10	1	COVER 590 O.D.x50 THK.	SA.266-GR.2	
11	9	SEGMENTAL BAFFLE 445 O.D.x 8 THK.	SABS1431-GR.300WA	SEE DETAIL
12	9	SEGMENTAL BAFFLE 445 O.D.x 8 THK.	SABS1431-GR.300WA	SEE DETAIL
13	1	SUPPORT PLATE 445 O.D.x 12 THK.	SABS1431-GR.300WA	SEE DETAIL
14	8	DOWEL PINS M16x40 LG.	GRD.4,6	SEE DETAIL

GENERAL NOTES:

1. MATERIALS LIST IS FOR ONE UNIT - THREE OFF REQUIRED
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606AB/1 & C-711/606CD/1
 3. SIZES SHOWN IN MATERIALS LIST ARE FINISHED SIZES AFTER MACHINING
- NOTE: DRILLING SEQUENCE FOR TUBESHEETS & BAFFLES
1. PILOT
 2. UNDERSIZE
 3. REAM TO FINAL SIZE
- IN CASE OF CNC DRILLING, ONCE THROUGH FINAL DRILL ONLY.

SAIBA ENGINEERING CC

STATUS: A B C D E

DESIGN: A B C D E

QA: A B C D E

WELDING: A B C D E

A - PROCEED
B - PROCEED CHANGE AS NOTED & RESUBMIT
C - DO NOT PROCEED: CHANGE AS NOTED & RESUBMIT
D - INFORMATION ONLY: NOT REVIEWED
E - INFORMATION ONLY: NOT REVIEWED

Foster Wheeler South Africa (Pty) Ltd.

1. Rejected.
2. Comments As Noted.
3. Minor Comments (Acceptable)
4. No Comments.
5. Information Only.

Foster Wheeler South Africa Contract No.: 25913
Foster Wheeler South Africa Order No.: 25913/PYP 579/02
Foster Wheeler South Africa Registration No.: 25913-1211AA
Rem No.: EX-002A-C
Client's Name: Petronet
Project Title: Intermixture Refractorator Project
Project Location: Tliffon, Gauteng, South Africa
Client Drawing No.: D20-147

REV.	DATE	NAME	REMARKS	DATE	CHK.	APPD.
3	29.11.05	J.W.	"AS BUILT"			
2	18.7.05	B.B.	COVER GROOVE POSITION CORRECTED, WAS SHOWN AS 76	6.9.05	R.T.	A.B.
1	4.7.05	B.B.	FWSA ORDER & DRG. No. ADDED, ISSUED FOR MANUFACTURE	4.7.05	R.T.	A.B.
A	6.6.05	B.B.	ISSUED FOR APPROVAL	6.6.05	A.B.	M.C.

DRWN: 20.5.05 A.B. CLIENT: FWSA FOR PETRONET

CHKD: 6.6.05 A.B.

APP: 6.6.05 M.C.

Manufacturer: GEA AIRCOOLED SYSTEMS (Pty) LTD. R.S.A. (Reg. No: 75/00303/07)

TITLE: EX-002A FEED/BOTTOMS EXCHANGER FORGING & MACH. DETAILS

SCALE: GEA No. 1:5 C-711/606A/3

REV. 3

DOC. No. 1077; G-00-4-0026

CLIENT No.

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IF IN DOUBT, ASK.

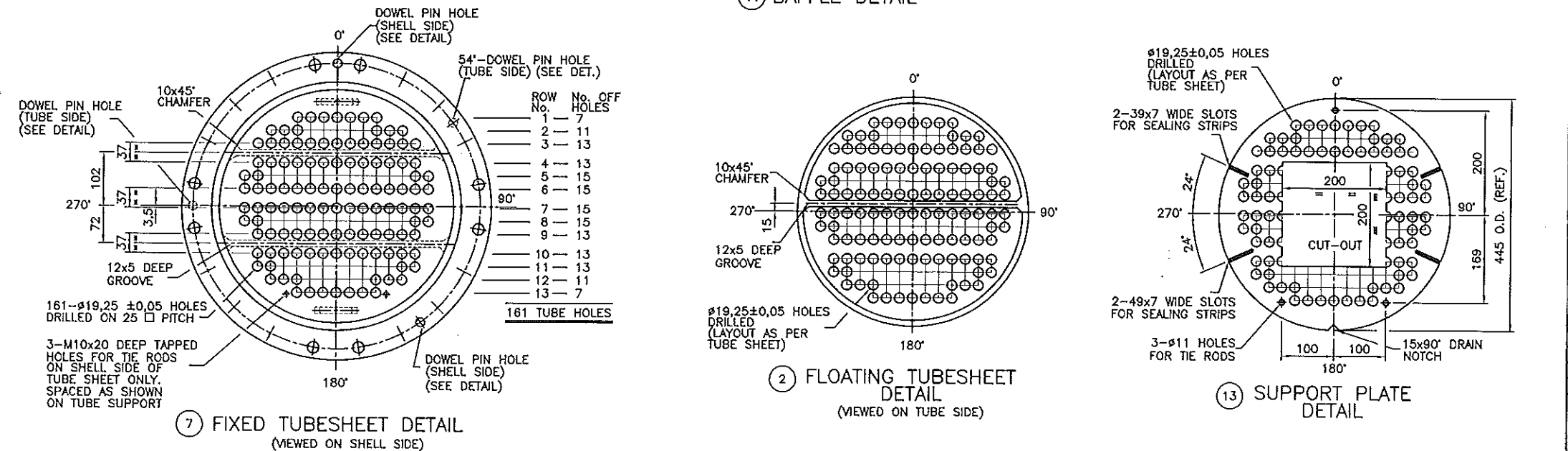
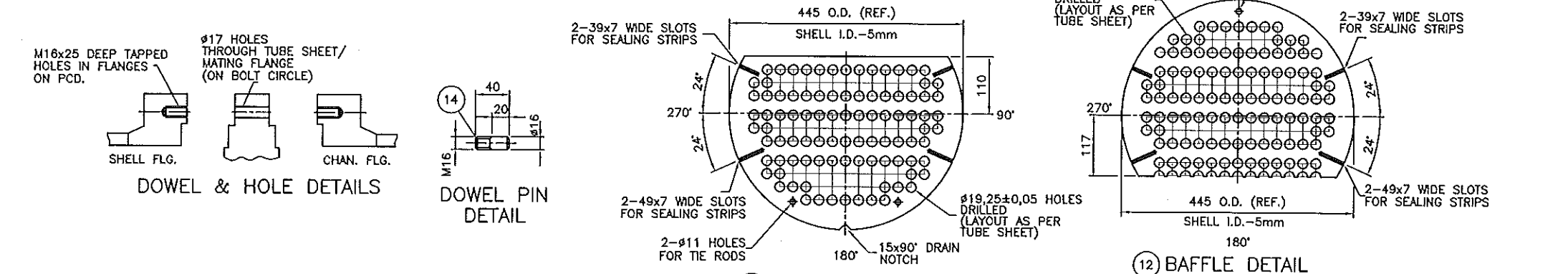
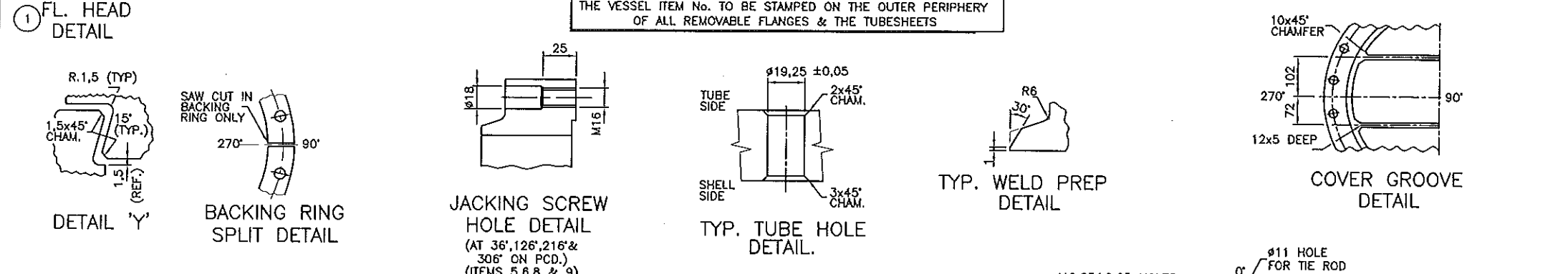
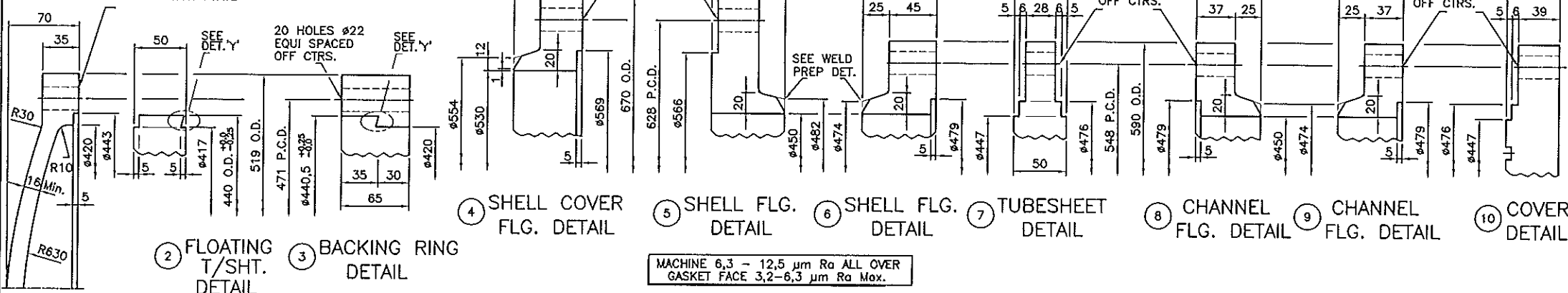
ITEM 5 DOWEL PINS
AT 0° & 144° ON P.C.D.
ITEM 4 TO MATCH

