



**BHARAT HEAVY ELECTRICALS LIMITED,
TIRUCHIRAPPALLI 620 014
OUTSOURCING DEPARTMENT**

NIT: 2024OSB051
NIC TENDER ID: 2025_BHEL_45981_1
CORRIGENDUM-III

Kindly note the following points w.r.t NIT 2024OSB051.

1. PQR-**Annexure A (Revised)** is attached. Bidder to submit the **REVISED PQR** document alongwith the Offer.
2. As per the Quality document SIP:PP:04/12 published in the tender, DM water is NOT required for Headers in Carbon Steel, P12 and P22 Grade Materials.
3. BOM list is attached.
4. IBR Inspection fees for Boiler Pressure-parts components is in Bidder Scope if the location of the Vendor Works is outside Tamil Nadu. Once the payment is made, the vendor should submit a copy of fees payment letter to us (BHEL, Trichy) specifying the Heating surface area (HSA) of the pressure parts for which the fees have been paid. Final IBR Form IIIH for Headers will be in vendor's scope.
5. The following Part Drawings are attached.
 - 1-19-783-02981
 - 1-19-763-02985
6. Bidder to refer the standard drawings 1-10-183-01282 PLAIN END and 1-10-183-01283 TAPER END regarding weld edge profile details of header to nipple fillet joint for each Header.
7. TPI / BHEL / Customer inspection is applicable as per SECTION I(F) -Quality Documents attached in the Tender.W.r.t Material TC for inspection, Group Certificate will be provided with IBR Sign from Trichy.
8. All headers to be hydro tested at shop. BHEL will provide Hydro dummy/blanks for plugs as per standard drg. For hydro dummy welding mentioned in the tender.
9. Tube bending radius is mentioned below
TUBE DIA 69.85 X 4.57, RADIUS - 200 mm

10. **Post Weld Heat Treatment:**

A) During Furnace heat treatment it shall be ensured that no portion of the header extends outside the furnace. Considering the limitations in furnace length, we accept one local heat treatment for a header. Anything more, we shall consider on a case to case basis.

B) In this regard, below are our broad recommendations for CS and P12 grade headers: Manufacturing can be planned to heat treat the header in furnace in two separate parts of sufficient lengths such that each part is enclosed within the furnace. Thereafter, these two parts can be combined with a butt joint which can be locally heat treated. When such a method is followed, it shall be ensured that

- Sufficient free space (free of drill holes, attachments) is left on both parts at the butt joint interface end to enable welding of the butt joint and performing NDE.
- The butt joint to be locally heat treated shall be non-destructively examined (as per QWIs) and accepted before any holes are drilled or attachments are welded at this location.
- The stubs and other attachments at this location shall be welded afterwards and locally heat treated along with the butt joint.

C) As a one-time activity, before performing any local heat treatments, all sub-contractors shall be requested to submit their local heat treatment process qualification record and heat treatment plan (with a sketch) illustrating the type of heating element, method of placement/winding of heating element, width of soak band, heating band and insulation band, placement of thermocouples

11. In production of headers, only IBR qualified welders shall be used. Personal Qualification shall be as per chapter XIII.

12. **List of Approved NDT agencies:**

List of Approved NDT Agencies as mentioned in the tender to be complied. Deviation is not acceptable. However if the vendor is carrying out NDE by his own facilities and qualified employees on the company role, Vendor can apply for BHEL approval for his company. Or If the NDE is outsourced by the vendor, the corresponding NDE agency shall get BHEL approval.

13. **RT:** Iridium 192 shall be used only up to 65 mm thickness. More than 65 mm thickness, Cobalt 60 or any other high energy source like LINAC shall be used. PAUT/TOFD is not acceptable.
14. **Limitation of Liability** clause as mentioned below will be applicable for this tender:
Notwithstanding anything to the contrary in this Contract or LOI or any other mutually agreed document between the parties, the maximum liability, for damages, of the contractor, its servants or agents, shall under no circumstances exceed an amount equal to the Price of the Contract. The Contractor shall not in any case be liable for loss of profit or special, punitive, exemplary, indirect or consequential losses whatsoever. This shall not be applicable on the recoveries made by Customer from BHEL on account of Contractor, any other type of recoveries for workmanship, material, T&P etc. due from the contractor.

*The due date for offer submission has been extended till
11-04-2025; 11.00 AM.*

NOTE:

Participation by a vendor will be considered as acceptance of all Terms & Conditions, including any corrigendum

**ANNEXURE-A (REVISED)****BHARAT HEAVY ELECTRICALS LIMITED, TIRUCHIRAPPALLI****OUTSOURCING****Pre -Qualification Requirements (PQR) for Header Fabrication-2024OSB051**

Supplier Name:

Office Address:

Factory Address:

Contact details (Email id & Phone Number):

RS01 – Carbon Steel: (80 Headers, 1140 TONS)

Prior Experience: The vendor shall provide evidence of previous successful experience in fabricating CARBON STEEL or ALLOY STEEL Headers or pressure vessels applicable to utility or industrial boilers in accordance with the Indian boiler regulations (IBR) or the American Society of Mechanical Engineers (ASME) / Equivalent international codes.

RS02 – P12 Alloy Steel: (180 Headers, 2090 TONS)

Prior Experience: The vendor shall provide evidence of previous successful experience in fabricating Alloy Steel (P11, P12, P22, P91, P92) Headers or pressure vessels applicable to utility or industrial boilers in accordance with the Indian boiler regulations (IBR) or the American Society of Mechanical Engineers (ASME) / Equivalent international codes.

