



INVITATION TO TENDER

Ref : OS/19-20/Drum Internals/12 & 30/064

Date : 05.10.2019

Sub : Fabrication of HP Drum Internals for various boiler projects against S.O. No. 7842, 7850, 7851 & 7885.

Dear Sir,

Sealed tenders are invited for the subject work in **two part bid system** from Vendors who are experienced in / capable of executing similar jobs. Bidders shall enclose relevant documents in support of experience or capability in execution of similar jobs.

1. VENDOR'S SCOPE OF WORK :

<u>S.O. No.</u>	<u>PGMA</u>	<u>Description of Item</u>	<u>Qty.</u>	<u>Total Weight</u>
7842	04-114	HP Drum Internals	1 Set	1.25 MT
7850	04-116	HP Drum Internals	1 Set	2.70 MT
7851	04-114	HP Drum Internals	1 Set	1.25 MT
7885	04-114	HP Drum Internals	1 Set	2.10 MT
Total				7.30 MT

- Complete Fabrication of Drum Internals which includes items like Bottom Plate Assly., Corrugated Sheet Basket Assly., CBD Header Assly., Duct Plate Assly., Feed Header Assly., Final Scrubber Assly., Perforated Plate Assly., Phosphate Dosing Header Assly., Separator Scrubber Assly., Separator Scrubber Box Assly., Spider Plate Assly., CBD Pipe, Drain Tube, Feed Pipe / Tube, Feed Support, Phosphate Dosing Pipe, Bent Panel, Bent Plate / Strip, Bent Support Bar / Plate, End Plate, End Cover (Top & Bottom), Top / Bottom Cover Plate, Clamp, Flat Bar, Strap, Centrifugal Separator, Connecting Duct, Separating Chamber etc. as per details mentioned in the Annexure . II, as per applicable drawings, QAP, WPS and other relevant documents.
- Plain sheets & Plain wire mesh, if required, shall be supplied by BHEL-HPVP and required corrugations (wherever applicable) shall be done by vendor as per the drawing/s.
- Collection & transportation of raw materials from BHEL-HPVP stores, Transportation & Delivery of finished items to BHEL-HPVP Shops, handing over of balance materials at BHEL-HPVP stores.
- Rectification of raw materials such as straightening etc. and rectification of defects etc. shall be attributable to vendor/s, if found any after handing over to shops.
- Any modification work due to revision of the drawings during fabrication is to be carried out by the vendor without any extra cost.
- Submission of economic cutting plans for all plate materials and sections issued by BHEL-HPVP and obtaining approval of competent authority is mandatory before taking up fabrication.
- Wherever fabrication is done without proper approved cutting plans, any loss of materials arising due to the same will be recovered as per BHEL-HPVP recovery rates.
- All indirect materials, consumables like electrodes, gases, etc. required for fabrication fall in the scope of the Vendor.
- Free issue items cleared by QC (Stores) to be collected within 3 days from the date of intimation without any failure. Any delay beyond the 3 days shall be considered for levying of LD.
- Qualified Engineers & Supervisors shall be deployed for proper co-ordination of the job.
- Though not mentioned specifically, any activity which is required for completion of the work is deemed to be included in the scope of work of bidders.

2. BHEL's SCOPE :

BHEL shall provide the following as free issue :

- (a) Supply of Drawings, GMS, Shipping List, QAP, WPS etc.
- (b) Plates / Sheets in the form of full plates / off-cuts.
- (c) Rounds, Tubes / Pipes and Angles in running meters.
- (d) Other materials and BOC if any, as per GMS.

3. LOCATION OF WORK SPOT :

The fabrication work is to be carried out **at Vendor's Works.**

4. INSPECTION :

Inspection shall be carried out by M/s. BHEL . HPVP, Visakhapatnam / BHEL Authorized Inspection Agency as per applicable QAP and relevant documents.

5. DELIVERY :

Finished items shall be handed over to BHEL-HPVP Shops along with all inspection documents / certificates **within 6 weeks from the date of issue of last consignment of free issue raw materials.**

6. PRICE :

The prices shall be quoted for the detailed scope of work in the Schedule of Rates enclosed at Annexure . I. The prices shall be fixed & firm without any escalation during the entire period of contract and till completion of the work.

The quoted price shall be inclusive of all applicable taxes & duties except GST. Income tax shall be deducted at applicable rates from the vendor's bills. GST shall be reimbursable to the vendor as detailed in the Clause - 7.

7. GOODS & SERVICES TAX (GST) :

Bidders shall make a note of the following points of GST before submission of their offer:

- a) Vendors registered under GST Act shall have to mention their GSTIN no. (15 Digits) in their Technical Bid. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
- b) Semi-finished goods are to be delivered by the Vendors in BHEL, HPVP premises within a maximum period of one year from the date of issue of the material, failing which the whole transaction will be considered as Supply and Sale and GST is required to be paid along with interest from the date of Challan on the whole value of materials. Hence vendors shall have to ensure that materials issued to them are returned within 365 days.
- c) After fabrication, the vendors shall have to deliver the Semi-Finished Goods by fulfilling the following formalities.
 - GST invoice should be raised by the vendors by paying GST on job work charges at applicable rates and by incorporating the HPVP GSTIN no. in the invoice for availing the reimbursement of GST from HPVP.
 - The vendor shall also have to enter in their GST Return -1 (GSTR-1) the details of invoice raised for payment of GST so as to enable HPVP to avail input credit.

8. REVERSE AUCTION :

BHEL reserves the right to opt for Reverse Auction at its discretion instead of opening the price bids submitted in sealed envelope and any information regarding the reverse auction shall be decided after technical evaluation and intimated to the bidders at appropriate time.

The bidders are advised to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids in case BHEL decides to go for RA.

In case BHEL decides to go for RA, only those bidders who give their acceptance will be allowed to participate in RA and these bidders shall have to necessarily submit ~~Online~~ Sealed Bid in the RA. **Non-submission of 'Online Sealed Bid' by the bidder will be considered as tampering of the tendering process and will invite action by BHEL as per extant guidelines in vogue.**

9. VALIDITY OF OFFER:

The offer shall be valid for a period of **3 months** from the last date for tender submission.

10. RISK PURCHASE:

In case the contractor fails to execute the work within the scheduled time or due to any other reasons, BHEL-HPVP reserves the right to get the same completed through some other party at the risk & cost of the contractor and any additional expenditure incurred due to the same shall be charged to the contractor.

11. Other General terms and conditions shall be as per **Annexure - III** enclosed.

12. GENERAL :

- a) The bidders shall study the Tender documents, Drawings, Quality Documents and all other relevant documents in detail for understanding the scope of work and the processes involved before submission of offer. For any clarifications required on this tender document, scope of work etc., the bidders can get clarifications through e-mail or over phone between 09:00 AM and 04:00 PM.
- b) **Bidders shall confirm their acceptance to all the terms & conditions of the tender enquiry. Any deviations to the tender terms & conditions are not acceptable** and BHEL reserves the right to reject such offers without further correspondence.
- c) BHEL reserves the right to modify or cancel the tender enquiry at any stage without assigning any reasons thereof.

13. The following shall form part of tender enquiry:

- | | |
|---|------------------|
| i) Schedule of Rates | : Annexure - I |
| ii) Details of Items to be fabricated | : Annexure – II |
| iii) General Terms & Conditions | : Annexure - III |
| iv) Acceptance to Tender terms & conditions | : Annexure – IV |
| v) General Terms & Conditions of RA (Reverse Auction) | : Annexure – V |
| vi) GST Compliance for Indigenous Suppliers | : Annexure – GST |
| vii) Relevant Drawings | |

14. TENDER SUBMISSION :

Techno-Commercial bids shall be submitted along with the **tender document duly signed & stamped by the bidder on all pages**. Tenders completed in all respects (Techno-Commercial Bid and Price bid separately in two envelopes and both kept in another envelope) shall be sent by Post to the following address before **14.00 Hrs. on 21.10.2019** duly super scribing on the envelopes with the Subject, Tender Ref. No. and Technical / Price Bid etc.

Outsourcing Tender Box,

Reception Counter, ADM Building,
Heavy Plates & Vessels Plant
BHEL, Visakhapatnam.
PIN – 530012 (A.P.)

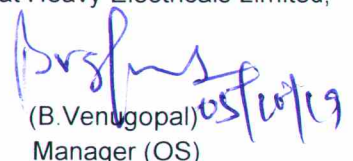
Note : Tenders / offers received after the due date & time are not acceptable and the offers sent in any other form will be treated as invalid and will be summarily rejected.

15. OPENING OF TENDERS :

Techno-commercial Bids will be opened **at 14.00 Hrs. on 21.10.2019** at Customer Cell, Adm. Building, BHEL-HPVP, Visakhapatnam. Price bid/s of the techno-commercially qualified bidders will be opened in presence of representatives of the bidders and the date & time of opening of price bids will be intimated later. The bidders may depute their representatives at the time of opening.

In case of opting for Reverse Auction, intimation shall be given to the qualified bidders in advance at appropriate time.

For Bharat Heavy Electricals Limited,


(B. Venugopal)
Manager (OS)

SCHEDULE OF RATES

Sub : Fabrication of HP Drum Internals for various boiler projects against S.O. No. 7842, 7850, 7851 & 7885.