ITEM 6 DOWEL PINS
AT 0° & 144° ON P.C.D.
ITEM 7 TO MATCH

ITEM 8 DOWEL PINS
AT 54° & 270° ON P.C.D.
ITEM 7 TO MATCH

ITEM 10 DOWEL PINS
AT 0° & 144° ON P.C.D.
ITEM 9 TO MATCH

NOTE: FINAL MACHINING
OF FACES TO BE AFTER
WELDING IN PARTITION PLATE



PARTS LIST

MK	QTY	DESCRIPTION	MATERIALS	REMARKS
1	1	FLOATING HEAD DOME 519 O.D.x70 THK.	SA.266-GR.2	SEE DETAIL
2	1	FLOATING TUBESHEET 440 O.D.x50 THK.	SA.266-GR.2	
3	1	BACKING RING 519 O.D.x420 I.D.x65 THK.	SA.266-GR.2	
4	1	COVER GIRTH FLANGE 670 O.D.x450 I.D.x65 THK.	SA.266-GR.2	SHELL COVER END
5	1	SHELL GIRTH FLANGE 590 O.D.x450 I.D.x70 THK.	SA.266-GR.2	CHANNEL END
6	1	FIXED TUBESHEET 590 O.D.x50 THK.	SA.266-GR.2	TUBESHEET END
7	1	CHANNEL GIRTH FLANGE 590 O.D.x450 I.D.x62 THK.	SA.266-GR.2	COVER END
8	1	COVER 590 O.D.x50 THK.	SA.266-GR.2	
9	1	SEGMENTAL BAFFLE 445 O.D.x 8 THK.	SABS1431-GR.300WA	SEE DETAIL
10	1	SEGMENTAL BAFFLE 445 O.D.x 8 THK.	SABS1431-GR.300WA	SEE DETAIL
11	1	SUPPORT PLATE 445 O.D.x 12 THK.	SABS1431-GR.300WA	SEE DETAIL
12	8	DOWEL PINS M16x40 LG.	GRD.4,6	SEE DETAIL

GENERAL NOTES:

1. MATERIALS LIST IS FOR ONE UNIT - ONE OFF REQUIRED
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606CD/1
 3. SIZES SHOWN IN MATERIALS LIST ARE FINISHED SIZES AFTER MACHINING
- NOTE: DRILLING SEQUENCE FOR TUBESHEETS & BAFFLES
1. PILOT
 2. UNDERSIZE
 3. REAM TO FINAL SIZE
- IN CASE OF CNC DRILLING, ONCE THROUGH FINAL DRILL ONLY.

SAIBA ENGINEERING CC

STATUS: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M ☐ N ☐ O ☐ P ☐ Q ☐ R ☐ S ☐ T ☐ U ☐ V ☐ W ☐ X ☐ Y ☐ Z

DESIGN: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M ☐ N ☐ O ☐ P ☐ Q ☐ R ☐ S ☐ T ☐ U ☐ V ☐ W ☐ X ☐ Y ☐ Z

WELDING: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M ☐ N ☐ O ☐ P ☐ Q ☐ R ☐ S ☐ T ☐ U ☐ V ☐ W ☐ X ☐ Y ☐ Z

APPROVAL: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M ☐ N ☐ O ☐ P ☐ Q ☐ R ☐ S ☐ T ☐ U ☐ V ☐ W ☐ X ☐ Y ☐ Z

REVISION: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ L ☐ M ☐ N ☐ O ☐ P ☐ Q ☐ R ☐ S ☐ T ☐ U ☐ V ☐ W ☐ X ☐ Y ☐ Z

Foster Wheeler South Africa (Pty) Ltd.

1. Rejected. ☐

2. Comments As Noted. ☐

3. Minor Comments (Acceptable). ☐

4. No Comments. ☐

5. Information Only. ☐

Compliance with standards does not release Supplier from responsibility for the correctness of his work or of any requirements, warranties or guarantees stated or implied in the order.

Approval of this document does not imply approval of related documents. According to general terms and conditions of the contract, the responsibility of the client is to ensure that the contract is properly executed.

Foster Wheeler South Africa Contract No.: 25913
Foster Wheeler South Africa Order No.: 25913/PYP 579/02
Foster Wheeler South Africa Requisition No.: 25913-1211AA
Rem No.: EX-002D
Client's Name: Petronet
Project Title: Intermixture Refractorator Project
Project Location: Toriton, Gauteng, South Africa
Client Drawing No.: D20-148

REV. DATE NAME REMARKS

3	29.11.05	J.W.	"AS BUILT"		
2	18.7.05	B.B.	COVER GROOVE POSITION CORRECTED, WAS SHOWN AS 76	6.9.05	R.T. A.B.
1	4.7.05	B.B.	FWSA ORDER & DRG. No. ADDED, ISSUED FOR MANUFACTURE	5.7.05	R.T. A.B.
A	6.6.05	B.B.	ISSUED FOR APPROVAL	6.6.05	A.B. M.C.

DATE NAME GEA ORDER No. C-711/606

DRWN. 20.5.05 B.B. CLIENT: FWSA FOR PETRONET

CHKD. 6.6.05 A.B.

APP. 6.6.05 M.C.

Manufacturer: **GEA** AIRCOOLED SYSTEMS (Pty.) LTD. R.S.A. (Reg. No.: 75/00303/07)

TITLE: EX-002D FEED/BOTTOMS EXCHANGER FORGING & MACH. DETAILS

SCALE: 1:5

GEA No. C-711/606D/3

REV. 3

DOC. No. 1077; G-00-4-0027

CLIENT No.

The subject matter of this document is confidential and comprises original works in which copyright subsists. Any reproduction or three dimensional form in the case of drawings and other printed works) constitutes infringement of copyright and is unlawful. Such conduct could give rise to a claim of damages and/or criminal prosecution.

IF IN DOUBT, ASK.

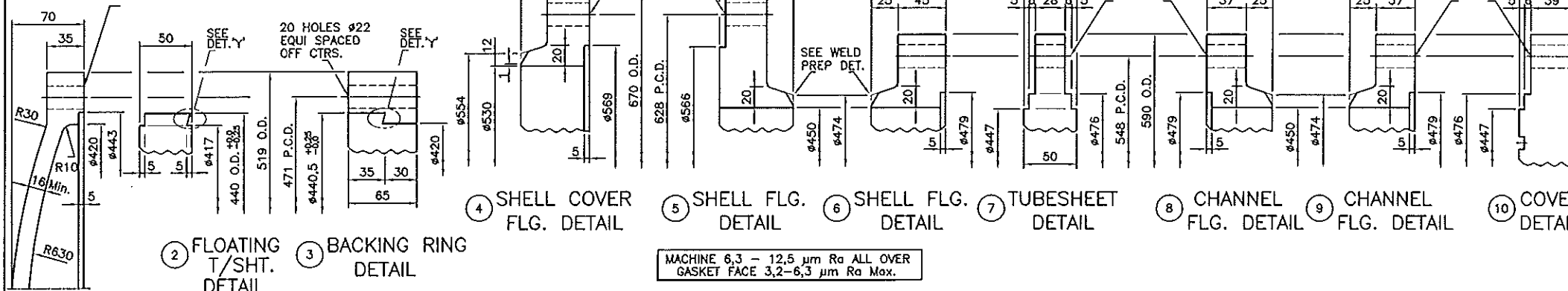
ITEM 5 DOWEL PINS
AT 0' & 144' ON P.C.D.
ITEM 4 TO MATCH

ITEM 6 DOWEL PINS
AT 0' & 144' ON P.C.D.
ITEM 7 TO MATCH

ITEM 8 DOWEL PINS
AT 54° & 270° ON P.C.D.
ITEM 7 TO MATCH

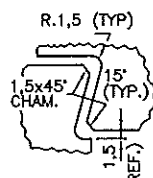
ITEM 10 DOWEL PINS
AT 0° & 144° ON P.C.D.
ITEM 9 TO MATCH

NOTE: FINAL MACHINING
OF FACES TO BE AFTER
WELDING IN PARTITION PLATE

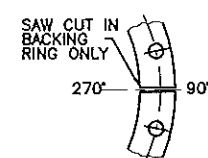


MACHINE 6,3 - 12,5 μm Ra ALL OVER
GASKET FACE 3,2-6,3 μm Ra Max.

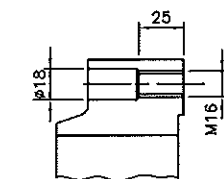
THE VESSEL ITEM No. TO BE STAMPED ON THE OUTER PERIPHERY
OF ALL REMOVABLE FLANGES & THE TUBESHEETS



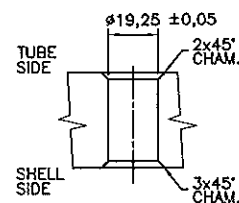
DETAIL 'Y



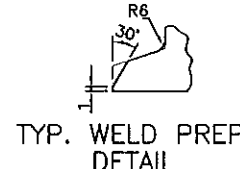
BACKING RING
SPLIT DETAIL



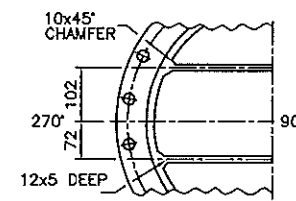
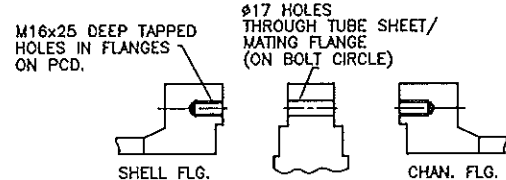
JACKING SCREW
HOLE DETAIL
(AT 36", 126", 216" &
306" ON P.C.D.)
(ITEMS 5, 6, 8 & 9)



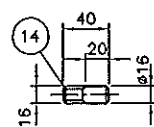
TYP. TUBE HOLE
DETAIL.