Part-A - (Mandatory)

Sl No	Paramter for evaluation	Minimum Required	Details of facility available with Supplier (Supplier to fill this column)	Actual Observed in Assessment (BHEL use)	Remarks (BHEL Use)	Ok/Not Ok (BHEL Use)
	LAND DETAILS :					
1	Land area (If land is taken under lease, registered lease deed for 3 yrs period is required)	0.5 Acres				
2	Covered shed area - with concrete flooring	8000 sq.ft				
3	Fencing/compound wall	All around				
	EB POWER					
4	Power capacity	75 to 100 HP				
	HANDLING FACILITIES					
5	Material handling crane capacity with stability certificate (Mobile crane / A frame / EOT)	10 MT (Mobile crane may be owned or under lease)				
	SPECIFIC MACHINES :					
6	Auto welding machine (SAW) (800 A)	1 No				
7	Rectifier/inverter welding m/c for SMAW process	2 Nos				
8	TIG welding machines	2 Nos				

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9	Tube boring and chamferring machine	2 Nos				
10	Spectrotesting machine (with calibration) - portable type	Inhouse/outourced				
11	Preheating/post heating - fuel and burner facilities	Required. Details of available facilities to be furnished				
12	Heat treatment furnace with IBR approval & with valid calibration - 4mx 4m capability to handle length of 16 to 24 m. Temperature range: 600- 780 °C	Inhouse/outourced				
13	Heating torches for bow correction	Required. Details of available facilities to be furnished				
14	Hydro testing pumps (with calibrated gauges) - min 600 Kg/sq.cm	1 No				
15	IBR qualified welders. CS/AS	Personnel qualification mandatory for all welding processes in pressure parts				
16	Firm approval for boiler pressure parts by IBR	A must				

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17	Pipe boring and chamferring machine	Inhouse/outourced				
18	Horizontal boring (H80)	Inhouse/outourced				
19	Painting facility	Details of available facilities to be furnished				
20	Stands and supporting stands	Details of available facilities to be furnished				
21	Positioner with V Block	Details of available facilities to be furnished				
22	Compressor for Test facility	1 No				
23	Temperature Control - Pyrometer / Heat spy/ Thermo chalk	1 set				
24	Tube cutting machine (SAW cutting)	1 No				
	OVEN:					
25	Flux baking oven	2 Nos				
26	Electrode baking oven	1 No				
27	Electrode holding oven	1 No				
28	Flask Oven	3 Nos				
	INSPECTION FACILITIES					
29	MPI Unit with calibration block (Prod type - 1000 A)	1 No				
30	LPI Kit	1 Set				

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31	Qualified NDE personnel - Level - II for PT, MT, UT & RT	1 person for each category				
32	NDE facility for UT & RT with IBR approval	Inhouse/outsourced (IBR approval is mandatory for the testing facility)				
	MEASURING INSTRUMENTS					
33	Measuring tape 5m,30m *	1 No each				
34	Vernier caliper - 300 mm	1 No				
35	Paint coating thickness meter	1 No				
36	D meter (for thickness checking)	1 No				
	GRINDING & DRILLING MACHINES:					
37	Grinding M/Cs (AG 7 & AG 5)	5 Nos each				
38	Radial drilling Machine (RM65)	1 No				
	PAN & GST :					
39	IT Pan Card No	Original to be offered for verification				
40	GST No	Original to be offered for verification				
	OFFICE ROOM :					
41	Office room with 2 PC/ Laptop, internet facility.					

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NOTE_1:

* Tapes upto 5 m - Class II accuracy, above 5 m - Class I accuracy

A. Items in sl no. 10, 12, 14, 25 to 28 (Tapes - one time calibration) must have valid calibration certificate from any NABL accredited lab.

B. For sl no. 11, 13, 18, 19 and 33, valid agreement for facility tie-up must be produced.

C. For mobile cranes under lease, valid lease document must be produced at the time of spot assessment.

Part - B (Optional)

1	Tube bending machine - capable of bending 76.1 mm dia tubes	1 No				
2	Standby Generator	--				
3	Stenciling/Engraving/Dot punching facility	--				

Part-C: Final Recommendation (for BHEL use only)

Recommendation after checklist verification:

Date of spot assessment:

Recommendation after spot assessment:

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Assessor.1- TCA (Spot assessment):			Assessor.2- Co-assessor (Spot assessment):			

NOTE_2:

01	Part-A requirement is a must for qualifying the vendor. Hence, filling up all evaluation parameters is a must and all mandatory facilities shall be available at the time of spot assessment					
02	Part-B is only optional and need not be considered for disqualifying the vendor.					