Sl. No.	S.O. No.	Description of Item	Unit	Qty.	Unit Rate (in ₹)	Total Amount (in ₹)
1.0		Complete Fabrication of HP Drum Internals as per applicable drawings, QAP, WPS and other relevant documents given in Annexure-II and transportation of FIM from BHEL – HPVP stores / shops to vendor works, Transportation and Handing over of Fabricated / Finished items to BHEL-HPVP shops etc. as per the detailed scope of work mentioned in the tender.				
1.1	7842	Drum Internals – 1 Set @ 1.25 MT	MT	1.25		
1.2	7850	Drum Internals – 1 Set @ 2.70 MT	MT	2.70		
1.3	7851	Drum Internals – 1 Set @ 1.25 MT	MT	1.25		
1.4	7885	Drum Internals – 1 Set @ 2.10 MT	MT	2.10		
		TOTAL		7.30		
Total Amount (In Words) :						

Notes :

- i) **L1 Status will be evaluated on total quoted value.**
- ii) The bidders are advised to go through all the drawings & documents before quoting the tender.
- iii) The quantity and weights indicated above are tentative and may vary slightly on both sides depending upon requirement at the time of ordering / execution or due to revision of drawings/GMS. However, payment shall be made for the actual quantities / weights only.
- iv) The quoted prices shall be inclusive of all applicable taxes & duties except GST. However, GST shall be reimbursed by BHEL on submission of proof of GST payment.
- v) The quoted price shall be for the detailed scope of work mentioned in the tender and shall be fixed & firm without any escalation during the entire period of contract and till completion of the work.
- vi) BHEL reserves the right to go for Reverse auction as per the applicable guidelines instead of opening price bids.
- vii) Tenderer should quote the amount in figures & words. It may be noted that corrections, overwriting etc. are not allowed. If there is a discrepancy between amount in figures & words, the amount in words shall prevail unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail. If there is an error in the total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and total shall be corrected accordingly.

In case of mismatch between rate and amount in figures, rate in figures shall be taken into consideration for further evaluation and processing.

Signature of the Bidder with Stamp

Details of Drum Internals to be fabricated

Ref : OS/19-20/Drum Internals/12 & 30/64

Date : 05.10.2019

Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
001	7842	04-114	001	9004	0-04-114-U8015	00	00	UPPER DRUM INTERNALS		NO.	1	1,198.436
002	7842	04-114	001	1501	2-04-114-U8040	00	00	CORRUGATED SHEET BASKET ASS		NO.	35	548.800
003	7842	04-114	001	1601	2-04-114-U8040	00	00	TOP COVER PLATE 5THK. X	IS2062E250A(FE410W	NO.	35	56.000
004	7842	04-114	001	1602	2-04-114-U8040	00	00	END PLATE 5THK. X	IS2062E250A(FE410W	NO.	70	105.000
005	7842	04-114	001	1603	2-04-114-U8040	00	00	BOTTOM COVER PLATE 5THK. X	IS2062E250A(FE410W	NO.	35	38.500
006	7842	04-114	001	1604	2-04-114-U8040	00	00	ROD D6	IS2062FE410GRA	NO.	140	7.000
007	7842	04-114	001	1605	1-04-114-U8012	00	01	CORRUGATED SHEET - 0.63 Thk.	IS513D	NO.	1,015	165.445
008	7842	04-114	001	1606	1-04-114-U8012	00	02	CORRUGATED SHEET- 0.63 Thk.	IS513D	NO.	1,085	176.855
009	7842	04-114	001	1502	3-04-114-U8093	00	00	BENT PANEL		NO.	4	139.496
010	7842	04-114	001	1701	3-04-114-U8093	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	4	124.056
011	7842	04-114	001	1702	3-04-114-U8093	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	15.200
012	7842	04-114	001	1703	3-04-114-U8093	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	0.240
013	7842	04-114	001	1503	3-04-114-U8094	00	00	BENT PANEL		NO.	1	13.600
014	7842	04-114	001	1801	3-04-114-U8094	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	12.100
015	7842	04-114	001	1802	3-04-114-U8094	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	1.500
016	7842	04-114	001	1504	3-04-114-U8104	00	06	ANGLE ISA 50X50X6	IS2062E250A(FE410W	NO.	1	37.000
017	7842	04-114	001	1505	2-04-114-U8041	00	01	END PLATE		NO.	1	11.000
018	7842	04-114	001	1901	2-04-114-U8041	00	01	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	10.400
019	7842	04-114	001	1902	2-04-114-U8041	00	01	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
020	7842	04-114	001	1903	2-04-114-U8041	00	01	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
021	7842	04-114	001	1904	2-04-114-U8041	00	01	PLATE 5X38X52	IS2062E250A(FE410W	NO.	1	0.100
022	7842	04-114	001	1506	2-04-114-U8041	00	02	END PLATE		NO.	1	11.000
023	7842	04-114	001	2001	2-04-114-U8041	00	02	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	10.400
024	7842	04-114	001	2002	2-04-114-U8041	00	02	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
025	7842	04-114	001	2003	2-04-114-U8041	00	02	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
026	7842	04-114	001	2004	2-04-114-U8041	00	02	PLATE 5X38X52	IS2062E250A(FE410W	NO.	1	0.100
027	7842	04-114	001	1507	3-04-114-U8090	00	00	BENT STRIP		NO.	1	1.825
028	7842	04-114	001	2101	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	1.000
029	7842	04-114	001	2102	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
030	7842	04-114	001	2103	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.075
031	7842	04-114	001	2104	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.250
032	7842	04-114	001	2105	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
033	7842	04-114	001	1508	3-04-114-U8091	00	00	BENT STRIP		NO.	1	1.825
034	7842	04-114	001	2201	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	1.000
035	7842	04-114	001	2202	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
036	7842	04-114	001	2203	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.075
037	7842	04-114	001	2204	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.250
038	7842	04-114	001	2205	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
039	7842	04-114	001	1509	4-04-114-U8067	00	00	STRIP 5THK. X	IS2062E250A(FE410W	NO.	2	1.000
040	7842	04-114	001	1510	3-04-114-U8095	00	00	PANEL		NO.	4	45.600
041	7842	04-114	001	2301	3-04-114-U8095	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	44.000
042	7842	04-114	001	2302	3-04-114-U8095	00	00	SHEET 3.15THK. X	IS1079 D	NO.	8	1.600
043	7842	04-114	001	1511	3-04-114-U8096	00	00	PANEL		NO.	1	4.400
044	7842	04-114	001	2401	3-04-114-U8096	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	4.000
045	7842	04-114	001	2402	3-04-114-U8096	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	0.400

Details of Drum Internals to be fabricated

Ref : OS/19-20/Drum Internals/12 & 30/64

Date : 05.10.2019

Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
046	7842	04-114	001	1512	3-04-114-U8097	00	00	BENT PANEL		NO.	4	93.056
047	7842	04-114	001	2501	3-04-114-U8097	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	75.600
048	7842	04-114	001	2502	3-04-114-U8097	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	14.400
049	7842	04-114	001	2503	3-04-114-U8097	00	00	SHEET 3.15THK. X	IS1079 D	NO.	8	2.400
050	7842	04-114	001	2504	3-04-114-U8097	00	00	PLATE 6THK. X	IS2062E250A(FE410W)	NO.	8	0.656
051	7842	04-114	001	1513	3-04-114-U8101	00	00	BENT PANEL		NO.	1	8.982
052	7842	04-114	001	2601	3-04-114-U8101	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	7.000
053	7842	04-114	001	2602	3-04-114-U8101	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	1.300
054	7842	04-114	001	2603	3-04-114-U8101	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	0.600
055	7842	04-114	001	2604	3-04-114-U8101	00	00	PLATE 6THK. X	IS2062E250A(FE410W)	NO.	1	0.082
056	7842	04-114	001	1514	3-04-114-U8092	00	00	BENT PANEL		NO.	2	36.200
057	7842	04-114	001	2701	3-04-114-U8092	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	29.200
058	7842	04-114	001	2702	3-04-114-U8092	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	5.800
059	7842	04-114	001	2703	3-04-114-U8092	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	1.200
060	7842	04-114	001	1515	3-04-114-U8099	00	00	BENT PANEL		NO.	1	18.400
061	7842	04-114	001	2801	3-04-114-U8099	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	15.000
062	7842	04-114	001	2802	3-04-114-U8099	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	2.800
063	7842	04-114	001	2803	3-04-114-U8099	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	0.600
064	7842	04-114	001	1516	2-04-114-U8042	00	06	BENT SUPPORT BAR		NO.	1	64.700
065	7842	04-114	001	2901	2-04-114-U8042	00	06	PLATE 6THK. X	IS2062E250A(FE410W)	NO.	1	56.500
066	7842	04-114	001	2902	2-04-114-U8042	00	06	SHEET 3.15THK.	IS1079 D	NO.	1	8.200
067	7842	04-114	001	1517	4-04-114-U8076	00	00	DRAIN TUBE OD33.4X 3.38THK. X	SA106GRB	NO.	17	23.800
068	7842	04-114	001	1518	4-04-114-U8068	00	01	SUPPORT BAR 50X6	IS2062FE410GRA	NO.	14	7.000
069	7842	04-114	001	1519	4-04-114-U8068	00	02	SUPPORT BAR 50X6	IS2062FE410GRA	NO.	9	5.850
070	7842	04-114	001	1520	4-04-114-U8064	00	01	FLAT 50X6	IS2062FE410GRA	NO.	5	3.000
071	7842	04-114	001	1521	4-04-114-U8072	00	00	END COVER 5THK. X	IS2062E250A(FE410W)	NO.	1	14.000
072	7842	04-114	001	1522	4-04-114-U8069	00	00	END COVER 5THK. X	IS2062E250A(FE410W)	NO.	1	11.000
073	7842	04-114	001	1523	4-04-114-U8060	00	00	END PLATE		NO.	1	1.300
074	7842	04-114	001	3001	4-04-114-U8060	00	00	PLATE 5THK. X	IS2062E250A(FE410W)	NO.	1	0.700
075	7842	04-114	001	3002	4-04-114-U8060	00	00	PLATE 5THK. X	IS2062E250A(FE410W)	NO.	1	0.600
076	7842	04-114	001	1524	3-04-114-U8081	00	00	CBD HEADER		NO.	1	14.562
077	7842	04-114	001	3101	3-04-114-U8081	00	00	TUBE D27.3X2.65	IS1239&IS1161	NO.	1	13.200
078	7842	04-114	001	3102	3-04-114-U8081	00	00	TUBE D27.3X2.65	IS1239&IS1161	NO.	1	0.400
079	7842	04-114	001	3103	3-04-114-U8081	00	00	TUBE D27.3X2.65	IS1239&IS1161	NO.	1	0.160
080	7842	04-114	001	3104	3-04-114-U8081	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	0.010
081	7842	04-114	001	3105	3-04-114-U8081	00	00	PLATE 5THK. X	IS2062E250A(FE410W)	NO.	9	0.792
082	7842	04-114	001	1525	3-04-114-U8100	00	00	FEED HEADER		NO.	1	42.610
083	7842	04-114	001	3201	3-04-114-U8100	00	00	TUBE D63.5X3.2THK. X	SA192	NO.	1	42.410
084	7842	04-114	001	3202	3-04-114-U8100	00	00	SHEET 4THK.XD57	IS1079 D	NO.	2	0.200
085	7842	04-114	001	1526	3-04-114-U8098	00	00	FEED TUBE		NO.	1	1.830
086	7842	04-114	001	3301	3-04-114-U8098	00	00	TUBE D51X4	SA192	NO.	1	1.200
087	7842	04-114	001	3302	3-04-114-U8098	00	00	TUBE D51X4	SA192	NO.	1	0.630
088	7842	04-114	001	1527	0-04-114-U8015	00	00	WASHER PNCHD A12	IS-2016	NO.	220	2.200
089	7842	04-114	001	1528	4-04-114-U8070	00	00	FEED SUPPORT ISA 50X50X6	IS2062E250A(FE410W)	NO.	8	7.200
090	7842	04-114	001	1529	4-04-114-U8071	00	00	U ROD D 16	IS2062FE410GRA	NO.	8	3.200
091	7842	04-114	001	1530	0-04-114-U8015	00	00	SCRU HEX GR C4.6 M12X40	IS-1363(P-1)	NO.	220	11.000