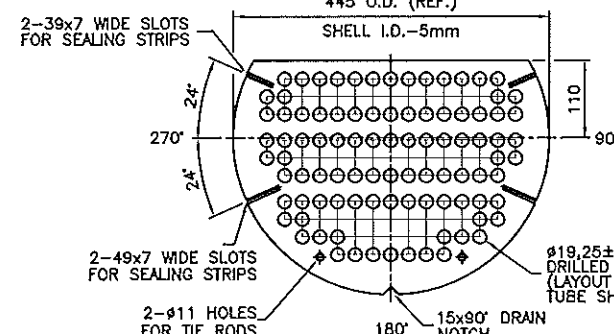
TYP. WELD PREP
DETAIL

COVER GROOVE
DETAIL

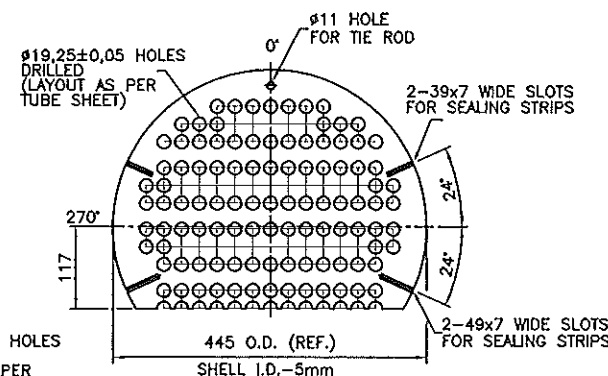
DOWEL & HOLE DETAILS



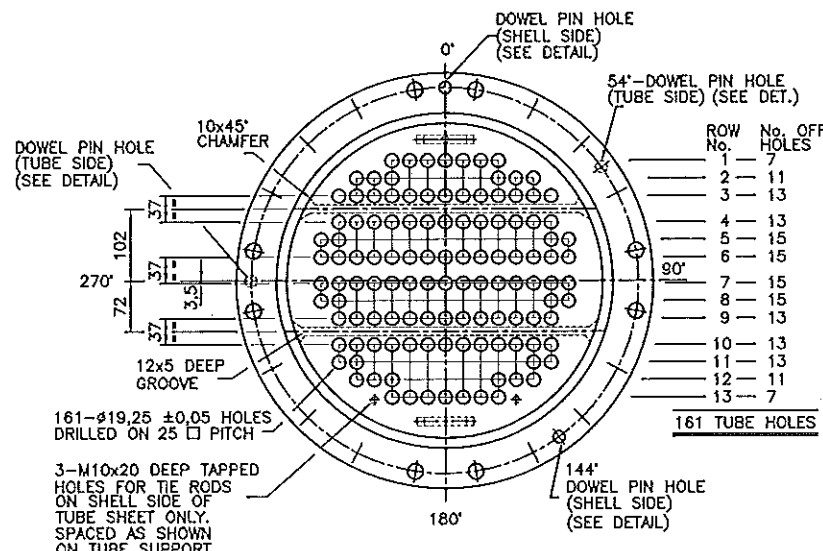
DOWEL PIN DETAIL



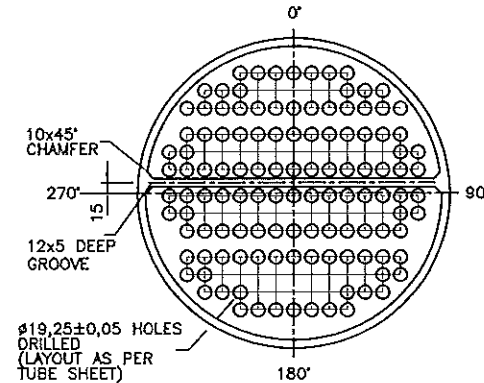
⑪ BAFFLE DETAIL



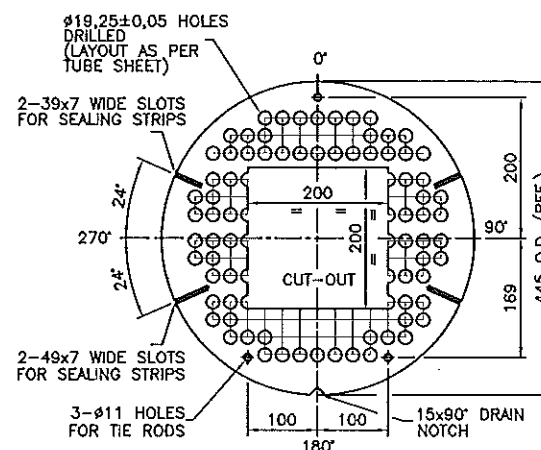
(12) BAFFLE DETAIL



⑦ FIXED TUBESHEET DETAIL
(VIEWED ON SHELL SIDE)



② FLOATING TUBESHEET
DETAIL
(MEWED ON TUBE SIDE)



⑬ SUPPORT PLATE
DETAIL

PARTS LIST

NO	QTY	DESCRIPTION	MATERIALS	REMARKS
1	1	FLOATING HEAD DOME 519 O.D.x70 THK.	SA.266-GR.2	SEE DETAIL
2	1	FLOATING TUBESHEET 440 O.D.x50 THK.	SA.266-GR.2	
3	1	BACKING RING 519 O.D.x420 I.D.x65 THK.	SA.266-GR.2	
4	1	COVER GIRTH FLANGE 670 O.D.x530 I.D.x65 THK	SA.266-GR.2	
5	1	SHELL GIRTH FLANGE 670 O.D.x450 I.D.x70 THK.	SA.266-GR.2	SHELL COVER END
6	1	SHELL GIRTH FLANGE 590 O.D.x450 I.D.x70 THK.	SA.266-GR.2	CHANNEL END
7	1	FIXED TUBESHEET 590 O.D.x50 THK.	SA.266-GR.2	
8	1	CHANNEL GIRTH FLANGE 590 O.D.x450 I.D.x62 THK	SA.266-GR.2	TUBESHEET END
9	1	CHANNEL GIRTH FLANGE 590 O.D.x450 I.D.x62 THK	SA.266-GR.2	COVER END
10	1	COVER 590 O.D.x50 THK.	SA.266-GR.2	
11	9	SEGMENTAL BAFFLE 445 O.D.x 8 THK.	SABS1431-GR.300WA	SEE DETAIL
12	9	SEGMENTAL BAFFLE 445 O.D.x 8 THK.	SABS1431-GR.300WA	SEE DETAIL
13	1	SUPPORT PLATE 445 O.D.x 12 THK.	SABS1431-GR.300WA	SEE DETAIL
14	8	DOWEL PINS M16x40 LG.	GRD.4,6	SEE DETAIL

GENERAL NOTES:

1. MATERIALS LIST IS FOR ONE UNIT - THREE OFF REQUIRED
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606AB/1 & C-711/606CD/1
 3. SIZES SHOWN IN MATERIALS LIST ARE FINISHED SIZES AFTER MACHINING
- NOTE: DRILLING SEQUENCE FOR TUBESHEETS & BAFFLES
1. PILOT
 2. UNDERSIZE
 3. REAM TO FINAL SIZE
- IN CASE OF CNC DRILLING, ONCE THROUGH FINAL DRILL ONLY.

SAIBA ENGINEERING CC				
STATUS	A	B	C	NO
DESIGN	☐	☐	☐	☐
QA	☐	☐	☐	☐
WELDING	☐	☐	☐	☐

A - PROCEED
 B - PROCEED; CHANGE AS NOTED & RESUBMIT
 C - DO NOT PROCEED; CHANGE AS NOTED & RESUBMIT
 NO - NO PROCEED; DO NOT REVIEW/REVIEWED.

Approval of this document does not imply approval of related documents.
 Approval is process does not remove the contractor's/owner's
 major liability of safety under the contract/buyback order.

SIGN / DATE / STAMP

Foster Wheeler South Africa (Pty) Ltd. 1. Rejected. ☐ 2. Comments As Noted. ☐ 3. Minor Comments (Acceptable). ☐ 4. No Comments. ☐ 5. Information Only. ☐			Foster Wheeler South Africa Contract No.: 25913 Foster Wheeler South Africa Order No.: 25913/PPY 579/02 Foster Wheeler South Africa Request No.: 25913-1211AA Rem No.: EX-002A-C Client's Name: Petronet Project Title: Intermixture Refractionator Project
Compliance with comments does not relieve Supplier of responsibility for the correctness of the work or of any requirements, warranties or guarantees made or intended in the order.	Project Location: Tlarton, Gauteng, South Africa Client Drawing No.: D20-147		

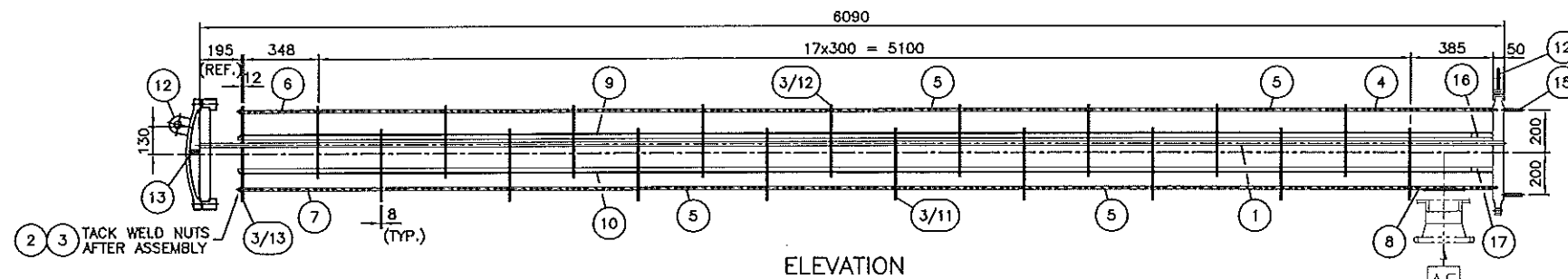
4						
3	29.11.05	J.W	"AS BUILT"			
2	18.7.05	B.B.	COVER GROOVE POSITION CORRECTED, WAS SHOWN AS 76	6.9.05	R.T.	A.B.
1	4.7.05	B.B.	FWSA ORDER & DRG. No. ADDED, ISSUED FOR MANUFACTURE	4.7.05	R.T.	A.B.
A	6.6.05	B.B.	ISSUED FOR APPROVAL	6.6.05	A.B.	M.C.
REV.	DATE	NAME	REMARKS	DATE	CHKD.	APPRD.