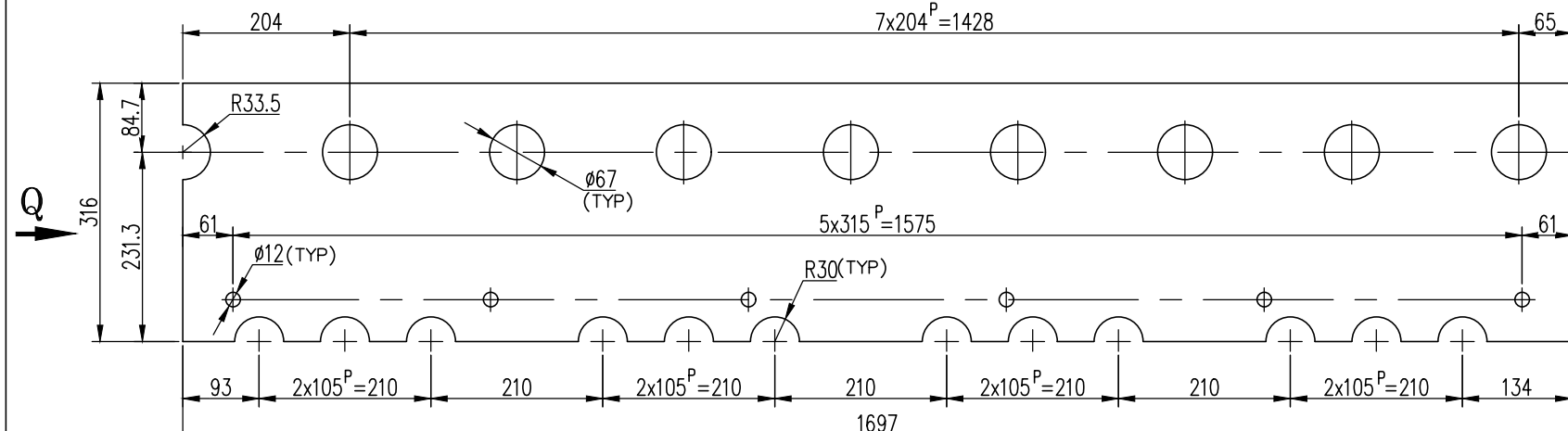
PROD	ITM	ITEM DESCRIPTION	RAW MATERIAL DESCRIPTION	Size1	Size2	UNIT	Qty	Qty Un	Fin Wt(KG)
05-137	01	PIPE D406.4 X 70(GR.C)24011.2 LONG	PIPE OD 406.4 X 70 X 5000 - SA106GRC	24,011		MM	1	NO	13,943
05-137	02	INSPECTION NOZZLE D168.3; T=33(MIN.)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
05-137	03	FEC FOR INSP. NOZZLED168.3; T=39.7(MIN.)	FEC OD 200 X 50 - SA105			MM	2	NO	16
05-137	04	DRAIN NOZZLE D168.3X27.5	DC NOZZLE OD 220 X ID 100 - 580L-SA105			MM	1	NO	137
05-137	05	TUBE OD 38.1 X 6.6 (SA213T12)	TUBE OD 38.1 x 6.6 x 11000- SA213T12	102		MM	272	NO	150
05-137	06	RADIOGRAPHIC PLUG M27X3 (CS)	RG PLUG CS M27 - SA105			MM	2	NO	1
05-137	07	LUG 45THK	PLATE 45.0 MM - SA515GR70	309	210	MM	6	NO	137
05-137	08	PAD PLATE (GR12)	PLATE 12.0 MM - SA387GR12CL2(CERT)	300	329	MM	12	NO	112
05-147	01	PIPE D406.4 X 70(GR.C)24011.2 LONG	PIPE OD 406.4 X 70 X 5000 - SA106GRC	24,011		MM	1	NO	13,943
05-147	02	INSPECTION NOZZLE D168.3; T=33(MIN.)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
05-147	03	FEC FOR INSP. NOZZLED168.3; T=39.7(MIN.)	FEC OD 200 X 50 - SA105			MM	2	NO	16
05-147	04	DRAIN NOZZLE D168.3X27.5	DC NOZZLE OD 220 X ID 100 - 580L-SA105			MM	1	NO	137
05-147	05	TUBE OD 38.1 X 6.6 (SA213T12)	TUBE OD 38.1 x 6.6 x 11000- SA213T12	102		MM	272	NO	150
05-147	06	RADIOGRAPHIC PLUG M27X3 (CS)	RG PLUG CS M27 - SA105			MM	2	NO	1
05-147	07	LUG 45THK	PLATE 45.0 MM - SA515GR70	309	210	MM	6	NO	137
05-147	08	PAD PLATE (GR12)	PLATE 12.0 MM - SA387GR12CL2(CERT)	300	329	MM	12	NO	112
05-227	01	PIPE D323.9 X 70 - SA335P12	PIPE OD 323.9 X 70 X 6000 - SA335P12	21,798		MM	1	NO	9,554
05-227	01	TUBE D57.2 X 13.7 - SA213T22	TUBE D57.2 X 13.7 X 10000- SA213T22	210		MM	140	NO	451
05-227	01	TUBE OD 38.1 X 7.1 - SA213T22	TUBE OD 38.1 X 7.1 X 10000 - SA213T22	201		MM	280	NO	319
05-227	01	NOZZLE D219.1; T=36 (MIN)	NZL OD 225.ID 139. L 600 SA182F12CL2			MM	4	NO	219
05-227	05	FLAT END COVER D323.9;T=57(MIN)	FLAT END COVER-D330 X 82 - SA182F12CL2			MM	2	NO	80
05-227	06	INSP NOZZLE D168.3; T=39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	64
05-227	07	FLAT END COVER D168.3; T=33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	13
05-227	08	LUG 50 THK	PLATE 50.0 MM - SA387GR12CL2(CERT)	330	740	MM	2	NO	148
05-227	09	BEARING PLATE 6 THK	PLATE 6.00 MM - SA387GR12CL2(CERT)	250	250	MM	4	NO	10
05-227	10	PIPE D168.3 X 18.26	PIPE OD168.3X18.26X6000-SA335P12	346		MM	2	NO	47
05-231	01	PIPE OD 323.9X70	PIPE OD 323.9 X 70 X 6000 - SA335P12	21,938		MM	1	NO	9,615
05-231	02	FLAT END COVER D323.9,T(MIN)56	FLAT END COVER-D330 X 82 - SA182F12CL2			MM	2	NO	77
05-231	01	TUBE D38.1X8.13 (T22)	TUBE OD 38.1X8.13X10000-SA213T22	190		MM	420	NO	503
05-231	01	PIPE D219.1X36	NZL OD 225.ID 139. L 600 SA182F12CL2			MM	4	NO	208
05-231	05	INSP NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	63