Details of Drum Internals to be fabricated

Ref : OS/19-20/Drum Internals/12 & 30/64

Date : 05.10.2019

Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
092	7842	04-114	001	1531	0-04-114-U8015	00	00	NUT HEX GR C M12	IS-1363(P-1)	NO.	220	11.000
093	7842	04-114	001	1532	4-04-114-U8064	00	02	FLAT 50X6	IS2062FE410GRA	NO.	5	2.000
001	7850	04-116	001	9004	0-04-116-U8051	00	00	DRUM INTERNALS		NO.	1	2,644.158
002	7850	04-116	001	2901	0-04-116-U8052	00	00	SEPARATING CHAMBER		NO.	1	916.504
003	7850	04-116	001	3001	3-04-116-U8305	00	00	DUCT PLATE ASSEMBLY		NO.	2	80.882
004	7850	04-116	001	3101	3-04-116-U8305	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	58.932
005	7850	04-116	001	3102	2-04-116-U8144	00	00	CONNECTING DUCT-1		NO.	10	21.200
006	7850	04-116	001	3201	4-04-116-U8325	00	00	SHEET 3.15MM	IS1079 D	NO.	20	12.040
007	7850	04-116	001	3202	4-04-116-U8326	00	00	SHEET 3.15MM	IS1079 D	NO.	20	6.120
008	7850	04-116	001	3203	2-04-116-U8144	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.660
009	7850	04-116	001	3204	4-04-116-U8327	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.380
010	7850	04-116	001	3103	4-04-116-U8328	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	10	0.750
011	7850	04-116	001	3002	3-04-116-U8306	00	00	DUCT PLATE ASSEMBLY		NO.	2	77.198
012	7850	04-116	001	3301	3-04-116-U8306	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	55.248
013	7850	04-116	001	3302	2-04-116-U8144	00	00	CONNECTING DUCT-1		NO.	10	21.200
014	7850	04-116	001	3201	4-04-116-U8325	00	00	SHEET 3.15MM	IS1079 D	NO.	20	12.040
015	7850	04-116	001	3202	4-04-116-U8326	00	00	SHEET 3.15MM	IS1079 D	NO.	20	6.120
016	7850	04-116	001	3203	2-04-116-U8144	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.660
017	7850	04-116	001	3204	4-04-116-U8327	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.380
018	7850	04-116	001	3303	4-04-116-U8328	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	10	0.750
019	7850	04-116	001	3003	3-04-116-U8307	00	00	DUCT PLATE ASSEMBLY		NO.	2	80.882
020	7850	04-116	001	3401	3-04-116-U8307	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	58.932
021	7850	04-116	001	3402	2-04-116-U8144	00	00	CONNECTING DUCT-1		NO.	10	21.200
022	7850	04-116	001	3201	4-04-116-U8325	00	00	SHEET 3.15MM	IS1079 D	NO.	20	12.040
023	7850	04-116	001	3202	4-04-116-U8326	00	00	SHEET 3.15MM	IS1079 D	NO.	20	6.120
024	7850	04-116	001	3203	2-04-116-U8144	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.660
025	7850	04-116	001	3204	4-04-116-U8327	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.380
026	7850	04-116	001	3403	4-04-116-U8328	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	10	0.750
027	7850	04-116	001	3004	3-04-116-U8308	00	00	DUCT PLATE ASSEMBLY		NO.	2	74.420
028	7850	04-116	001	3501	3-04-116-U8308	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	52.470
029	7850	04-116	001	3502	2-04-116-U8144	00	00	CONNECTING DUCT-1		NO.	10	21.200
030	7850	04-116	001	3201	4-04-116-U8325	00	00	SHEET 3.15MM	IS1079 D	NO.	20	12.040
031	7850	04-116	001	3202	4-04-116-U8326	00	00	SHEET 3.15MM	IS1079 D	NO.	20	6.120
032	7850	04-116	001	3203	2-04-116-U8144	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.660
033	7850	04-116	001	3204	4-04-116-U8327	00	00	SHEET 3.15MM	IS1079 D	NO.	20	1.380
034	7850	04-116	001	3503	4-04-116-U8328	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	10	0.750
035	7850	04-116	001	3005	2-04-116-U8143	00	00	SHEET 3.15MM	IS1079 D	NO.	4	55.688
036	7850	04-116	001	3006	2-04-116-U8143	00	00	SHEET 3.15MM	IS1079 D	NO.	2	26.112
037	7850	04-116	001	3007	2-04-116-U8143	00	00	SHEET 3.15MM	IS1079 D	NO.	2	24.826
038	7850	04-116	001	3008	2-04-116-U8143	00	00	SHEET 3.15MM	IS1079 D	NO.	6	73.590
039	7850	04-116	001	3009	2-04-116-U8143	00	00	SHEET 3.15MM	IS1079 D	NO.	6	68.994
040	7850	04-116	001	3010	3-04-116-U8346	00	00	FLAT BAR		NO.	12	115.848
041	7850	04-116	001	3601	3-04-116-U8346	00	00	PLATE 10.0 MM	IS2062E250GRA	NO.	12	107.640
042	7850	04-116	001	3602	4-04-116-U8337	00	00	ROUND 22MM	SA105	NO.	108	8.208
043	7850	04-116	001	3011	3-04-116-U8345	00	00	FLAT BAR		NO.	2	17.074