	DATE	NAME	GEA ORDER No. C-711/606	Manufacturer:  AIRCooled Systems (Pty.) Ltd. R.S.A. Energy Technology Division (Reg. No: 75/00303/07)
DRWN.	20.5.05	B.B.	CUSTOMER: FWSA FOR PETRONET	
CHCK.	6.6.05	A.B.		
APP.	6.6.05	M.C.		

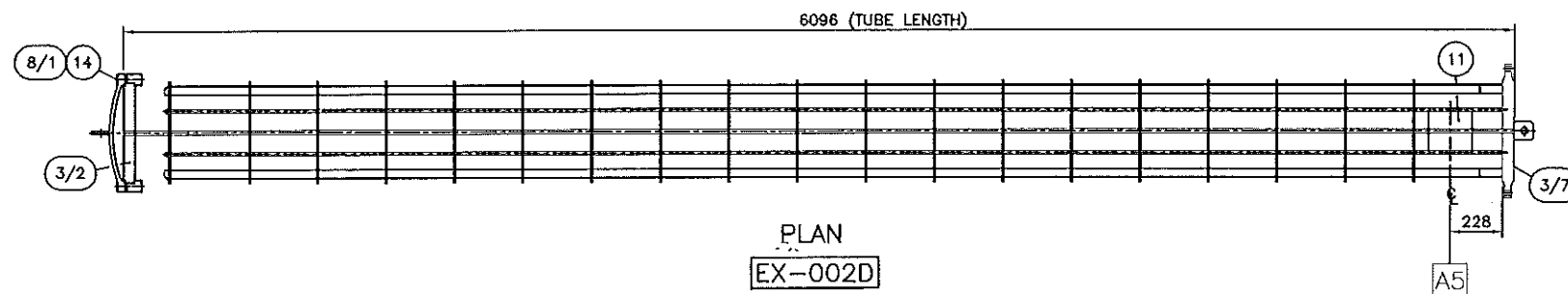
TITLE EX-002C FEED/BOTTOMS EXCHANGER FORGING & MACH. DETAILS	SCALE	GEA No.	REV.
	1:5	C-711/606C/3	3
A1	DOC. No. 1077; G-00-4-0026		
	CLIENT No.		

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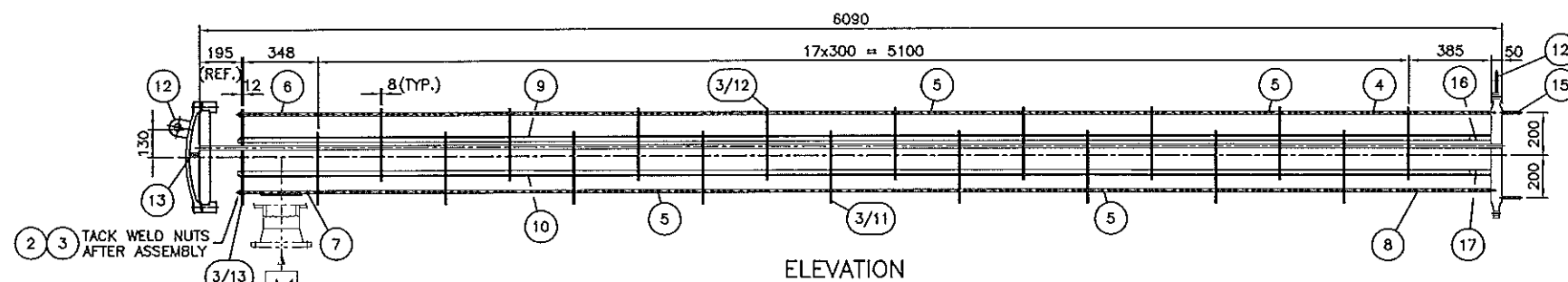
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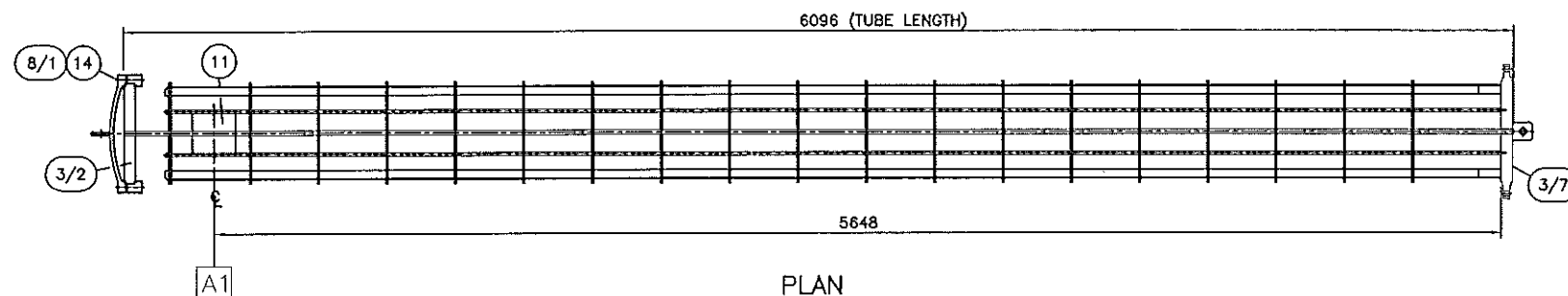
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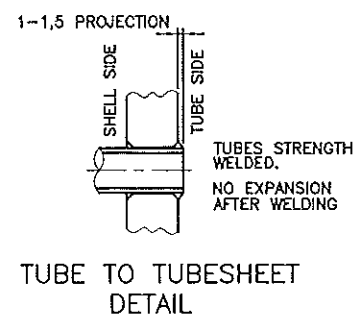
PLAN
EX-002D



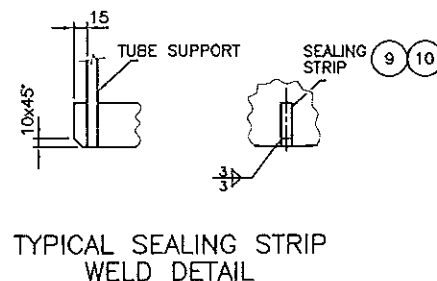
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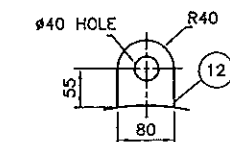
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EX-002C