05-231	06	FLAT END COVER D168.3,T=45	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	12
05-231	07	SUSPENSION LUG PL.25	PLATE 25.0 MM - SA387GR12CL2(CERT)	120	169	MM	5	NO	18
05-251	01	PIPE OD 323.9X70	PIPE OD 323.9 X 70 X 6000 - SA335P12	20,487		MM	1	NO	8,979
05-251	02	END COVER FOR HEADER	FLAT END COVER-D330 X 82 - SA182F12CL2			MM	2	NO	80
05-251	01	TUBE OD 38.1X8.13	TUBE OD 38.1 x 8.13 x 10000- SA213T12	192		MM	396	NO	480
05-251	01	PIPE D219.1X36	NZL OD 225.ID 139. L 600 SA182F12CL2			MM	4	NO	208
05-251	02	PLATE D157; 50 THK	PLATE 50.0 MM - SA515GR70	157	157	MM	4	NO	29
05-251	05	INSPECTION NOZZLE D168.3X39.7	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
05-251	06	FLAT END COVER D168.3X45(NOM)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	12
05-251	07	SUSPENSION LUG	PLATE 25.0 MM - SA387GR12CL2(CERT)	120	192	MM	5	NO	21
05-251	01	PIPE OD 323.9X70	PIPE OD 323.9 X 70 X 6000 - SA335P12	20,487		MM	1	NO	8,979
05-251	02	END COVER FOR HEADER	FLAT END COVER-D330 X 82 - SA182F12CL2			MM	2	NO	80
05-251	01	TUBE OD 38.1X8.13	TUBE OD 38.1 x 8.13 x 10000- SA213T12	192		MM	396	NO	480
05-251	01	PIPE D219.1X36	NZL OD 225.ID 139. L 600 SA182F12CL2			MM	4	NO	208
05-251	02	PLATE D157; 50 THK	PLATE 50.0 MM - SA515GR70	157	157	MM	4	NO	29
05-251	05	INSPECTION NOZZLE D168.3X39.7	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
05-251	06	FLAT END COVER D168.3X45(NOM)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	12
05-251	07	SUSPENSION LUG	PLATE 25.0 MM - SA387GR12CL2(CERT)	120	192	MM	5	NO	21
05-327	01	PIPE OD 355.6X70	PIPE 355.60 X 70.00 - 5700 - SA335P12	22,379		MM	1	NO	11,033
05-327	01	TUBE D33.4X5.6	TUBE 33.40 X 5.60 - SA213T12	125		MM	420	NO	213
05-327	01	TUBE D38.1X6.6	TUBE OD 38.1 x 6.6 x 11000- SA213T12	125		MM	140	NO	94
05-327	04	FLAT END COVER D355.6,T=69MIN)	FEC OD360 X 90 THK - SA182F12CL2			MM	2	NO	141
05-327	05	INSPECTION NOZZLE D168.3X39.7	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
05-327	06	FLAT END COVER D168.3,T=46	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	16
05-327	01	DRAIN NOZZLE D73X14 ; 148.4+40 LONG	NOZZLE OD100 ID40 300 L SA182F12CL2			MM	1	NO	15
05-330	01	PIPE OD 355.6X70	PIPE OD 355.6 X 70 X 6000 - SA335P12	22,379		MM	1	NO	11,033
05-330	01	TUBE D33.4X5.6	TUBE 33.40 X 5.60 - SA213T12	125		MM	420	NO	213
05-330	01	TUBE D38.1X6.6	TUBE OD 38.1 x 6.6 x 11000- SA213T12	125		MM	140	NO	94
05-330	04	FLAT END COVER D355.6,T=69MIN)	FEC OD360 X 90 THK - SA182F12CL2			MM	2	NO	132
05-330	05	INSPECTION NOZZLE D168.3X39.7	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
05-330	06	FLAT END COVER D168.3,T=46	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	25
05-330	01	DRAIN NOZZLE D73X14 ; 150+40 LONG	NOZZLE OD100 ID40 300 L SA182F12CL2			MM	1	NO	15
05-350	01	PIPE D355.6X70; L=21296	PIPE OD 355.6 X 70 X 5000 - SA335P12	21,296		MM	1	NO	10,499