Details of Drum Internals to be fabricated

Ref : OS/19-20/Drum Internals/12 & 30/64

Date : 05.10.2019

Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
044	7850	04-116	001	3701	3-04-116-U8345	00	00	PLATE 10.0 MM	IS2062E250GRA	NO.	2	15.858
045	7850	04-116	001	3702	4-04-116-U8337	00	00	ROUND 22MM	SA105	NO.	16	1.216
046	7850	04-116	001	3012	3-04-116-U8344	00	00	FLAT BAR		NO.	10	93.280
047	7850	04-116	001	3801	3-04-116-U8344	00	00	PLATE 10.0 MM	IS2062E250GRA	NO.	10	87.200
048	7850	04-116	001	3802	4-04-116-U8337	00	00	ROUND 22MM	SA105	NO.	80	6.080
049	7850	04-116	001	3013	0-04-116-U8052	00	00	NUT -M16	IS-1363(P-3)	NO.	240	7.200
050	7850	04-116	001	3014	0-04-116-U8052	00	00	PUN WASHER-M16	IS-2016	NO.	240	2.400
051	7850	04-116	001	3015	4-04-116-U8335	00	00	CLAMP		NO.	80	37.360
052	7850	04-116	001	3901	4-04-116-U8335	00	00	PLATE 20.0 MM	IS2062E250A(FE410W)	NO.	80	36.240
053	7850	04-116	001	3902	4-04-116-U8335	00	00	ROD D 6.0 MM	IS2062FE410GRA	NO.	80	0.640
054	7850	04-116	001	3903	4-04-116-U8335	00	00	SHEET 3.15MM	IS1079 D	NO.	80	0.480
055	7850	04-116	001	3016	4-04-116-U8336	00	00	CLAMP		NO.	150	70.350
056	7850	04-116	001	4001	4-04-116-U8336	00	00	PLATE 20.0 MM	IS2062E250A(FE410W)	NO.	150	67.950
057	7850	04-116	001	4002	4-04-116-U8336	00	00	ROD D 6.0 MM	IS2062FE410GRA	NO.	300	2.400
058	7850	04-116	001	3017	0-04-116-U8052	00	00	HEX HD SCRU-M12X40	IS-1363(P-2)	NO.	130	6.500
059	7850	04-116	001	3018	0-04-116-U8052	00	00	NUT -M12	IS-1363(P-3)	NO.	130	2.600
060	7850	04-116	001	3019	0-04-116-U8052	00	00	PUN WASHER-M12	IS-2016	NO.	130	1.300
061	7850	04-116	001	2902	41304 12000	00	00	NUT -M12	IS-1363(P-3)	NO.	1150	23.000
062	7850	04-116	001	2903	41408 12000	00	00	PUN WASHER-M12	IS-2016	NO.	1000	10.000
063	7850	04-116	001	2904	2-04-116-U8132	00	00	END COVER (BOTTOM)		NO.	2	9.054
064	7850	04-116	001	4101	2-04-116-U8132	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	2	7.254
065	7850	04-116	001	4102	2-04-116-U8132	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	2	1.800
066	7850	04-116	001	2905	3-04-116-U8317	00	00	CBD PIPE		NO.	1	4.597
067	7850	04-116	001	4201	3-04-116-U8317	00	00	PIPE OD 48.3 X 5.08	SA106GRB	NO.	1	2.586
068	7850	04-116	001	4202	3-04-116-U8317	00	00	PIPE OD 48.3 X 5.08	SA106GRB	NO.	1	2.011
069	7850	04-116	001	2906	3-04-116-U8347	00	00	PHOSPHATE DOSING PIPE		NO.	1	2.389
070	7850	04-116	001	4301	3-04-116-U8347	00	00	TUBE OD 31.80 X 4.00	SA213TP304H	NO.	1	1.344
071	7850	04-116	001	4302	3-04-116-U8347	00	00	TUBE OD 31.80 X 4.00	SA213TP304H	NO.	1	1.045
072	7850	04-116	001	2907	2-04-116-U8145	00	00	FINAL SCRUBBER ASSY. (10")		NO.	36	359.892
073	7850	04-116	001	4401	2-04-116-U8145	00	00	SHEET 1.6 MM	IS513D	NO.	612	316.404
074	7850	04-116	001	4402	2-04-116-U8145	00	00	TUBE 14X2	SA210GRA1	NO.	2304	25.344
075	7850	04-116	001	4403	4-04-116-U8331	00	00	DIA 8 MM	IS2062FE410GRA	NO.	144	17.280
076	7850	04-116	001	4404	2-04-116-U8145	00	00	NUT -M 6	IS-1363(P-3)	NO.	288	0.864
077	7850	04-116	001	2908	41222 12030	00	00	HEX HD SCRU-M12X30	IS-1363(P-2)	NO.	250	10.250
078	7850	04-116	001	2909	3-04-116-U8320	00	00	PERFORATED PLATE ASSY		NO.	2	94.810
079	7850	04-116	001	4501	3-04-116-U8319	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	2	92.394
080	7850	04-116	001	4502	3-04-116-U8320	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	4	0.768
081	7850	04-116	001	4503	41222 12030	00	00	HEX HD SCRU-M12X30	IS-1363(P-2)	NO.	8	0.328
082	7850	04-116	001	4504	3-04-116-U8320	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	12	1.320
083	7850	04-116	001	2910	3-04-116-U8321	00	00	PLATE 6MM	IS2062E250A(FE410W)	NO.	2	59.000
084	7850	04-116	001	2911	3-04-116-U8322	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	1	43.500
085	7850	04-116	001	2912	3-04-116-U8323	00	00	FEED HEADER		NO.	1	135.868
086	7850	04-116	001	4601	3-04-116-U8323	00	00	OD PIPE DIA 127.00 X 12.50	SA106GRB	NO.	1	134.102
087	7850	04-116	001	4602	3-04-116-U8323	00	00	PLATE 5.00 MM	IS2062E250A(FE410W)	NO.	2	1.766
088	7850	04-116	001	2913	2-04-116-U8133	00	00	PHOSPHATE DOSING HEADER ASS		NO.	1	33.214
089	7850	04-116	001	4701	2-04-116-U8133	00	00	TUBE OD 31.80 X 4.00	SA213TP304H	NO.	1	21.499

Details of Drum Internals to be fabricated

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Date : 05.10.2019

Sl. No	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
090	7850	04-116	001	4702	2-04-116-U8133	00	00	TUBE OD 31.80 X 4.00	SA213TP304H	NO.	1	0.370
091	7850	04-116	001	4703	2-04-116-U8133	00	00	TUBE OD 31.80 X 4.00	SA213TP304H	NO.	1	11.305
092	7850	04-116	001	4704	2-04-116-U8133	00	00	SHEET 4.00 MM	IS1079 D	NO.	2	0.040
093	7850	04-116	001	2914	4-04-116-U8329	00	00	CS ROUND BAR DIA 16	IS2062GRA	NO.	120	12.720
094	7850	04-116	001	2915	3-04-116-U8324	00	00	BENT PLATE		NO.	2	76.684
095	7850	04-116	001	4801	3-04-116-U8324	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	76.000
096	7850	04-116	001	4802	3-04-116-U8324	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	12	0.684
097	7850	04-116	001	2916	3-04-116-U8326	00	00	BOTTOM PLATE ASSY		NO.	1	107.000
098	7850	04-116	001	4901	3-04-116-U8325	00	00	PLATE 5.00 MM	IS2062E250A(FE410W	NO.	1	102.000
099	7850	04-116	001	4902	4-04-116-U8310	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	2.000
100	7850	04-116	001	4903	4-04-116-U8311	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	3	3.000
101	7850	04-116	001	2917	4-04-116-U8330	00	00	ROUND DIA 16	SA105	NO.	40	8.000
102	7850	04-116	001	2918	0-04-116-U8051	00	00	TUBE OD 76.10 X 4.50	SA192	NO.	4	27.932
103	7850	04-116	001	2919	4-04-116-U8300	00	00	FEED PIPE DIA 127.0X12.50	SA106GRB	NO.	1	18.986
104	7850	04-116	001	2920	2-04-116-U8134	00	00	CBD HEADER ASSY		NO.	1	44.360
105	7850	04-116	001	5001	2-04-116-U8134	00	00	PIPE OD 48.3 X 3.68	SA106GRB	NO.	1	28.800
106	7850	04-116	001	5002	2-04-116-U8134	00	00	PIPE OD 48.3 X 3.68	SA106GRB	NO.	1	0.500
107	7850	04-116	001	5003	2-04-116-U8134	00	00	PIPE OD 48.3 X 3.68	SA106GRB	NO.	1	15.000
108	7850	04-116	001	5004	2-04-116-U8134	00	00	SHEET 4.00 MM	IS1079 D	NO.	2	0.060
109	7850	04-116	001	2921	4-04-116-U8301	00	00	SUPPORT PLATE-1	IS2062E250A(FE410W	NO.	2	0.724
110	7850	04-116	001	2922	4-04-116-U8302	00	00	SUPPOER PLATE-2	IS2062E250A(FE410W	NO.	4	2.176
111	7850	04-116	001	2923	4-04-116-U8303	00	00	SUPPORT PLATE-3	IS2062E250A(FE410W	NO.	2	0.724
112	7850	04-116	001	2924	4-04-116-U8304	00	00	SUPPORT PLATE-4	IS2062E250A(FE410W	NO.	4	2.176
113	7850	04-116	001	2925	2-04-116-U8135	00	00	SPIDER PLATE ASSY		NO.	2	15.780
114	7850	04-116	001	5101	2-04-116-U8135	00	00	SHEET 3.15MM	IS1079 D	NO.	2	0.460
115	7850	04-116	001	5102	2-04-116-U8135	00	00	SHEET 3.15MM	IS1079 D	NO.	2	0.920
116	7850	04-116	001	5103	2-04-116-U8135	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	4	7.200
117	7850	04-116	001	5104	2-04-116-U8135	00	00	PLATE 6MM	IS2062E250A(FE410W	NO.	2	7.200
118	7850	04-116	001	2926	2-04-116-U8136	00	00	END COVER (TOP)		NO.	2	14.658
119	7850	04-116	001	5201	2-04-116-U8136	00	00	PLATE 5.00 MM	IS2062E250A(FE410W	NO.	2	12.858
120	7850	04-116	001	5202	2-04-116-U8136	00	00	PLATE 5.00 MM	IS2062E250A(FE410W	NO.	2	1.800
121	7850	04-116	001	2927	0-04-116-U8047	00	00	CENTRIFUGAL SEPARATOR (POT)		NO.	38	422.028
122	7850	04-116	001	5301	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	38	91.960
123	7850	04-116	001	5302	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	38	150.860
124	7850	04-116	001	5303	0-04-116-U8047	00	00	SHEET 2MM D343 / D189	IS1079 D	NO.	38	38.000
125	7850	04-116	001	5304	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	38	11.400
126	7850	04-116	001	5305	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	38	57.000
127	7850	04-116	001	5306	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	380	23.180
128	7850	04-116	001	5307	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	76	1.520
129	7850	04-116	001	5308	0-04-116-U8047	00	00	SHEET 2MM	IS1079 D	NO.	38	0.760
130	7850	04-116	001	5309	0-04-116-U8047	00	00	SHEET 2.5MM	IS1079 D	NO.	38	7.600
131	7850	04-116	001	5310	0-04-116-U8047	00	00	SHEET 2.5MM	IS1079 D	NO.	38	30.400
132	7850	04-116	001	5311	0-04-116-U8047	00	00	SHEET 2.5MM	IS1079 D	NO.	38	3.800
133	7850	04-116	001	5312	0-04-116-U8047	00	00	SHEET 2.5MM	IS1079 D	NO.	38	3.800
134	7850	04-116	001	5313	0-04-116-U8047	00	00	HEX HD SCRU-M 8X25	IS-1363(P-2)	NO.	76	1.064
135	7850	04-116	001	5314	0-04-116-U8047	00	00	NUT -M 8	IS-1363(P-3)	NO.	76	0.380