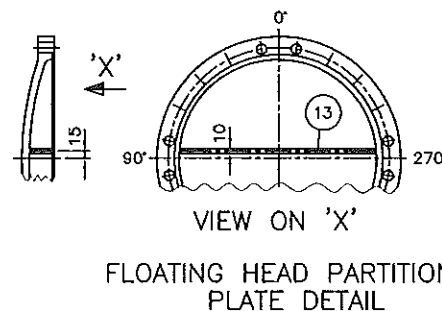
TUBE TO TUBESHEET
DETAIL



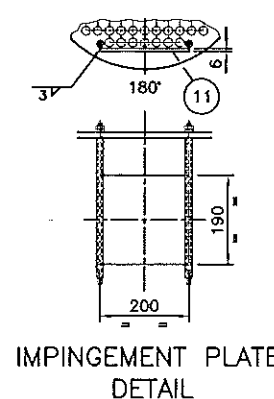
TYPICAL SEALING STRIP
WELD DETAIL



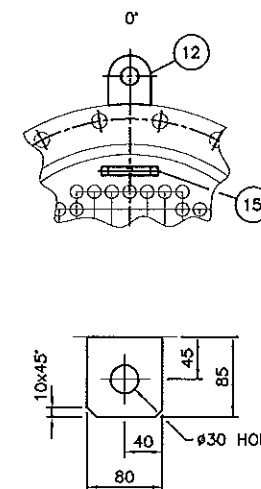
LIFTING LUG DETAIL



FLOATING HEAD PARTITION
PLATE DETAIL



IMPINGEMENT PLATE
DETAIL



PULLING LUG
DETAIL
POSITIONED AT 0° & 180°

PARTS LIST

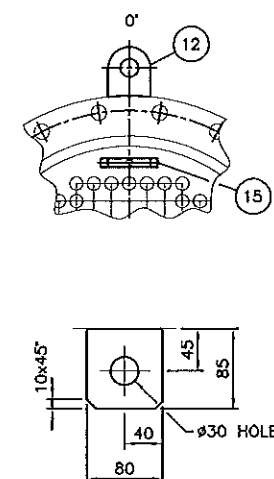
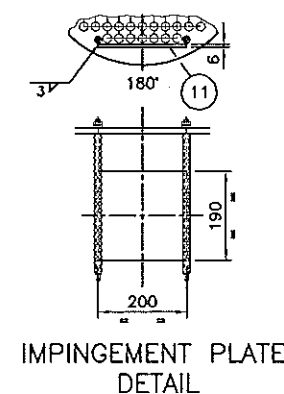
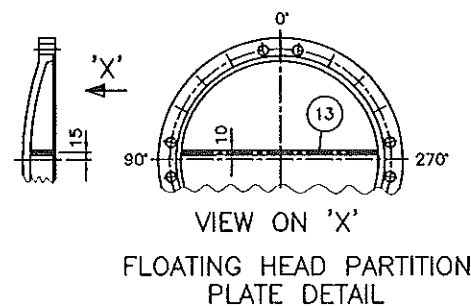
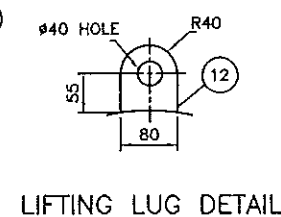
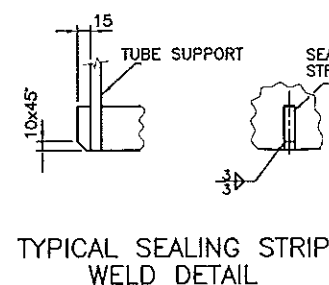
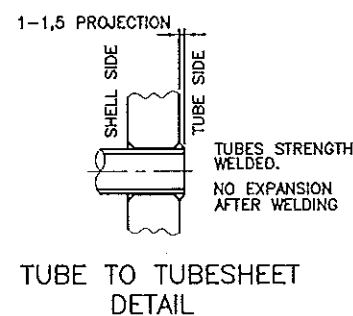
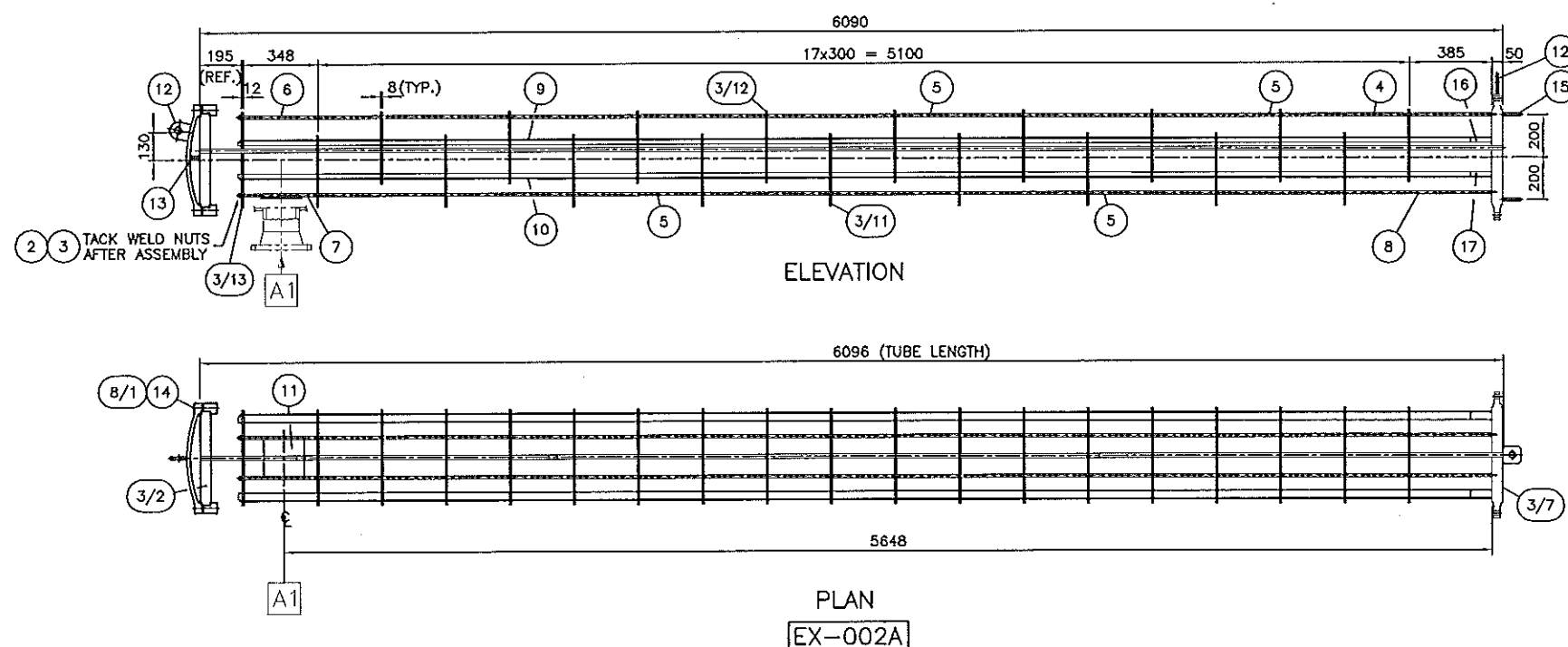
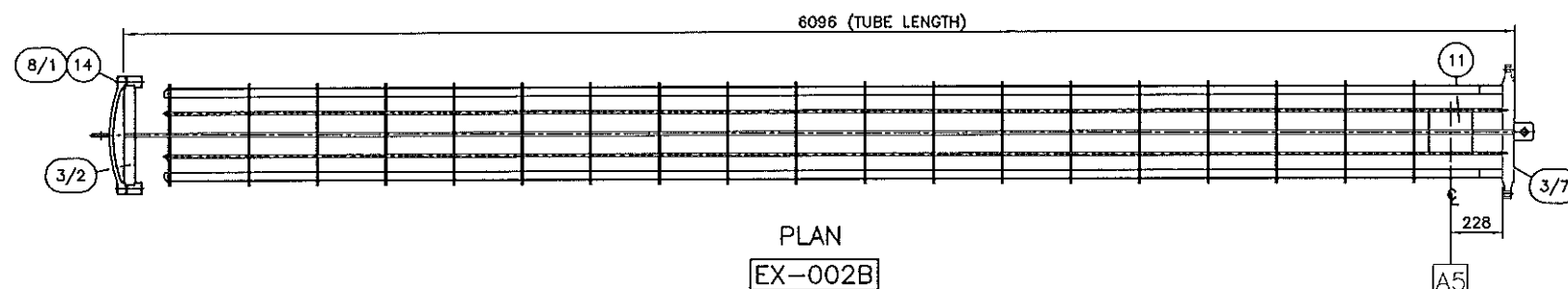
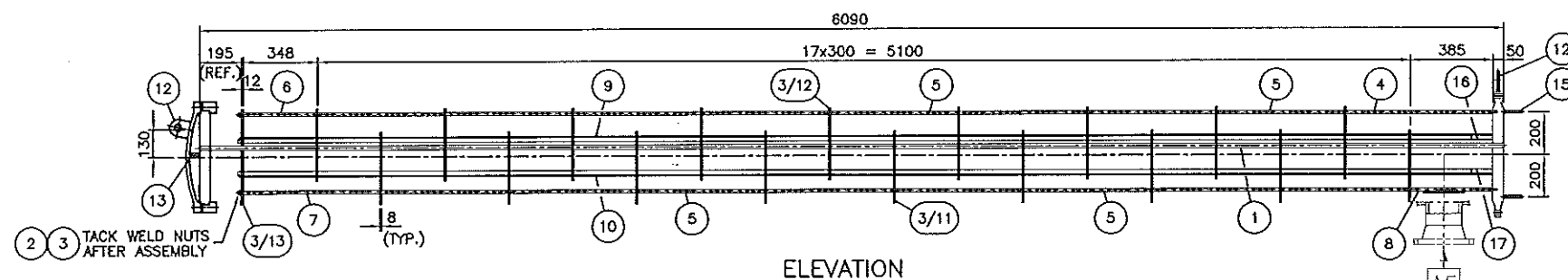
MK	QTY	DESCRIPTION	MATERIALS	REMARKS
1	161	TUBE 19.05 O.D.x2.11 WT.x6096 LG.	SA.179	
2	3	TIE ROD #10 ROUND BAR x 5890 LG	SA.1431-GR.300WA	THREAD M10x30 LG BOTH ENDS
3	6	HEX NUT M10	MS.	
4	1	SPACER TUBE 10NBxMED. CLASSx685 LG	SABS 62	
5	24	SPACER TUBE 10NBxMED. CLASSx592 LG	SABS 62	
6	1	SPACER TUBE 10NBxMED. CLASSx340 LG	SABS 62	
7	2	SPACER TUBE 10NBxMED. CLASSx640 LG	SABS 62	
8	2	SPACER TUBE 10NBxMED. CLASSx385 LG	SABS 62	
9	2	SEALING STRIP 40x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
10	2	SEALING STRIP 50x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
11	1	IMPINGEMENT PLATE 200x190x6 THK	SA.1431-GR.300WA	
12	2	LIFTING LUG 95x80x12 THK	SA.516-GR.60N	
13	1	PARTITION PLATE 418x65x10 THK	SA.516-GR.60N	INCLUDES 10mm TRIM ALLOW.
14	20+2	STUD BOLTS 3/4"UNCx145 Lg. c/w 2 NUTS EACH	SA.193-B7/194-2H	
15	2	PULLING LUG 85x80x12 THK.	SA.516-GR.60N	
16	1	SEALING STRIP STUB 40x6 FLAT BARx100 LG	SA.516-GR.60N	
17	1	SEALING STRIP STUB 50x6 FLAT BARx100 LG	SA.516-GR.60N	
3/2		TUBESHEET		
3/7		TUBESHEET		
3/11		BAFFLE	C-711/606ABC/3	
3/12		BAFFLE	C-711/606D/3	
3/13		SUPPORT PLATE		
8/1		GASKET	C-711/606/8	

GENERAL NOTES:

- MATERIALS LIST IS FOR ONE BUNDLE - TWO BUNDLES REQUIRED
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606CD/1, C-711/606C/2A&2B & C-711/606D/2A&2B
- LEGEND: ITEM NUMBERS SHOWN THUS: (3/7) REFERS TO DRG. C-711/606ABC/3 ITEM 7 AND DRG. C-711/606D/3 ITEM 7

SAIBA ENGINEERING CC STATUS: A B C D DESIGN: ☐ ☐ ☐ ☐ QA: ☐ ☐ ☐ ☐ WELDING: ☐ ☐ ☐ ☐ A - PROCEED B - PROCEED CHANGE AS NOTED & RESUBMIT C - DO NOT PROCEED CHANGE AS NOTED & RESUBMIT D - INFORMATION ONLY; NOT REVIEWED. Approval of the drawing does not imply approval of the design or the construction of the project.		Foster Wheeler South Africa (Pty) Ltd. 1. Rejected. 2. Comments As Noted. 3. Minor Comments (Acceptable) 4. No Comments. 5. Information Only.		Foster Wheeler South Africa Contract No.: 25913 Foster Wheeler South Africa Order No.: 25913/PYP 579/02 Foster Wheeler South Africa Requestion No.: 25913-1211AA Item No.: EX-002C/D Client's Name: Petronet Project Title: Intermixture Refractionator Project Project Location: Terton, Gauteng, South Africa Client Drawing No.: D20-154	
Compliance with comments does not release Supplier/Contractor of Responsibility for the correctness of its work or of any requirements, warranties or guarantees stated or implied in the order.		4 3 2 29.11.05 J.W. "AS BUILT" 1 4.7.05 B.B. FWSA ORDER & DRG. No. ADDED, ISSUED FOR MANUFACTURE A 6.6.05 B.B. ISSUED FOR APPROVAL REV. DATE NAME GEA ORDER No. C-711/606 DRAWN 25.5.05 A.B. CLIENT: FWSA FOR PETRONET CHCK. 6.6.05 A.B. APP. 6.6.05 M.C.			
TITLE: EX-002C FEED/BOTTOMS EXCHANGER BUNDLE DETAILS		SCALE: GEA No. 1:15 C-711/606C/6 DOC. No. 1077; G-00-4-0038 CLIENT No.			