PROD	ITM	ITEM DESCRIPTION	RAW MATERIAL DESCRIPTION	Size1	Size2	UNIT	Qty	Qty Un	Fin Wt(KG)
05-350	01	TUBE D33.4X5.6; L= 95.1+30	TUBE-33.4X5.6X10000-SA213T12	125		MM	396	NO	200
05-350	01	TUBE D38.1X6.6; L= 95.3+30	TUBE OD 38.1 x 6.6 x 11000- SA213T12	125		MM	132	NO	88
05-350	04	FLAT END COVER OD355.6, T=69(MIN)	FEC OD360 X 90 THK - SA182F12CL2			MM	2	NO	141
05-350	05	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
05-350	06	FLAT END COVER D168.3X46(NOM)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	16
05-350	01	NOZZLE D73X14; L=148.4+40	NOZZLE OD100 ID40 300 L SA182F12CL2			MM	1	NO	15
05-350	01	PIPE D355.6X70; L=21296	PIPE OD 355.6 X 70 X 5000 - SA335P12	21,296		MM	1	NO	10,499
05-350	01	TUBE D33.4X5.6; L= 95.1+30	TUBE-33.4X5.6X10000-SA213T12	125		MM	396	NO	200
05-350	01	TUBE D38.1X6.6; L= 95.3+30	TUBE OD 38.1 x 6.6 x 11000- SA213T12	125		MM	132	NO	88
05-350	04	FLAT END COVER OD355.6, T=69(MIN)	FEC OD360 X 90 THK - SA182F12CL2			MM	2	NO	141
05-350	05	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
05-350	06	FLAT END COVER D168.3X46(NOM)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	16
05-350	01	NOZZLE D73X14; L=148.4+40	NOZZLE OD100 ID40 300 L SA182F12CL2			MM	1	NO	15
10-135	01	PIPE 406.40 X 85.00 - SA335P12	PIPE 406.40 X 85.00 - 5500 - SA335P12	10,432		MM	2	NO	14,056
10-135	02	EQUAL TEE D406.4X85(N)/406.4X85(N)	EQUAL TEE D406.4X85(N)/406.4X85(N)			MM	1	NO	677
10-135	03	FLAT END COVER D406.4;T=79(MIN)	FEC 420 X 110 SA182F12CL2			MM	2	NO	169
10-135	04	NOZZLE D168.3; T=47.6 (MIN)	NZL OD 174 ID 69. L 500 SA182F12CL2			MM	20	NO	800
10-135	05	INSP NOZZLE D168.3; T=39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	60
10-135	06	FLAT END COVER D168.3; T=33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	13
10-135	07	NIPPLE D50.8 X 9.14	TUBE-D50.8X9.14X11500-SA213T22	173		MM	6	NO	10
10-135	08	SUPPORT PLATE 50 THK	PLATE 50.0 MM - SA387GR12CL2(CERT)	507	750	MM	2	NO	186
10-135	09	LUG 50 THK	PLATE 50.0 MM - SA387GR12CL2(CERT)	254	378	MM	70	NO	2,093
10-135	10	LUG 50 THK	PLATE 50.0 MM - SA387GR12CL2(CERT)	302	397	MM	10	NO	325
10-135	11	LUG 16 THK	PLATE 16.0 MM - SA387GR12CL2(CERT)	262	288	MM	20	NO	152
10-135	12	PIPE OD 219.10 X 25.00	PIPE OD 219.10 x 25.00 x 6000 - SA335P12	300		MM	2	NO	72
10-176	01	PIPE D406.4x80	PIPE 406.40 X 80.00 - 5000 - SA335P12	4,469		MM	2	NO	5,755
10-176	02	PIPE D406.4x80	PIPE 406.40 X 80.00 - 5000 - SA335P12	10,152		MM	1	NO	6,537
10-176	03	UNEQUAL TEE D406.4X80(NOM)/D457X75(NOM)	UNEQUAL TEE D406.4X80(N)/D457X75(N)			MM	2	NO	1,968
10-176	04	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	3	NO	94
10-176	05	FLAT END COVER D168.3,T(MIN)=33	FEC OD 200 X 50 - SA182F12CL2			MM	3	NO	24
10-176	06	FLAT END COVER D406.4,T(MIN)=79	FEC 420 X 110 SA182F12CL2			MM	2	NO	172
10-176	07	NIPPLE D33.4x6.1	TUBE-33.4X6.1X10000-SA213T22	162		MM	544	NO	381
10-176	08	NIPPLE D38.1x6.6	TUBE-38.1 X 6.6 X 10000-SA213T22	162		MM	68	NO	60
10-176	09	NIPPLE D57.15X9.6	TUBE-57.15X9.6X10000-SA213T22	162		MM	68	NO	131
10-183	01	PIPE D406.4X85;	PIPE OD-406.4X85X5000-SA335P12	16,132		MM	1	NO	10,868
10-183	02	NIPPLE D50.8X7.62; 161.1+10 LONG	TUBE OD 50.8 x 7.62 x 10000- SA213T12	171		MM	119	NO	175
10-183	03	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	64
10-183	04	FLAT END COVER D168.3X33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	13
10-183	05	FLAT END COVER D406.4X 58 (MIN)	FEC 420 X 110 SA182F12CL2			MM	1	NO	75
10-183	06	RADIOGRAPHIC TEST PLUG D21	RG PLUG AS M24 - SA182F22CL3			MM	1	NO	0
10-183	01	PIPE D406.4X85;	PIPE OD-406.4X85X5000-SA335P12	16,132		MM	1	NO	10,868
10-183	02	NIPPLE D50.8X7.62; 161.1+10 LONG	TUBE OD 50.8 x 7.62 x 10000- SA213T12	171		MM	119	NO	175
10-183	03	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	64
10-183	04	FLAT END COVER D168.3X33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	13
10-183	05	FLAT END COVER D406.4X 58 (MIN)	FEC 420 X 110 SA182F12CL2			MM	1	NO	75
10-183	06	RADIOGRAPHIC TEST PLUG D21	RG PLUG AS M24 - SA182F22CL3			MM	1	NO	0
10-184	01	PIPE D406.4X85,	PIPE 406.40 X 85.00 - 4000 - SA335P12	6,695		MM	1	NO	4,510
10-184	02	NIPPLE D44.45X6.6	TUBE OD 44.45 x 6.60 x 10000- SA213T12	170		MM	79	NO	87
10-184	03	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	63
10-184	04	FLAT END COVER. D168.3X33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	16
10-184	05	FLAT END COVER D406.4X95,T(MIN)=79	FEC 420 X 110 SA182F12CL2			MM	1	NO	88
10-184	06	EQUALTEE D406.4X80(NOM)/D406.4X85(NOM)	EQT D406.4X80(N)/406.4X85(N)SA234WP12CL1			MM	1	NO	720
10-184	01	PIPE D406.4X85,	PIPE 406.40 X 85.00 - 4000 - SA335P12	6,695		MM	1	NO	4,510
10-184	02	NIPPLE D44.45X6.6	TUBE OD 44.45 x 6.60 x 10000- SA213T12	170		MM	79	NO	87
10-184	03	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	63
10-184	04	FLAT END COVER. D168.3X33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	16
10-184	05	FLAT END COVER D406.4X95,T(MIN)=79	FEC 420 X 110 SA182F12CL2			MM	1	NO	88
10-184	06	EQUALTEE D406.4X80(NOM)/D406.4X85(NOM)	EQT D406.4X80(N)/406.4X85(N)SA234WP12CL1			MM	1	NO	720
10-191	01	PIPE D323.9X75 ;	PIPE OD-323.9X75X6000-SA335P12	1,090		MM	2	NO	1,004
10-191	02	PIPE D323.9X75 ;	PIPE OD-323.9X75X6000-SA335P12	1,560		MM	2	NO	1,436
10-191	03	PIPE D323.9X75 ;	PIPE OD-323.9X75X6000-SA335P12	2,912		MM	2	NO	2,681
10-191	04	PIPE D323.9X75 ;	PIPE OD-323.9X75X6000-SA335P12	1,976		MM	2	NO	1,819
10-191	05	PIPE D323.9X75 ;	PIPE OD-323.9X75X6000-SA335P12	2,236		MM	1	NO	1,029
10-191	06	NIPPLE D57.15X8.64; 162.2+10 LONG	TUBE OD 57.15 X 8.64 X 10000 - SA213T12	172		MM	210	NO	393