Details of Drum Internals to be fabricated

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Date : 05.10.2019

Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
136	7850	04-116	001	5315	0-04-116-U8047	00	00	PUN WASHER-M 8	IS-2016	NO.	152	0.304
137	7850	04-116	001	2928	2-04-116-U8146	00	00	SEPARATOR SCRUBBER BOX ASSY		NO.	12	148.632
138	7850	04-116	001	5401	3-04-116-U8349	00	00	SHEET 2MM	IS1079 D	NO.	12	25.680
139	7850	04-116	001	5402	4-04-116-U8332	00	00	SHEET 2MM	IS1079 D	NO.	24	12.168
140	7850	04-116	001	5403	4-04-116-U8333	00	00	SHEET 2MM	IS1079 D	NO.	12	1.728
141	7850	04-116	001	5404	4-04-116-U8334	00	00	SHEET 2MM	IS1079 D	NO.	12	2.400
142	7850	04-116	001	5405	3-04-116-U8350	00	00	SHEET 2MM	IS1079 D	NO.	24	3.192
143	7850	04-116	001	5406	2-04-116-U8147	00	00	SEPARATOR SCRUBBER ASSEMBL		NO.	12	87.264
144	7850	04-116	001	5501	2-04-116-U8147	00	00	SHEET 1.0 MM	IS513D/IS513O	NO.	468	80.496
145	7850	04-116	001	5502	2-04-116-U8147	00	00	TUBE 14X2	SA210GRA1	NO.	936	3.744
146	7850	04-116	001	5503	4-04-116-U8331	00	00	DIA 8 MM	IS2062FE410GRA	NO.	24	2.880
147	7850	04-116	001	5504	2-04-116-U8147	00	00	NUT -M 6	IS-1363(P-3)	NO.	48	0.144
148	7850	04-116	001	5407	2-04-116-U8146	00	00	HEX HD SCRU-M16X25	IS-1363(P-2)	NO.	12	0.852
149	7850	04-116	001	5408	2-04-116-U8146	00	00	NUT -M16	IS-1363(P-3)	NO.	12	0.360
150	7850	04-116	001	5409	3-04-116-U8351	00	00	SHEET 2MM	IS1079 D	NO.	12	14.988
151	7850	04-116	001	2929	0-04-116-U8051	00	00	NUT -M12	IS-1363(P-3)	NO.	50	1.000
152	7850	04-116	001	2930	0-04-116-U8051	00	00	PUN WASHER-M12	IS-2016	NO.	50	0.500
153	7850	04-116	001	2931	0-04-116-U8051	00	00	HEX HD SCRU M12X125	IS:1363(P-2)	NO.	50	4.650
154	7850	04-116	001	2932	3-04-116-U8348	00	00	STRAP		NO.	76	23.408
155	7850	04-116	001	5601	3-04-116-U8348	00	00	SHEET 2MM	IS1079 D	NO.	76	15.808
156	7850	04-116	001	5602	3-04-116-U8348	00	00	ANGLE 40 X 40 X 5	IS2062E250A(FE410W	NO.	76	7.600
157	7850	04-116	001	2933	4-04-116-U8305	00	00	SUPPORT PLATE-5	IS2062E250A(FE410W	NO.	6	9.942
001	7851	04-114	001	9004	0-04-114-U8015	00	00	UPPER DRUM INTERNALS		NO.	1	1,198.436
002	7851	04-114	001	1501	2-04-114-U8040	00	00	CORRUGATED SHEET BASKET ASS		NO.	35	548.800
003	7851	04-114	001	1601	2-04-114-U8040	00	00	TOP COVER PLATE 5THK. X	IS2062E250A(FE410W	NO.	35	56.000
004	7851	04-114	001	1602	2-04-114-U8040	00	00	END PLATE 5THK. X	IS2062E250A(FE410W	NO.	70	105.000
005	7851	04-114	001	1603	2-04-114-U8040	00	00	BOTTOM COVER PLATE 5THK. X	IS2062E250A(FE410W	NO.	35	38.500
006	7851	04-114	001	1604	2-04-114-U8040	00	00	ROD D6	IS2062FE410GRA	NO.	140	7.000
007	7851	04-114	001	1605	1-04-114-U8012	00	01	CORRUGATED SHEET 0.63THK.	IS513D	NO.	1,015	165.445
008	7851	04-114	001	1606	1-04-114-U8012	00	02	CORRUGATED SHEET 0.63THK.	IS513D	NO.	1,085	176.855
009	7851	04-114	001	1502	3-04-114-U8093	00	00	BENT PANEL		NO.	4	139.496
010	7851	04-114	001	1701	3-04-114-U8093	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	4	124.056
011	7851	04-114	001	1702	3-04-114-U8093	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	15.200
012	7851	04-114	001	1703	3-04-114-U8093	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	0.240
013	7851	04-114	001	1503	3-04-114-U8094	00	00	BENT PANEL		NO.	1	13.600
014	7851	04-114	001	1801	3-04-114-U8094	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	12.100
015	7851	04-114	001	1802	3-04-114-U8094	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	1.500
016	7851	04-114	001	1504	3-04-114-U8104	00	06	ANGLE ISA 50X50X6	IS2062E250A(FE410W	NO.	1	37.000
017	7851	04-114	001	1505	2-04-114-U8041	00	01	END PLATE		NO.	1	11.000
018	7851	04-114	001	1901	2-04-114-U8041	00	01	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	10.400
019	7851	04-114	001	1902	2-04-114-U8041	00	01	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
020	7851	04-114	001	1903	2-04-114-U8041	00	01	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
021	7851	04-114	001	1904	2-04-114-U8041	00	01	PLATE 5X38X52	IS2062E250A(FE410W	NO.	1	0.100
022	7851	04-114	001	1506	2-04-114-U8041	00	02	END PLATE		NO.	1	11.000
023	7851	04-114	001	2001	2-04-114-U8041	00	02	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	10.400

Details of Drum Internals to be fabricated

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Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
024	7851	04-114	001	2002	2-04-114-U8041	00	02	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
025	7851	04-114	001	2003	2-04-114-U8041	00	02	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
026	7851	04-114	001	2004	2-04-114-U8041	00	02	PLATE 5X38X52	IS2062E250A(FE410W	NO.	1	0.100
027	7851	04-114	001	1507	3-04-114-U8090	00	00	BENT STRIP		NO.	1	1.825
028	7851	04-114	001	2101	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	1.000
029	7851	04-114	001	2102	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
030	7851	04-114	001	2103	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.075
031	7851	04-114	001	2104	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.250
032	7851	04-114	001	2105	3-04-114-U8090	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
033	7851	04-114	001	1508	3-04-114-U8091	00	00	BENT STRIP		NO.	1	1.825
034	7851	04-114	001	2201	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	1.000
035	7851	04-114	001	2202	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.300
036	7851	04-114	001	2203	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.075
037	7851	04-114	001	2204	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.250
038	7851	04-114	001	2205	3-04-114-U8091	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.200
039	7851	04-114	001	1509	4-04-114-U8067	00	00	STRIP 5THK. X	IS2062E250A(FE410W	NO.	2	1.000
040	7851	04-114	001	1510	3-04-114-U8095	00	00	PANEL		NO.	4	45.600
041	7851	04-114	001	2301	3-04-114-U8095	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	44.000
042	7851	04-114	001	2302	3-04-114-U8095	00	00	SHEET 3.15THK. X	IS1079 D	NO.	8	1.600
043	7851	04-114	001	1511	3-04-114-U8096	00	00	PANEL		NO.	1	4.400
044	7851	04-114	001	2401	3-04-114-U8096	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	4.000
045	7851	04-114	001	2402	3-04-114-U8096	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	0.400
046	7851	04-114	001	1512	3-04-114-U8097	00	00	BENT PANEL		NO.	4	93.056
047	7851	04-114	001	2501	3-04-114-U8097	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	75.600
048	7851	04-114	001	2502	3-04-114-U8097	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	14.400
049	7851	04-114	001	2503	3-04-114-U8097	00	00	SHEET 3.15THK. X	IS1079 D	NO.	8	2.400
050	7851	04-114	001	2504	3-04-114-U8097	00	00	PLATE 6THK. X	IS2062E250A(FE410W	NO.	8	0.656
051	7851	04-114	001	1513	3-04-114-U8101	00	00	BENT PANEL		NO.	1	8.982
052	7851	04-114	001	2601	3-04-114-U8101	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	7.000
053	7851	04-114	001	2602	3-04-114-U8101	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	1.300
054	7851	04-114	001	2603	3-04-114-U8101	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	0.600
055	7851	04-114	001	2604	3-04-114-U8101	00	00	PLATE 6THK. X	IS2062E250A(FE410W	NO.	1	0.082
056	7851	04-114	001	1514	3-04-114-U8092	00	00	BENT PANEL		NO.	2	36.200
057	7851	04-114	001	2701	3-04-114-U8092	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	29.200
058	7851	04-114	001	2702	3-04-114-U8092	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	5.800
059	7851	04-114	001	2703	3-04-114-U8092	00	00	SHEET 3.15THK. X	IS1079 D	NO.	4	1.200
060	7851	04-114	001	1515	3-04-114-U8099	00	00	BENT PANEL		NO.	1	18.400
061	7851	04-114	001	2801	3-04-114-U8099	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	15.000
062	7851	04-114	001	2802	3-04-114-U8099	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	2.800
063	7851	04-114	001	2803	3-04-114-U8099	00	00	SHEET 3.15THK. X	IS1079 D	NO.	2	0.600
064	7851	04-114	001	1516	2-04-114-U8042	00	06	BENT SUPPORT BAR		NO.	1	64.700
065	7851	04-114	001	2901	2-04-114-U8042	00	06	PLATE 6THK. X	IS2062E250A(FE410W	NO.	1	56.500
066	7851	04-114	001	2902	2-04-114-U8042	00	06	SHEET 3.15THK.	IS1079 D	NO.	1	8.200
067	7851	04-114	001	1517	4-04-114-U8076	00	00	DRAIN TUBE OD33.4X 3.38THK. X	SA106GRB	NO.	17	23.800
068	7851	04-114	001	1518	4-04-114-U8068	00	01	SUPPORT BAR 50X6	IS2062FE410GRA	NO.	14	7.000
069	7851	04-114	001	1519	4-04-114-U8068	00	02	SUPPORT BAR 50X6	IS2062FE410GRA	NO.	9	5.850