IF IN DOUBT, ASK.



15 PULLING LUG
DETAIL
POSITIONED AT 0° & 180°

PARTS LIST				
QTY	UNIT	DESCRIPTION	MATERIALS	REMARKS
1	161	TUBE 19.05 O.D.x2.11 WT.x6096 LG.	SA.179	
2	3	TIE ROD #10 ROUND BAR x 5890 LG	SA.1431-GR.300WA	THREAD M10x30 U BOTH ENDS
3	6	HEX NUT M10	MS.	
4	1	SPACER TUBE 10NBxMED. CLASSx685 LG	SABS 62	
5	24	SPACER TUBE 10NBxMED. CLASSx592 LG	SABS 62	
6	1	SPACER TUBE 10NBxMED. CLASSx340 LG	SABS 62	
7	2	SPACER TUBE 10NBxMED. CLASSx640 LG	SABS 62	
8	2	SPACER TUBE 10NBxMED. CLASSx385 LG	SABS 62	
9	2	SEALING STRIP 40x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
10	2	SEALING STRIP 50x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
11	1	IMPINGEMENT PLATE 200x190x6 THK	SA.1431-GR.300WA	
12	2	LIFTING LUG 95x80x12 THK	SA.516-GR.60N	
13	1	PARTITION PLATE 418x65x10 THK	SA.516-GR.60N	INCLUDES 10mm TRIM. ALLOW.
14	20+2	STUD BOLTS 3/4"UNCx145 Lg. c/w 2 NUTS EACH	SA.193-B7/194-2H	
15	2	PULLING LUG 85x80x12 THK.	SA.516-GR.60N	
16	1	SEALING STRIP STUB 40x6 FLAT BARx100 LG	SA.516-GR.60N	
17	1	SEALING STRIP STUB 50x6 FLAT BARx100 LG	SA.516-GR.60N	
3/2		TUBESHEET		
3/7		TUBESHEET		
3/11		BAFFLE	C-711/608ABC/3	
3/12		BAFFLE		
3/13		SUPPORT PLATE		
8/1		GASKET	C-711/608/8	

GENERAL NOTES:

1. MATERIALS LIST IS FOR ONE BUNDLE - TWO BUNDLES REQUIRED
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606AB/1,
C-711/606A/2A&2B & C-711/606B/2A&2B
3. LEGEND: ITEM NUMBERS SHOWN THUS: (3/7) REFERS TO DRG. C-711/606ABC/3 ITEM 7

SAIBA ENGINEERING CC				
STATUS	A	B	C	DO
DESIGN	☐	☐	☐	☐
QA	☐	☐	☐	☐
WELDING	☐	☐	☐	☐

A - PROCEED
 B - PROCEED; CHANGE AS NOTED & RESUBMIT
 C - DO NOT PROCEED; CHANGE AS NOTED & RESUBMIT
 DO - INFORMATION ONLY; NOT REVIEWED

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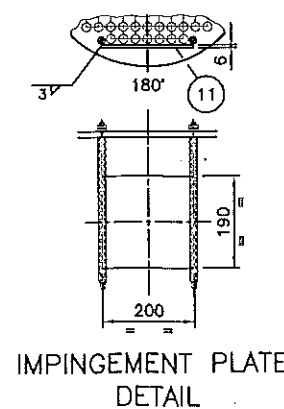
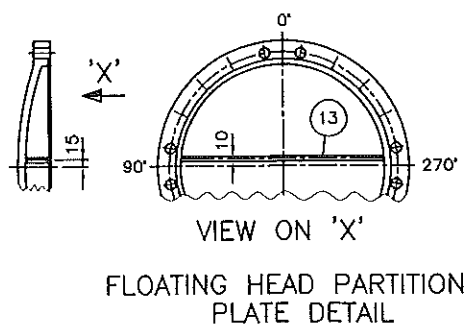
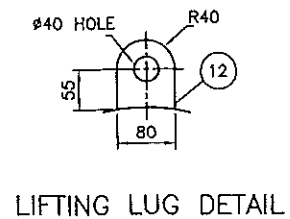
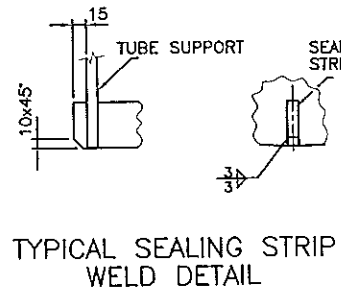
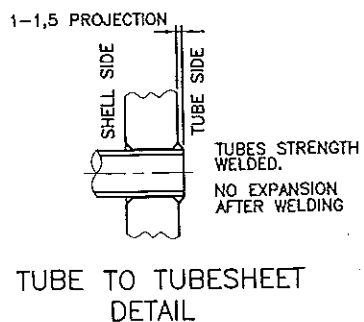
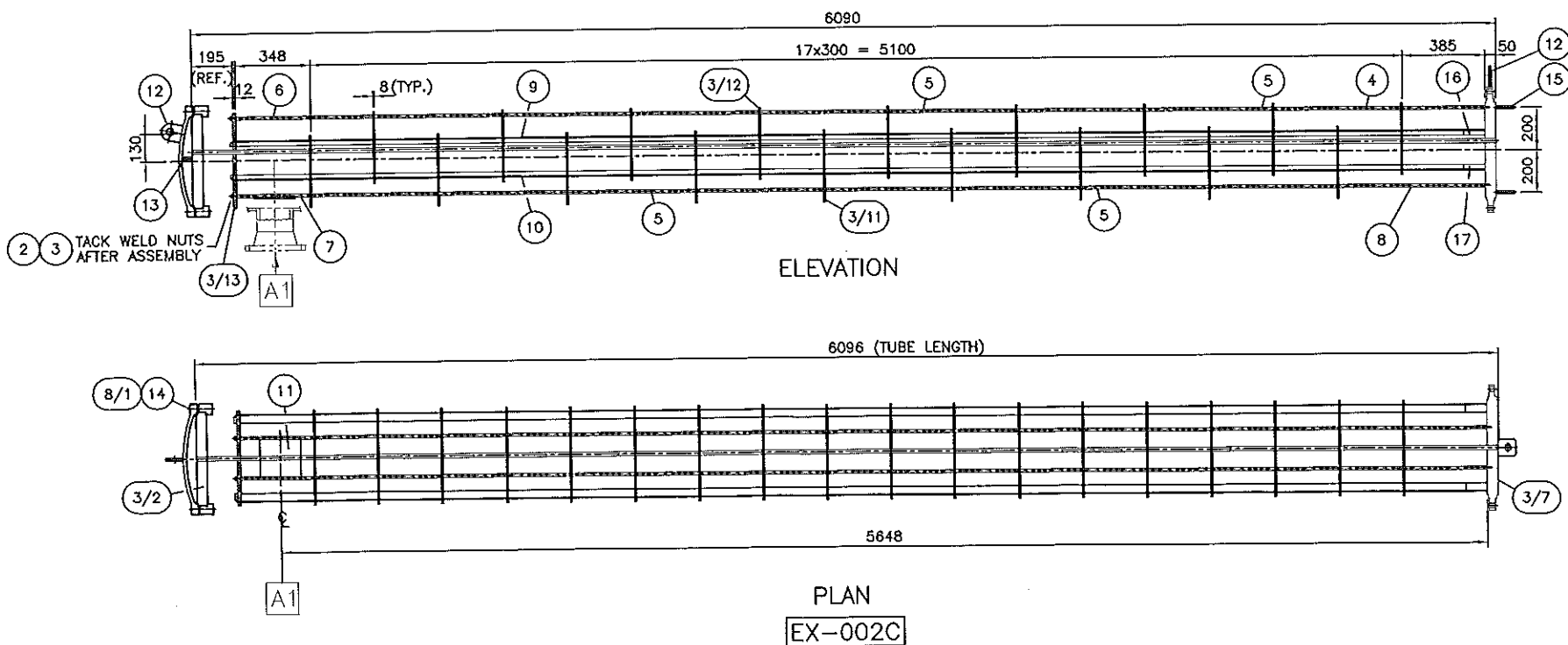
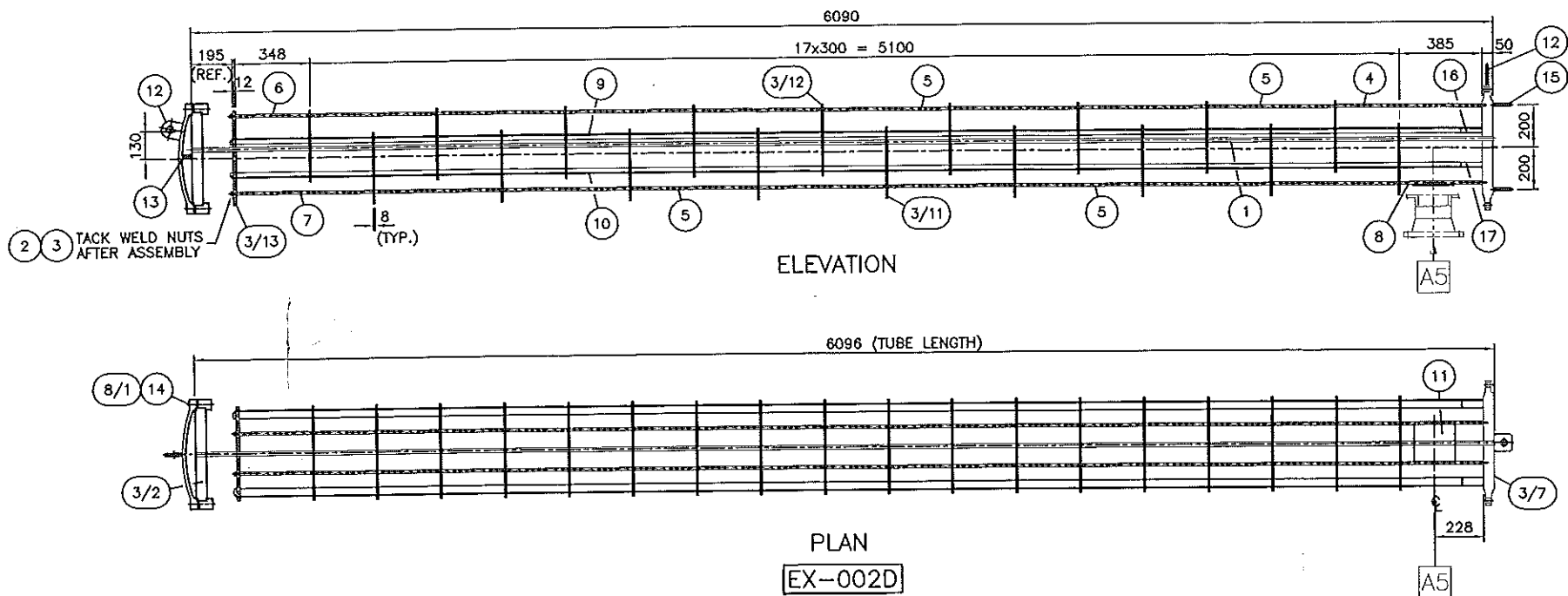
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☐ 1. Rejected.			Foster Wheeler South Africa Order No. : 25913/PYP 579/02	
☐ 2. Comments As Noted.			Foster Wheeler South Africa Requisition No. : 25913-1211AA	
☐ 3. Minor Comments (Acceptable)			Rem No. : EX-002A/B	
☐ 4. No Comments.			Client's Name : Petronas	
☐ 5. Information Only.			Project Title : Intermixture Refractoriation Project	
IN	OPEN	CLOSED	Project Location : Tariton, Gauteng, South Africa	
Compliance with comments does not relieve Supplier's Contractor of Responsibility for the Consequences of its work or of any requirements, warranties or guarantees made or included in the order.			Client Drawing No. : D20-153	