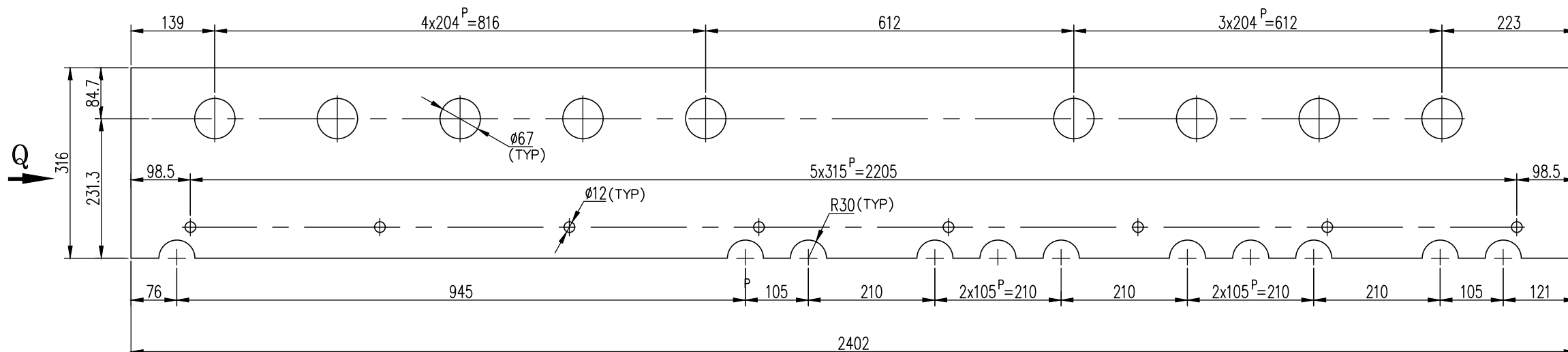
PROD	ITM	ITEM DESCRIPTION	RAW MATERIAL DESCRIPTION	Size1	Size2	UNIT	Qty	Qty Un	Fin Wt(KG)
10-191	07	NIPPLE D50.8X8.64; 161.2+10 LONG	TUBE OD 50.8 X 8.64 X 10000 - SA213T12	171		MM	4	NO	6
10-191	08	INSPEC NOZZ D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	63
10-191	09	FLAT END COVER D168.3X45 NOM	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	12
10-191	10	HDR END PLUG D323.9X82(NOM)	FLAT END COVER-D330 X 82 - SA182F12CL2			MM	2	NO	110
10-191	11	UNEQ TEE D323.9X 75/D273 X 45,	UNEQUAL TEE D323.9X75/D273X45			MM	8	NO	2,512
10-191	12	DRAIN CONNECTION D92X15.5	ROUND DIA 100 - SA182F12CL2	67		MM	1	NO	3
10-191	13	LUG ; 25 THK	PLATE 25.0 MM - SA387GR12CL2(CERT)	121	197	MM	6	NO	20
10-235	01	PIPE D406.4X85;	PIPE OD-406.4X85X5000-SA335P12	10,375		MM	2	NO	13,979
10-235	02	UNEQUAL TEE D406.4X85(N)/D457.2X70(N)	BW UET D406.4X85/ D457.2X70-SA234WP12CL1			MM	1	NO	1,020
10-235	03	NOZZLE D168.3X47.6(MIN) L=306.8	NZL OD 174 ID 69. L 500 SA182F12CL2			MM	20	NO	864
10-235	04	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	74
10-235	05	FEC FOR INSPEC NOZZLE,D168.3;T(MIN)=33	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	25
10-235	06	HEADER FLAT END COVER D406.4X79 (MIN)	FEC 420 X 110 SA182F12CL2			MM	2	NO	169
10-235	07	LUG PLATE	PLATE 50.0 MM - SA387GR22CL2(CERT)	318	350	MM	47	NO	1,900
10-235	08	LUG PLATE	PLATE 50.0 MM - SA387GR22CL2(CERT)	318	250	MM	6	NO	168
10-235	09	PLATE 06 THK	PLATE 6.00 MM - SA387GR12CL2	50	10,230	MM	2	NO	48
10-284	01	PIPE 406.40 X 85.00 - SA335P12	PIPE 406.40 X 85.00 - 4000 - SA335P12	6,673		MM	1	NO	4,496
10-284	02	FLAT END COVER D406.4;T=79(MIN)	FEC 420 X 110 SA182F12CL2			MM	1	NO	85
10-284	03	NIPPLE D44.45 X 6.6	TUBE OD 44.45 x 6.60 x 10000- SA213T12	160		MM	158	NO	164
10-284	04	NIPPLE D38.1 X 6.6	TUBE OD 38.1 x 6.6 x 10000- SA213T12	341		MM	1	NO	2
10-284	05	INSP NOZZLE D168.3; T=39.7(MIN)	NOZZLE OD 174 ID 85. L 260 SA182F12CL2			MM	2	NO	60
10-284	06	FLAT END COVER D168.3; T=33(MIN)	FEC OD 200 X 50 - SA182F12CL2			MM	2	NO	13
10-284	07	PAD PLATE 20 THK	PLATE 20.0 MM - SA387GR12CL2(CERT)	460	484	MM	1	NO	35
10-284	08	RG PLUG AS M24 - SA182F22CL3	RG PLUG AS M24 - SA182F22CL3			MM	1	NO	0
15-136	01	PIPE D 558.8X35(NOM); L=23920	PIPE OD-558.8X35X6000-SA335P12	23,920		MM	1	NO	10,814
15-136	02	TUBE D69.85 X 4.57 (R-03-01)	TUBE 69.85 X 4.57 - 10000 - SA213T11	1,895		MM	180	NO	2,672
15-136	03	TUBE Ø69.85 X 4.57 (R-03-02)	TUBE 69.85 X 4.57 - 10000 - SA213T11	1,577		MM	180	NO	2,224
15-136	04	TUBE Ø69.85 X 4.57 (R-03-03)	TUBE 69.85 X 4.57 - 10000 - SA213T11	1,342		MM	180	NO	1,892
15-136	05	TUBE Ø69.85 X 4.57 (R-03-04)	TUBE 69.85 X 4.57 - 10000 - SA213T11	935		MM	212	NO	1,553
15-136	06	TUBE Ø69.85 X 4.57 (R-03-05)	TUBE 69.85 X 4.57 - 10000 - SA213T11	881		MM	106	NO	732
15-136	07	TUBE Ø69.85 X 4.57 (R-03-06)	TUBE 69.85 X 4.57 - 10000 - SA213T11	831		MM	32	NO	208
15-136	08	TUBE Ø69.85 X 4.57 (R-03-07)	TUBE 69.85 X 4.57 - 10000 - SA213T11	872		MM	32	NO	219
15-136	09	TUBE Ø69.85 X 4.57 (R-03-08)	TUBE 69.85 X 4.57 - 10000 - SA213T11	999		MM	32	NO	250
15-136	10	WELD PAD 401.3X200X16 THK	PLATE 16.0 MM - SA387GR12CL2(CERT)	401	200	MM	4	NO	40
15-136	11	FLAT RING 1774.4X25X6 THK	PLATE 6.00 MM - SA387GR12CL2	1,774	25	MM	2	NO	4
19-701	01	PIPE D508X95;	PIPE OD-508X95X5000-SA106GRC	24,760		MM	1	NO	23,956
19-701	02	NIPPLE D50.8X7.62;	TUBE-50.8 X 7.62 X 12500-SA210GRC	238		MM	621	NO	1,267
19-701	03	INSPEC NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
19-701	04	FLAT END END COVER D168.3 X 33(MIN)	FEC OD 200 X 50 - SA105			MM	2	NO	12
19-701	05	HEADER BAR	SS PLATE 6 MM - SA240TY304	20	808	MM	30	NO	23
19-701	06	SUPPORT PAD	PLATE 10.0 MM - SA387GR12CL2	407	610	MM	5	NO	97
19-701	07	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	1,490	MM	2	NO	8
19-701	08	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	840	MM	2	NO	7
19-701	09	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	1,575	MM	10	NO	41
19-701	10	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	1,365	MM	1	NO	4
19-701	11	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	1,490	MM	1	NO	21
19-701	12	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	840	MM	2	NO	24
19-701	13	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	1,575	MM	8	NO	180
19-701	14	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	1,365	MM	1	NO	20
19-701	15	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	1,490	MM	2	NO	12
19-701	16	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	840	MM	2	NO	4
19-701	17	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	1,575	MM	10	NO	66
19-701	18	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	165	1,365	MM	1	NO	6
19-701	19	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	1,490	MM	1	NO	20
19-701	20	RG PLUG CS M27	RG PLUG CS M27 - SA105			MM	2	NO	1
19-701	21	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	1,575	MM	1	NO	23
19-701	22	EROSION SHIELD	SS SHEET 3.15 MM - SA240TY304	583	1,575	MM	1	NO	23
19-701	23	TC PAD	ROUND DIA 40 MM - SA105(CERT)	25		MM	3	NO	0
19-702	01	PIPE D508 X 95THK	PIPE OD-508X95X6000-SA106GRC	22,856		MM	1	NO	22,114
19-702	02	NIPPLE D57.15X9.6THK	TUBE OD 57.15 X 9.6 X 10200 - SA210GRC	173		MM	466	NO	957
19-702	03	INSP NOZZLE D168.3 X39.7(MIN)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
19-702	04	FEC D168.3 X45(NOM)	FEC OD 200 X 50 - SA105			MM	2	NO	12
19-753	01	PIPE OD 273 X 65 - SA106GRC	PIPE OD 273X65X5500-SA106GRC	10,480		MM	2	NO	6,988
19-753	02	PIPE OD 273 X 60 - SA106GRC	PIPE OD 273.00 X 60.00 X 5000 - SA106GRC	622		MM	1	NO	196
19-753	03	FLAT END COVER D273;T=49(MIN)	FEC OD 280 X 85 THK -SA105			MM	2	NO	50
19-753	04	INSP NOZZLE D168.3; T=39.7(MIN)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63