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Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
070	7851	04-114	001	1520	4-04-114-U8064	00	01	FLAT 50X6	IS2062FE410GRA	NO.	5	3.000
071	7851	04-114	001	1521	4-04-114-U8072	00	00	END COVER 5THK. X	IS2062E250A(FE410W	NO.	1	14.000
072	7851	04-114	001	1522	4-04-114-U8069	00	00	END COVER 5THK. X	IS2062E250A(FE410W	NO.	1	11.000
073	7851	04-114	001	1523	4-04-114-U8060	00	00	END PLATE		NO.	1	1.300
074	7851	04-114	001	3001	4-04-114-U8060	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.700
075	7851	04-114	001	3002	4-04-114-U8060	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	1	0.600
076	7851	04-114	001	1524	3-04-114-U8081	00	00	CBD HEADER		NO.	1	14.562
077	7851	04-114	001	3101	3-04-114-U8081	00	00	TUBE D27.3X2.65	IS1239&IS1161	NO.	1	13.200
078	7851	04-114	001	3102	3-04-114-U8081	00	00	TUBE D27.3X2.65	IS1239&IS1161	NO.	1	0.400
079	7851	04-114	001	3103	3-04-114-U8081	00	00	TUBE D27.3X2.65	IS1239&IS1161	NO.	1	0.160
080	7851	04-114	001	3104	3-04-114-U8081	00	00	SHEET 3.15THK. X	IS1079 D	NO.	1	0.010
081	7851	04-114	001	3105	3-04-114-U8081	00	00	PLATE 5THK. X	IS2062E250A(FE410W	NO.	9	0.792
082	7851	04-114	001	1525	3-04-114-U8100	00	00	FEED HEADER		NO.	1	42.610
083	7851	04-114	001	3201	3-04-114-U8100	00	00	TUBE D63.5X3.2THK. X	SA192	NO.	1	42.410
084	7851	04-114	001	3202	3-04-114-U8100	00	00	SHEET 4THK.XD57	IS1079 D	NO.	2	0.200
085	7851	04-114	001	1526	3-04-114-U8098	00	00	FEED TUBE		NO.	1	1.830
086	7851	04-114	001	3301	3-04-114-U8098	00	00	TUBE D51X4	SA192	NO.	1	1.200
087	7851	04-114	001	3302	3-04-114-U8098	00	00	TUBE D51X4	SA192	NO.	1	0.630
088	7851	04-114	001	1527	0-04-114-U8015	00	00	WASHER PNCHD A12	IS-2016	NO.	220	2.200
089	7851	04-114	001	1528	4-04-114-U8070	00	00	FEED SUPPORT ISA 50X50X6	IS2062E250A(FE410W	NO.	8	7.200
090	7851	04-114	001	1529	4-04-114-U8071	00	00	U ROD D 16	IS2062FE410GRA	NO.	8	3.200
091	7851	04-114	001	1530	0-04-114-U8015	00	00	SCRU HEX GR C4.6 M12X40	IS-1363(P-1)	NO.	220	11.000
092	7851	04-114	001	1531	0-04-114-U8015	00	00	NUT HEX GR C M12	IS-1363(P-1)	NO.	220	11.000
093	7851	04-114	001	1532	4-04-114-U8064	00	02	FLAT 50X6	IS2062FE410GRA	NO.	5	2.000
001	7885	04-114	001	9004	0-04-114-U8027	00	00	UPPER DRUM INTERNALS		NO.	1	2,002.693
002	7885	04-114	001	1501	2-04-114-U8048	00	00	CORRUGATED SHEET BASKET ASS		NO.	70	1,072.960
003	7885	04-114	001	1601	2-04-114-U8048	00	00	TOP COVER PL. 5 THK.X	IS2062E250A(FE410W	NO.	70	112.000
004	7885	04-114	001	1602	2-04-114-U8048	00	00	END PLATE 5 THK X	IS2062E250A(FE410W	NO.	140	210.000
005	7885	04-114	001	1603	2-04-114-U8048	00	00	BOTTOM COVER PLATE 5 THK. X	IS2062E250A(FE410W	NO.	70	77.000
006	7885	04-114	001	1604	2-04-114-U8048	00	00	ROD D 6	IS2062FE410GRA	NO.	280	14.560
007	7885	04-114	001	1605	1-04-114-U8018	00	01	CORRUGATED SHT. 0.63THK. X IS 5	IS513D	NO.	2,030	318.710
008	7885	04-114	001	1606	1-04-114-U8018	00	02	CORRUGATED SHT. 0.63THK. X IS 5	IS513D	NO.	2,170	340.690
009	7885	04-114	001	1502	3-04-114-U8124	00	00	BENT PANEL		NO.	8	243.696
010	7885	04-114	001	1701	3-04-114-U8124	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	8	243.200
011	7885	04-114	001	1702	3-04-114-U8124	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	8	0.496
012	7885	04-114	001	1503	3-04-114-U8125	00	00	BENT PANEL 5 THK. X	IS2062E250A(FE410W	NO.	2	23.800
013	7885	04-114	001	1504	4-04-114-U8108	00	00	ANGLE ISA 50X50X6	IS2062E250A(FE410W	NO.	2	74.000
014	7885	04-114	001	1505	2-04-114-U8052	00	00	END PLATE		NO.	2	14.040
015	7885	04-114	001	1801	2-04-114-U8052	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	11.800
016	7885	04-114	001	1802	2-04-114-U8052	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	4	0.840
017	7885	04-114	001	1803	2-04-114-U8052	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	4	1.120
018	7885	04-114	001	1804	2-04-114-U8052	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	4	0.280
019	7885	04-114	001	1506	3-04-114-U8126	00	00	END PLATE		NO.	2	3.430
020	7885	04-114	001	1901	3-04-114-U8126	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	1.400
021	7885	04-114	001	1902	3-04-114-U8126	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.400

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Sl. No.	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
022	7885	04-114	001	1903	3-04-114-U8126	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.560
023	7885	04-114	001	1904	3-04-114-U8126	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.150
024	7885	04-114	001	1905	3-04-114-U8126	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	4	0.920
025	7885	04-114	001	1507	3-04-114-U8127	00	00	END PLATE		NO.	2	3.430
026	7885	04-114	001	2001	3-04-114-U8127	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	1.400
027	7885	04-114	001	2002	3-04-114-U8127	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.400
028	7885	04-114	001	2003	3-04-114-U8127	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.560
029	7885	04-114	001	2004	3-04-114-U8127	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.150
030	7885	04-114	001	2005	3-04-114-U8127	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	4	0.920
031	7885	04-114	001	1508	4-04-114-U8106	00	00	STRIP PL 5 THK. X	IS2062E250A(FE410W	NO.	4	2.000
032	7885	04-114	001	1509	3-04-114-U8128	00	00	PANEL		NO.	4	68.000
033	7885	04-114	001	2101	3-04-114-U8128	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	4	65.600
034	7885	04-114	001	2102	3-04-114-U8128	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	8	2.400
035	7885	04-114	001	1510	3-04-114-U8129	00	00	PANEL		NO.	1	6.800
036	7885	04-114	001	2201	3-04-114-U8129	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	6.200
037	7885	04-114	001	2202	3-04-114-U8129	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.600
038	7885	04-114	001	1511	3-04-114-U8130	00	00	BENT PANEL		NO.	4	79.520
039	7885	04-114	001	2301	3-04-114-U8130	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	4	64.000
040	7885	04-114	001	2302	3-04-114-U8130	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	4	12.800
041	7885	04-114	001	2303	3-04-114-U8130	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	8	2.000
042	7885	04-114	001	2304	3-04-114-U8130	00	00	PLATE 6 THK. X	IS2062E250A(FE410W	NO.	8	0.720
043	7885	04-114	001	1512	3-04-114-U8131	00	00	BENT PANEL		NO.	1	7.970
044	7885	04-114	001	2401	3-04-114-U8131	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	6.150
045	7885	04-114	001	2402	3-04-114-U8131	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	1.230
046	7885	04-114	001	2403	3-04-114-U8131	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.500
047	7885	04-114	001	2404	3-04-114-U8131	00	00	PLATE 6 THK. X	IS2062E250A(FE410W	NO.	1	0.090
048	7885	04-114	001	1513	3-04-114-U8132	00	00	BENT PANEL		NO.	2	32.720
049	7885	04-114	001	2501	3-04-114-U8132	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	26.800
050	7885	04-114	001	2502	3-04-114-U8132	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	4.800
051	7885	04-114	001	2503	3-04-114-U8132	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	4	1.120
052	7885	04-114	001	1514	3-04-114-U8133	00	00	BENT PANEL		NO.	1	16.994
053	7885	04-114	001	2601	3-04-114-U8133	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	13.900
054	7885	04-114	001	2602	3-04-114-U8133	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	2.500
055	7885	04-114	001	2603	3-04-114-U8133	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.594
056	7885	04-114	001	1515	3-04-114-U8134	00	00	BENT PANEL		NO.	2	29.820
057	7885	04-114	001	2701	3-04-114-U8134	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	24.000
058	7885	04-114	001	2702	3-04-114-U8134	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	4.900
059	7885	04-114	001	2703	3-04-114-U8134	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	4	0.920
060	7885	04-114	001	1516	3-04-114-U8135	00	00	BENT PANEL		NO.	1	15.530
061	7885	04-114	001	2801	3-04-114-U8135	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	12.520
062	7885	04-114	001	2802	3-04-114-U8135	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	2.550
063	7885	04-114	001	2803	3-04-114-U8135	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.460
064	7885	04-114	001	1517	3-04-114-U8140	00	00	BENT PANEL		NO.	1	55.790
065	7885	04-114	001	2901	3-04-114-U8140	00	00	PLATE 6 THK. X	IS2062E250A(FE410W	NO.	1	48.000
066	7885	04-114	001	2902	3-04-114-U8140	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	1	7.500
067	7885	04-114	001	2903	3-04-114-U8140	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.150