4								
3								
2	29.11.05	J.W	"AS BUILT"					
1	4.7.05	B.B.	FWSA ORDER & DRG. No. ADDED, ISSUED FOR MANUFACTURE	7.7.05	A.B.	M.C.		
A	6.6.05	B.B.	ISSUED FOR APPROVAL	6.6.05	A.B.	M.C.		
REV.	DATE	NAME	REMARKS					
	DATE	NAME	GEA ORDER No. C-711/605					
DRWN.	25.5.05	B.B.	CLIENT: FWSA FOR PETRONET					
CHKD.	6.6.05	A.B.	 Manufacturer: AIRCOOLED SYSTEMS (Pty.) LTD. R.S.A. Energy Technology Division (Reg. No: 75/00303/07)					
APP.	6.6.05	M.C.						

TITLE	EX-002B	SCALE	GEA No.	REV.
FEED/BOTTOMS EXCHANGER		1:15	C-711/606B/6	2
BUNDLE DETAILS		A1	DOC. No. 1077; G-00-4-0038	
			CLIENT No.	

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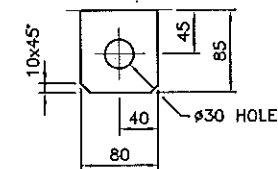
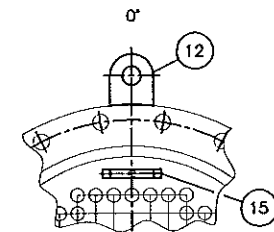
IF IN DOUBT, ASK.



PARTS LIST				
MK	QTY	DESCRIPTION	MATERIALS	REMARKS
1	161	TUBE 19.05 O.D.x2,11 WT.x6096 LG.	SA.179	
2	3	TIE ROD Ø10 ROUND BAR x 5890 LG	SA.1431-GR.300WA	THREAD M10x50 LG BOTH ENDS
3	6	HEX NUT M10	MS.	
4	1	SPACER TUBE 10NBxMED. CLASSx685 LG	SABS 62	
5	24	SPACER TUBE 10NBxMED. CLASSx592 LG	SABS 62	
6	1	SPACER TUBE 10NBxMED. CLASSx340 LG	SABS 62	
7	2	SPACER TUBE 10NBxMED. CLASSx640 LG	SABS 62	
8	2	SPACER TUBE 10NBxMED. CLASSx385 LG	SABS 62	
9	2	SEALING STRIP 40x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
10	2	SEALING STRIP 50x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
11	1	IMPINGEMENT PLATE 200x190x6 THK	SA.1431-GR.300WA	
12	2	LIFTING LUG 95x80x12 THK	SA.516-GR.60N	
13	1	PARTITION PLATE 418x65x10 THK	SA.516-GR.60N	INCLUDES 10mm TRIM. ALLOW.
14	20+2	STUD BOLTS 3/4"UNCx145 Lg. c/w 2 NUTS EACH	SA.193-B7/194-2H	
15	2	PULLING LUG 85x80x12 THK.	SA.516-GR.60N	
16	1	SEALING STRIP STUB 40x6 FLAT BARx100 LG	SA.516-GR.60N	
17	1	SEALING STRIP STUB 50x6 FLAT BARx100 LG	SA.516-GR.60N	
3/2		TUBESHEET		
3/7		TUBESHEET		
3/11		BAFFLE	C-711/606ABC/3	
3/12		BAFFLE	C-711/606D/3	
3/13		SUPPORT PLATE		
8/1		GASKET	C-711/606/8	

GENERAL NOTES:

1. MATERIALS LIST IS FOR ONE BUNDLE - TWO BUNDLES REQUIRED
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606CD/1,
C-711/606C/2A&2B & C-711/606D/2A&2B
3. LEGEND: ITEM NUMBERS SHOWN THUS: (3/7) REFERS TO DRG. C-711/606ABC/3 ITEM 7
AND DRG. C-711/606D/3 ITEM 7



⑮ PULLING LUG
DETAIL
POSITIONED AT 0° & 180°

SAIBA ENGINEERING CC				
STATUS	A	B	C	NO
DESIGN	☐	☐	☐	☐
QA	☐	☐	☐	☐
WELDING	☐	☐	☐	☐

A - PROCEED
 B - PROCEED; CHANGE AS NOTED & RESUBMIT
 C - DO NOT PROCEED; CHANGE AS NOTED & RESUBMIT
 NO INFORMATION CAN BE REVIEWED

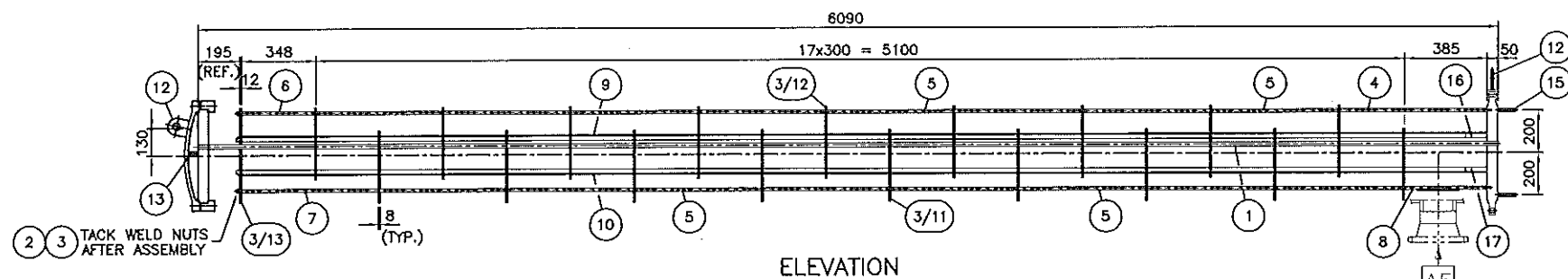
Approval of this document does not imply approval of related documents.
 Approval to proceed does not release the contractor/provider of his
 liability or liability under the contract purchase order.

W Foster Wheeler South Africa (Pty) Ltd. 1. ☐ Rejected. 2. ☐ Comments As Noted. 3. ☐ Minor Comments (Acceptable) 4. ☐ No Comments. 5. ☐ Information Only.			Foster Wheeler South Africa Contract No. : 25913 Foster Wheeler South Africa Order No. : 25913/PYP 579/02 Foster Wheeler South Africa Requestion No.: 25913-1211AA Item No. : EX-002C/D Client's Name : Petronet Project Title : Intermixture Refractionator Project Project Location : Toriton, Gauteng, South Africa Client Drawing No. : D20-154		
Compliance with comments does not relieve Supplier Contractor of Responsibility for the Correctness of the work, or of any requirements, warranties or guarantees stated or implied in the order.					
4					
3					
2	29.11.05	J.W	*AS BUILT*		
1	4.7.05	B.B.	FWSA ORDER & DRG. No. ADOED, ISSUED FOR MANUFACTURE		7.7.05 A.B. M.C.
A	6.6.05	B.B.	ISSUED FOR APPROVAL		6.6.05 A.B. M.C.
REV.	DATE	NAME	REMARKS		DATE CHCK. APP'D
	DATE	NAME	GEA ORDER No. C-711/606		
DRAWN.	25.5.05	B.B.	CLIENT: FWSA FOR PETRONET		
CHCK.	6.6.05	A.B.			
APP.	6.6.05	M.C.			
			Manufacturer:  Energy Technology Division AIRCOOLED SYSTEMS (Pty.) LTD. R.S.A. (Reg. No.: 75/60303/07)		

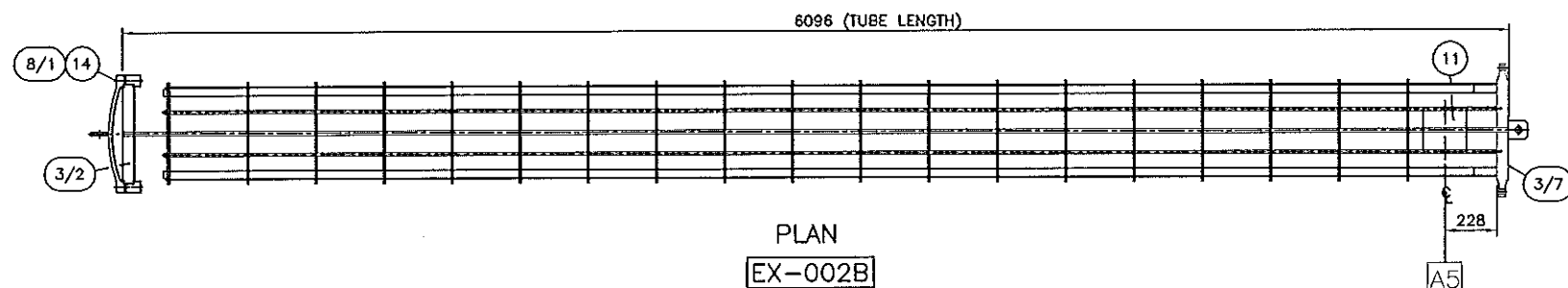
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FEED/BOTTOMS EXCHANGER		1:15	C-711/606D/6	2
BUNDLE DETAILS		A1	DOC. No. 1077; G-00-4-0038	
			CLIENT No.	