PROD	ITM	ITEM DESCRIPTION	RAW MATERIAL DESCRIPTION	Size1	Size2	UNIT	Qty	Qty Un	Fin Wt(KG)
19-753	05	FLAT END COVER D168.3; T=33(MIN)	FEC OD 200 X 50 - SA105			MM	2	NO	13
19-753	01	TUBE 57.15 X 9.60 L=178+40	TUBE OD 57.15 X 9.60 X 10000 - SA210GRC	218		MM	106	NO	224
19-753	01	TUBE 50.80 X 7.62 L=186.7+40	TUBE 50.80 X 7.62 X 11500 - SA210GRC	227		MM	155	NO	248
19-753	08	LUG 35 THK	PLATE 35.0 MM - SA515GR70	154	204	MM	95	NO	733
19-753	09	LUG 35 THK	PLATE 35.0 MM - SA515GR70	154	203	MM	4	NO	30
19-753	10	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	121	2,161	MM	1	NO	6
19-753	11	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	121	2,448	MM	7	NO	45
19-753	12	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	121	2,365	MM	1	NO	6
19-753	13	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	2,161	MM	1	NO	9
19-753	14	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	2,448	MM	7	NO	75
19-753	15	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	2,365	MM	1	NO	10
19-753	16	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	1,696	MM	1	NO	7
19-753	17	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	2,520	MM	6	NO	62
19-753	18	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	2,520	MM	1	NO	10
19-753	19	SHIELD 3.15 THK	SS SHEET 3.15 MM - SA240TY304	172	2,326	MM	1	NO	9
19-753	20	HEADER BAR 6 THK	PLATE 6.00 MM - SA387GR12CL2(CERT)	25	21,662	MM	4	NO	102
19-763	01	PIPE D273X65	PIPE OD 273X65X5500-SA106GRC	10,480		MM	2	NO	6,988
19-763	02	PIPE D273X60	PIPE OD 273.00 X 60.00 - SA106GRC	622		MM	1	NO	196
19-763	03	FLAT END COVER D273 T=49(MIN)	FEC OD 280 X 85 THK -SA105			MM	2	NO	50
19-763	01	TUBE D57.15X9.6 L=178+40	TUBE OD 57.15 X 9.60 X 10000 - SA210GRC	218		MM	106	NO	224
19-763	01	TUBE D50.8X7.62 L=186.7+40	TUBE-50.8 X 7.62 X 12500-SA210GRC	227		MM	156	NO	250
19-763	06	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
19-763	07	FLAT END COVER D168.3X33(MIN)	FEC OD 200 X 50 - SA105			MM	2	NO	13
19-763	08	LUG	PLATE 35.0 MM - SA515GR70	154	204	MM	95	NO	733
19-763	09	LUG	PLATE 35.0 MM - SA515GR70	154	204	MM	4	NO	30
19-763	10	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	2,281	MM	1	NO	9
19-763	11	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	1,425	MM	12	NO	69
19-763	12	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	2,281	MM	1	NO	9
19-763	13	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,402	MM	1	NO	18
19-763	14	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,697	MM	1	NO	12
19-763	15	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,692	MM	1	NO	12
19-763	16	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,651	MM	1	NO	12
19-763	17	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,680	MM	1	NO	12
19-763	18	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,709	MM	1	NO	12
19-763	19	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,709	MM	1	NO	12
19-763	20	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,680	MM	1	NO	12
19-763	21	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,632	MM	1	NO	12
19-763	22	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,711	MM	1	NO	13
19-763	23	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,697	MM	1	NO	12
19-763	24	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,402	MM	1	NO	18
19-763	25	HEADER BAR; PL.6	PLATE 6.00 MM - SA387GR12CL2(CERT)	20	21,662	MM	3	NO	61
19-783	01	PIPE D273X65	PIPE OD 273X65X5500-SA106GRC	10,480		MM	2	NO	6,988
19-783	02	FLAT END COVER D273 T=49(MIN)	FEC OD 280 X 85 THK -SA105			MM	2	NO	50
19-783	01	TUBE D57.15X9.6 L=178+40	TUBE OD 57.15 X 9.60 X 10000 - SA210GRC	218		MM	127	NO	268
19-783	01	TUBE D50.8X7.62 L=186.7+40	TUBE-50.8 X 7.62 X 12500-SA210GRC	227		MM	155	NO	248
19-783	05	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
19-783	06	FLAT END COVER D168.3X33(MIN)	FEC OD 200 X 50 - SA105			MM	2	NO	13
19-783	07	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	1,906	MM	1	NO	7
19-783	08	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	2,100	MM	8	NO	64
19-783	09	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	840	MM	1	NO	3
19-783	10	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	2,116	MM	1	NO	8
19-783	11	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,855	MM	1	NO	14
19-783	12	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,632	MM	4	NO	50
19-783	13	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	306	MM	1	NO	3
19-783	14	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,040	MM	4	NO	60
19-783	15	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,326	MM	1	NO	10
19-783	16	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,326	MM	1	NO	10
19-783	17	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	306	MM	1	NO	3
19-783	18	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,855	MM	1	NO	14
19-783	19	HEADER BAR; PL.6	PLATE 6.00 MM - SA387GR12CL2(CERT)	20	21,662	MM	3	NO	61
19-783	20	LUG	PLATE 35.0 MM - SA515GR70	154	204	MM	95	NO	733
19-783	21	LUG	PLATE 35.0 MM - SA515GR70	154	204	MM	4	NO	30
19-783	22	PIPE D273X60	PIPE OD 273.00 X 60.00 - SA106GRC	622		MM	1	NO	196
19-793	01	PIPE D273X65	PIPE OD 273X65X5500-SA106GRC	10,480		MM	2	NO	6,988
19-793	02	FLAT END COVER D273 T=49(MIN)	FEC OD 280 X 85 THK -SA105			MM	2	NO	50
19-793	01	TUBE D57.15X9.6 L=178+40	TUBE OD 57.15 X 9.60 X 10000 - SA210GRC	218		MM	127	NO	268
19-793	01	TUBE D50.8X7.62 L=186.7+40	TUBE-50.8 X 7.62 X 12500-SA210GRC	227		MM	155	NO	248
19-793	05	INSPECTION NOZZLE D168.3X39.7(MIN)	NOZZLE OD 174 ID 85 L 260 SA105			MM	2	NO	63
19-793	06	FLAT END COVER D168.3X33(MIN)	FEC OD 200 X 50 - SA105			MM	2	NO	13