Details of Drum Internals to be fabricated

Ref : OS/19-20/Drum Internals/12 & 30/64

Date : 05.10.2019

Sl. No	CUST	PGMA	DU	PART	DRAWING_NO	REV	VAR	DUPART_DESC	MATL_DESC	UNIT	QTY	WEIGHT
068	7885	04-114	001	2904	3-04-114-U8140	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.080
069	7885	04-114	001	2905	3-04-114-U8140	00	00	SHEET 3.15 THK. X	IS1079 D	NO.	2	0.060
070	7885	04-114	001	1518	4-04-114-U8115	00	00	DRAIN TUBE OD 31.8 X4.5 THK. X	SA210GRA1	NO.	34	59.840
071	7885	04-114	001	1519	4-04-114-U8116	00	00	SUPPORT PLATE 6THK X	IS2062E250A(FE410W	NO.	9	4.500
072	7885	04-114	001	1520	4-04-114-U8117	00	00	SUPPORT PLATE 6THK X	IS2062E250A(FE410W	NO.	9	5.400
073	7885	04-114	001	1521	4-04-114-U8118	00	00	SUPPORT PLATE 6THK X	IS2062E250A(FE410W	NO.	6	4.320
074	7885	04-114	001	1522	3-04-114-U8136	00	00	END COVER PL 5 THK X	IS2062E250A(FE410W	NO.	1	14.500
075	7885	04-114	001	1523	4-04-114-U8119	00	00	END COVER PL 5 THK X	IS2062E250A(FE410W	NO.	1	0.700
076	7885	04-114	001	1524	4-04-114-U8120	00	00	END PLATE 5 THK X	IS2062E250A(FE410W	NO.	1	7.400
077	7885	04-114	001	1525	3-04-114-U8137	00	00	CBD HEADER		NO.	1	23.353
078	7885	04-114	001	3001	3-04-114-U8137	00	00	PIPE OD 33.4 X 3.38 THK. X	SA106GRB	NO.	1	21.000
079	7885	04-114	001	3002	3-04-114-U8137	00	00	PIPE OD 33.4 X 3.38 THK. X	SA106GRB	NO.	1	0.495
080	7885	04-114	001	3003	3-04-114-U8137	00	00	PIPE OD 33.4 X 3.38 THK. X	SA106GRB	NO.	1	0.821
081	7885	04-114	001	3004	3-04-114-U8137	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	1	0.029
082	7885	04-114	001	3005	3-04-114-U8137	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	9	1.008
083	7885	04-114	001	1526	3-04-114-U8138	00	00	FEED HEADER		NO.	1	82.530
084	7885	04-114	001	3101	3-04-114-U8138	00	00	TUBE OD 76.1 X 5TK X	SA210GRC	NO.	1	82.230
085	7885	04-114	001	3102	3-04-114-U8138	00	00	PLATE 5 THK. X	IS2062E250A(FE410W	NO.	2	0.300
086	7885	04-114	001	1527	3-04-114-U8139	00	00	FEED TUBE		NO.	1	5.350
087	7885	04-114	001	3201	3-04-114-U8139	00	00	TUBE OD 76.1 X 5TK X	SA210GRC	NO.	1	3.000
088	7885	04-114	001	3202	3-04-114-U8139	00	00	TUBE OD 76.1 X 5TK X	SA210GRC	NO.	1	2.350
089	7885	04-114	001	1528	4-04-114-U8121	00	00	FEED SUPPORT ANGLE ISA 50X50	IS2062E250A(FE410W	NO.	10	13.000
090	7885	04-114	001	1529	4-04-114-U8122	00	00	U-ROD DIA 16	IS2062FE410GRA	NO.	10	5.300
091	7885	04-114	001	1530	0-04-114-U8027	00	00	HEX HD SCRU-M12X40 -4.6-IS1363P2	IS-1363(P-2)	NO.	280	14.000
092	7885	04-114	001	1531	0-04-114-U8027	00	00	NUT -M12 -CL4-IS1363P3	IS-1363(P-3)	NO.	300	6.000
093	7885	04-114	001	1532	0-04-114-U8027	00	00	PUN WASHER-M12 -IS2016-A	IS-2016	NO.	200	2.000
094	7885	04-114	001	1533	0-04-114-U8027	00	00	TAPER WASHER 14 IS:5372	IS:5372	NO.	200	4.000
								TOTAL				7,043.723

GENERAL TERMS & CONDITIONS**1. TECHNICAL DELIVERY CONDITIONS :**

The work should conform to the technical data given in our drawings, GMS, Shipping List Specifications, QAP, WPS etc.

2. PARTY'S SCOPE :

The scope of the party shall be as follows: -

- a) All welding equipments, baking oven, tools, jigs and fixtures, measuring instruments duly calibrated, handling facilities, testing facilities etc.
- b) All materials other than those mentioned under "Free Issue Materials", which are required for completion of the work.
- c) All consumables such as electrodes, gases, grinding wheels etc.

Note : Electrodes of specification mentioned in the drawings / WPS and of BHEL approved brands only shall be used.

3. REVISION OF DRAWINGS :

There may be minor changes in the drawings during execution. In such a case, party should accommodate the same without any extra claim.

4. WELDING QUALIFICATION : Qualification of required number of Welders is party's responsibility at their cost.**5. X-RAY :**

All welding shall be of X-ray quality where specified on drawings. Inspection would specify the quantum of X-ray based on drawings / code requirement. Party should strictly follow the WPS and QAP supplied by BHEL during welding. Getting the welds radiographed and getting them cleared by inspection is the responsibility of the party.

6. RECTIFICATIONS / REJECTIONS :

Any rectification due to defective work, if required, shall be done by the party free of charge with a suitable technology approved before hand by BHEL in writing. The cost of material, if any used for rectification work / rejection work, will be estimated by BHEL and the same shall be debited to party's account. In case any rectification / rework is to be carried out due to defective material supplied by BHEL, the replacement material and consumables will be supplied by BHEL free of Cost.

7. SECURITY DEPOSIT :

Vendors shall have to submit a Bank Guarantee (BG) / Fixed Deposit Receipt (FDR) for **10%** of the order value in case of **HPVP ADM site** or **25%** of the material cost in case of Vendor works towards Security Deposit and safe custody of materials within one week from the date of issue of Order. The BG/FDR shall be valid for the contract period with a claim period of 3 months. This BG/FDR shall be released to the contractor after completion of work and on acceptance of the same by BHEL / Owner and on submission of Performance BG for 10 % of the order value covering for the defects liability period. If PBG is not submitted, 10% of the order value shall be deducted towards PBG from final bill.

8. RAW MATERIALS ISSUE :

Raw materials shall be issued with appropriate processing allowance and invisible wastage over the theoretical requirement of raw materials (**Plates, Sheets, Sections and Pipes**).

9. TRANSFER / RETURN OF LEFT OVER MATERIALS :

Party should maintain proper records for receipt & use of all free issue materials. The left over materials & scrap as per the material accounting statement shall be returned to HPVP stores along with finished job. Material Transfer Vouchers (MTV) from one order to another or from one vendor to another and Material Return Vouchers should be submitted immediately after transfer / return. The material reconciliation statement shall be submitted by the contractor after verification and certification by BHEL along with the final bill **within 30 days from the date of completion of work**. Otherwise, recovery for the balance materials shall be made from any of their pending bills without further intimation.

10. MATERIAL RECONCILIATION :

Orders issued to the vendors have to be completed in all respects including Material Accounting within a maximum of **180 days** from the **date of issue of the first material** from BHEL - HPVP stores. This is a statutory requirement under Central Excise Rules and must be strictly complied with.

Maximum of 0.5 % on the requirement of materials (**Plates, Sections and Pipes**) is admitted towards **process allowance and invisible wastage**.

Scrap quantity is permissible up to a **maximum of 1% on Structural (Beams, Channels, Angles, Rods, Pipes etc.), 2% on Sheets, 3% for Plates** on the theoretical requirement of materials.