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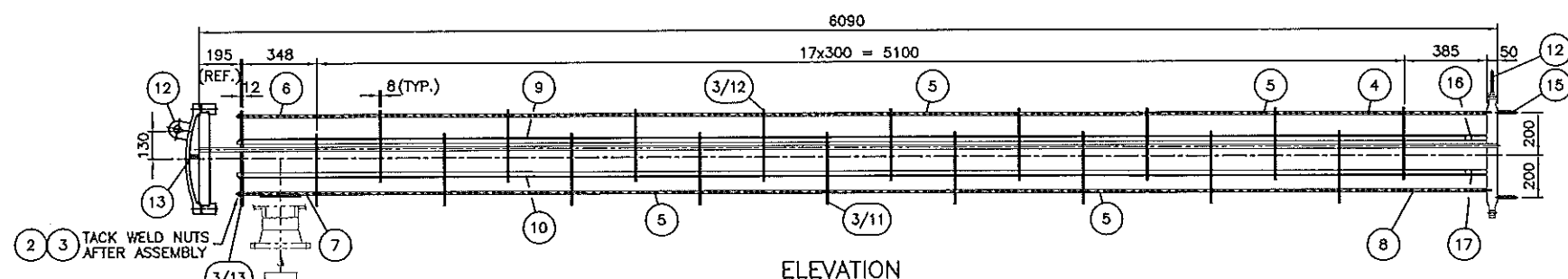
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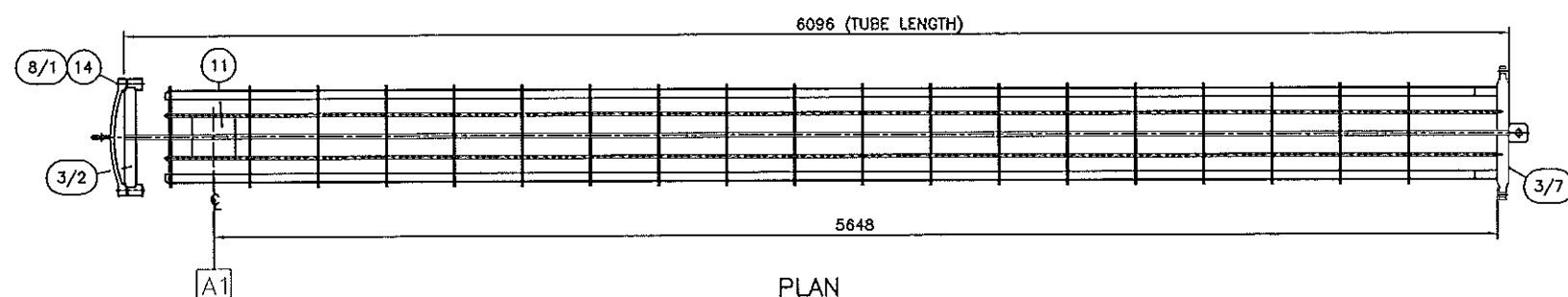
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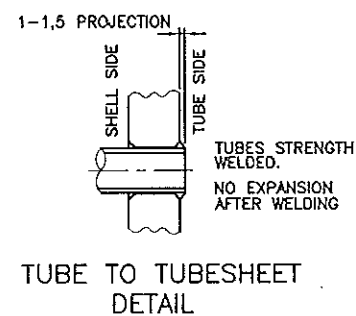
PLAN
EX-002B



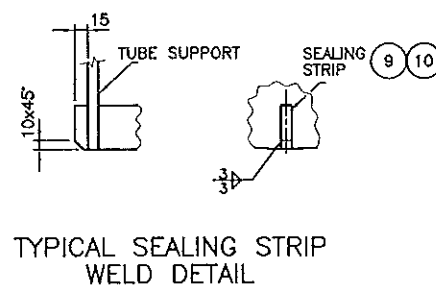
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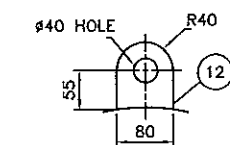
PLAN
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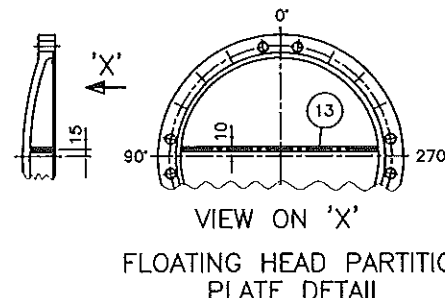
TUBE TO TUBESHEET
DETAIL



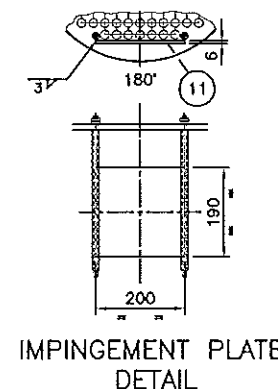
TYPICAL SEALING STRIP
WELD DETAIL



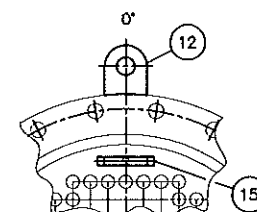
LIFTING LUG DETAIL



VIEW ON 'X'
FLOATING HEAD PARTITION
PLATE DETAIL



IMPINGEMENT PLATE
DETAIL



15 PULLING LUG
DETAIL
POSITIONED AT 0° & 180°

PARTS LIST

MK	QTY	DESCRIPTION	MATERIALS	REMARKS
1	161	TUBE 19,05 O.D.x2,11 WT.x6096 LG.	SA.179	
2	3	TIE ROD #10 ROUND BAR x 5890 LG	SA.1431-GR.300WA	THREAD M10x30 LG BOTH ENDS
3	6	HEX NUT M10	MS.	
4	1	SPACER TUBE 10NBxMED. CLASSx685 LG	SABS 62	
5	24	SPACER TUBE 10NBxMED. CLASSx592 LG	SABS 62	
6	1	SPACER TUBE 10NBxMED. CLASSx340 LG	SABS 62	
7	2	SPACER TUBE 10NBxMED. CLASSx640 LG	SABS 62	
8	2	SPACER TUBE 10NBxMED. CLASSx385 LG	SABS 62	
9	2	SEALING STRIP 40x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
10	2	SEALING STRIP 50x6 FLAT BARx5760 LG	SA.1431-GR.300WA	
11	1	IMPINGEMENT PLATE 200x190x6 THK	SA.1431-GR.300WA	
12	2	LIFTING LUG 95x80x12 THK	SA.516-GR.60N	
13	1	PARTITION PLATE 418x85x10 THK	SA.516-GR.60N	INCLUDES 10mm TRIM ALLOW.
14	20+2	STUD BOLTS 3/4"UNCx145 Lg. c/w 2 NUTS EACH	SA.193-B7/194-2H	
15	2	PULLING LUG 85x80x12 THK.	SA.516-GR.60N	
16	1	SEALING STRIP STUB 40x6 FLAT BARx100 LG	SA.516-GR.60N	
17	1	SEALING STRIP STUB 50x6 FLAT BARx100 LG	SA.516-GR.60N	
3/2		TUBESHEET		
3/7		TUBESHEET		
3/11		BAFFLE	C-711/606ABC/3	
3/12		BAFFLE		
3/13		SUPPORT PLATE		
8/1		GASKET	C-711/606/8	

GENERAL NOTES:

- MATERIALS LIST IS FOR ONE BUNDLE - TWO BUNDLES REQUIRED
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No's. C-711/606AB/1, C-711/606A/2A&2B & C-711/606B/2A&2B
- LEGEND: ITEM NUMBERS SHOWN THUS: (3/7) REFERS TO DRG. C-711/606ABC/3 ITEM 7

SAIBA ENGINEERING CC STATUS: A B C D DESIGN: ☐ ☐ ☐ ☐ QA: ☐ ☐ ☐ ☐ WELDING: ☐ ☐ ☐ ☐ A - PROCEED B - PROCEED, CHANGE AS NOTED & RESUBMIT C - DO NOT PROCEED, CHANGE AS NOTED & RESUBMIT D - INFORMATION ONLY, NOT REVIEWED Approved by the designator and not subject to the designator's liability of his responsibility or liability under the contract.		Foster Wheeler South Africa Contract No.: 25913 Foster Wheeler South Africa Order No.: 25913/PYP 579/02 Foster Wheeler South Africa Requisition No.: 25913-1211AA Rem No.: EX-002A/B Client's Name: Petronet Project Title: Intermixture Refractorator Project Project Location: Tarlton, Gauteng, South Africa Client Drawing No.: D20-153	
1. Rejected. 2. Comments Noted. 3. Minor Comments (Acceptable) 4. No Comments. 5. Information Only.		1. 29.11.05 J.W. "AS BUILT" 2. 4.7.05 B.B. FWSA ORDER & DRG. No. ADDED, ISSUED FOR MANUFACTURE 3. 6.6.05 B.B. ISSUED FOR APPROVAL	
DATE NAME GEA ORDER No. C-711/606 DRWN. 25.5.05 B.B. CLIENT: FWSA FOR PETRONET CHCK. 6.6.05 A.B. APP. 6.6.05 M.C.		SCALE: GEA No. 1:15 TITLE: EX-002A FEED/BOTTOMS EXCHANGER BUNDLE DETAILS REV. 2 DOC. No. 1072: 6-00-4-0036 CLIENT No.	