If wastage and scrap is beyond the above limits, it should be fully justified with cutting diagrams etc. which are to be approved in advance by BHEL. **Otherwise, the cost of raw materials beyond approved limits will be recovered from the contractor as per BHEL recovery rates including applicable taxes & duties.**

Material reconciliation including return of balance materials, off-cuts is to be completed within 20 days from the date of completion of the order. The material reconciliation statement shall be submitted by the contractor after verification and certification by BHEL-HPVP along with the final bill **within 30 days from the date of completion of work**. Otherwise, recovery for the balance materials shall be made from any of their pending bills without further intimation,

Repeated occurrence of inordinate delays in returning and settling the material accounting will entail BHEL the right to terminate the contract forthwith or impose a temporary suspension on further loading at the discretion of BHEL.

11. SCRAP & OFFCUT NORMS :

Sl. No.	Description	Scrap Size (in mm)	Off-Cut (in MM)
1.	CS/AS Sheets & Plates	Below 500 × 250	500 × 250 & above
2.	Rolled sections Rod, angles etc. (other than -tubes, pipes)	Below 1000	1000 & above
3.	Tubes & Pipes	Below 500	500 & above
4.	Universal column	Below 1000	1000 & Above
5.	SS Sheets & Plates	Below 500 × 250	500 × 250 & above
6.	SS Structural, Rods, Tubes, Pipes	Below 250	250 & above
7.	Non – ferrous: sheets & plates, rods & tubes	Below 500 × 250 (S & PL), Below 250 (Rods & Tubes)	500 × 250 & above, 250 & above
8.	Big size Scrap	(2500 & above) × (150 to 249)	-

12. INSPECTION :

Party shall contact our Quality Control Dept. for stages of inspection before commencement of job and should strictly follow the stages of inspection as per QAP.

13. WORKMANSHIP GUARANTEE :

The vendors should give workmanship guarantee for fabricated items for a period of 18 months from the date of last delivery of the order or 12 months from the date of commissioning, whichever is earlier. Any defects due to incomplete work, faulty workmanship found in the fabricated items after delivery during the defects liability period shall be rectified / replaced by the vendor free of cost. Otherwise, the expenditure incurred towards the same will be recovered from the pending bills of vendors.

14. WORK PROGRESS :

The fabricator shall furnish a weekly report on the progress of work along with the status of availability of free issue materials and requirement of further materials, if any.

Outsourcing dept. personnel will visit vendor's works from time to time to assess and review the work progress. Free access shall be provided to BHEL or its inspection agency at all reasonable times of the day / night.

In case the progress is not satisfactory or supplies are delayed abnormally beyond the contractual delivery date, BHEL-HPVP, Visakhapatnam reserves the right to cancel the order in part or full or get the balance job in as is where is condition completed elsewhere by another agency at the risk and cost of Fabricator. The value of the work carried out by the party will be assessed by BHEL and the same shall be final. No compensation will be given to the fabricator in case of cancellation of order or diversion of balance job even if the jobs have been processed partly.

15. DELIVERY :

Finished items should be handed over to the Logistics dept. on party's delivery challans along with Job completion certificate / Final Inspection Report from inspection agency / HPVP-QC department.

16. PENALTY :

If delivery exceeds the stipulated delivery schedule, penalty 1/2 % of the total value of order per week or part there of subject to a maximum of 10% on the total value of the order will be levied. However, time taken for the following will not be considered as delay on the part of the Sub-Contractor.

- 1) Intermediate operations, if any, carried out by BHEL.
- 2) Waiting time for BHEL / Third party Inspection beyond a normal time of 3 days.

17. PAYMENT TERMS :

100% payment will be made against delivery of the finished items duly inspected & cleared by Inspection authority along with all inspection documents to Logistics Dept. Payment shall be made within **45 days** from the date of submission of RA Bill.

Only one bill will be admitted for orders with value less than Rs. 5 lakh and for orders of value more than Rs. 5 lakh, a maximum of four RA bills are allowed @ one RA bill for each project after delivery of all DUs of the project.

Vendors shall have to submit the bills in the formats specified by HPVP-Outsourcing and the bills submitted in the specified format along with necessary supporting documents are only admitted for processing. The following documents shall be submitted along with the Final Bill: -

1. No Claim Certificate from the contractor
2. No Dues Certificate from BHEL
3. Work Completion Certificate from BHEL
4. Material Reconciliation Statement submitted by the Contractor and certified by concerned authority of BHEL (if applicable)
5. Workmanship Guarantee certificate from the contractor

18. SECRECY :

All the documents of BHEL inclusive of Drawings, GMS and Standards made available to the fabricator should be kept in strict confidence and under no circumstance be made available to others or allow others to make use of them. Such documents shall be returned to BHEL on demand after completion of the job. This secrecy clause is binding on the employees of the fabricators also. Violation of the same may lead to suspension of business with the vendor and necessary legal action.

19. SUB-LETTING :

In general, sub-letting of jobs will not be permitted. But in special circumstances, this may be allowed. In such case, the party should obtain written approval from BHEL-HPVP, Visakhapatnam before sub-letting.

20. FACTORY RULES AND REGULATIONS :

Party shall abide by all the rules and statutory regulations in force from time to time as per factories act. It shall be party's responsibility to ensure the safety of their workmen and fulfilling the ESI, PF and other relevant statutory regulations.

21. SAFETY :

- a) Contractor shall adhere to safe construction practices, guard against hazardous & unsafe working conditions and shall comply with the safety rules of BHEL and local authorities. He shall maintain First Aid facilities for all his employees and labour. Contractor's responsibility includes supply of welder kit, all safety items such as safety belts, white and colour glasses, goggles, safety helmets, safety shoes etc.
- b) *Contractor and his employees shall follow all fire & safety, security regulations of BHEL.*

22. HOUSE KEEPING :

During execution of work, the contractor at all times keep the working place and storage area clean and free from accumulation of waste materials, rubbish etc.,

23. ACCIDENT / DAMAGE / CONDUCT ETC. :

Contractor will be held responsible for any disorderly conduct / misconduct, indiscipline, theft, smoking etc., on the part of his men. He will ensure summary eviction of such men from his premises failing which BHEL would remove them from the factory on his responsibility. Any damage to and or loss of equipment, machinery, building etc., to BHEL or BHEL employees, visitors or other contractors resulting from his own or any of his men's negligence shall be liable to be made good by him. Contractor shall be solely responsible for any accident in which you or your men or your equipment may be involved during the execution of contract on account of any reason what so ever.

24. TERMINATION OF CONTRACT :

In the event of any failure on the part of the contractor, BHEL reserves the right to terminate the contract by giving a notice of 2 weeks for any of the following lapses and contractual violations: -

- a) Failure to make labour payments in time as per the rules
- b) Failure to progress the job according to the agreed schedule
- c) Failure to mobilize adequate man power, tools & tackles and consumables in time
- d) Failure to adhere to Quality Standards of BHEL
- e) Refused to co-operate with other agencies working in the same area
- f) Failure to resolve labour disputes like strikes etc., within 7 days of occurrence
- g) Failure to comply with statutory regulations applicable at BHEL

BHEL shall also be free to intervene and take necessary remedial measures. All costs incurred with interest and overheads shall be recovered from contractor by such foreclosing or off-loading any part of the contract work.

25. DISPUTES :

Head of BHEL- HPVP Unit will be the final authority for any disputes arising out of this contract. The disputes / arbitration / settlement of contractual or legal issues shall be under the Jurisdiction of Visakhapatnam Court.

26. For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of Contract / PO / WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and / or local content in respect of this procurement, same shall be applicable.

Signature of Bidder with Stamp

Acceptance to Tender Terms & Conditions

I / We hereby confirm that the Tender documents, Drawings, Quality documents etc. have been studied in detail and we have fully understood the scope of work.

I / We accept to all the Terms and Conditions of the Tender Enquiry and the prices quoted are in accordance with the same.

I / We give our acceptance to participate in Reverse Auction in case BHEL decides to opt for reverse auction for this tender.

Tender documents duly signed on all the pages by the Owner / authorized representative of the bidder are attached herewith.

Signature of the Bidder with Stamp

GENERAL TERMS AND CONDITIONS OF RA (REVERSE AUCTION)

BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder.

This will be decided after techno-commercial evaluation. Bidders have to give their acceptance with their offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit ~~Process~~ compliance form (to the designated service provider) as well as ~~Online~~ sealed bid in the Reverse Auction. Non-submission of ~~Process~~ compliance form or ~~Online~~ sealed bid by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of the business dealings with suppliers/ contractors (as available on www.bhel.com).

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. **The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.**

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers / contractors (as available on www.bhel.com).

As a reminder to the bidders, system will flash following message **(in RED Colour)** during the course of ~~online~~ sealed bid

~~Bidders~~ to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL.

Signature of the Bidder with Stamp

GST COMPLIANCE FOR INDIGENOUS SUPPLIERS

1. In Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GSTIN which should be clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
2. Supplier shall mention their GSTIN in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per P0, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.
3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
4. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.
5. All documents like Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment where ever applicable. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.
6. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.
7. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.
8. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number.
9. This is to inform that GST portion of invoice, shall be released only upon Vendor declaring such invoice in his GSTR-1 and receipt of goods and Tax invoice by BHEL and Confirmation of payment of GST thereon by vendor on GSTN portal. Alternatively, BG of appropriate value may be obtained from vendor which shall be valid At least one month after the confirmation of date of payment of GST by vendor on GSTN portal and receipt of Tax invoice and receipt of goods, whichever is later. Above is subject to receipt of goods/service and tax invoice thereof along with vendor declaring invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.
10. That in case vendor delays Declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from vendor/contractor along with interest levied/ leviable on BHEL.

Note : The above will be followed strictly for processing vendor payments to ensure GST Compliance.

Signature of the Bidder with Stamp