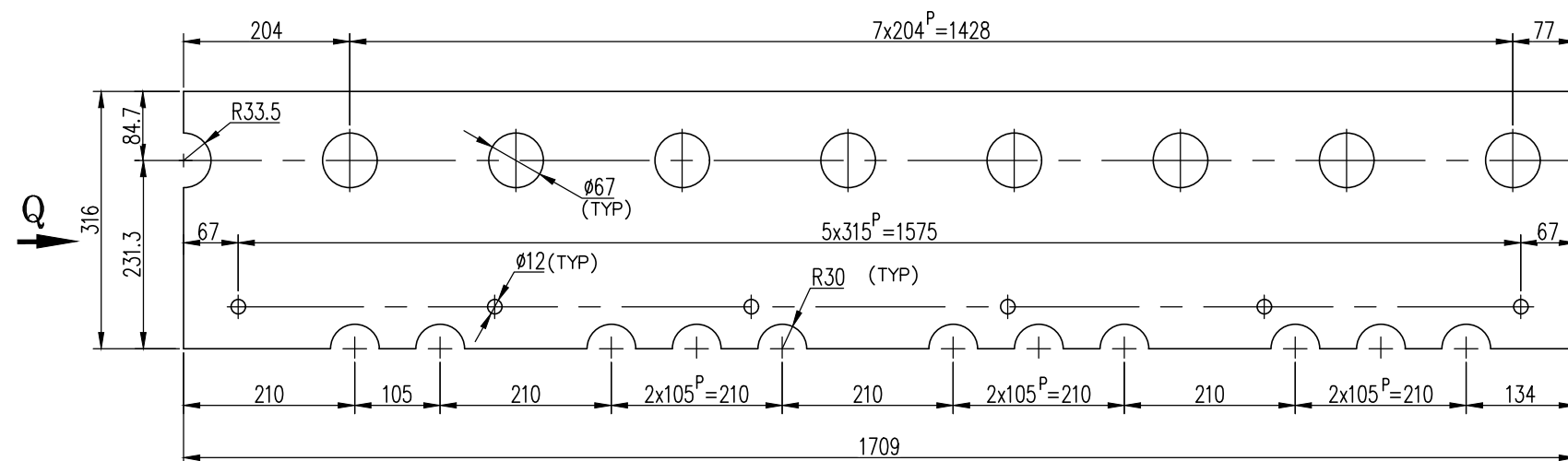
PROD	ITM	ITEM DESCRIPTION	RAW MATERIAL DESCRIPTION	Size1	Size2	UNIT	Qty	Qty Un	Fin Wt(KG)
19-793	07	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	1,855	MM	1	NO	7
19-793	08	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	1,632	MM	4	NO	26
19-793	09	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	306	MM	2	NO	2
19-793	10	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	2,040	MM	4	NO	33
19-793	11	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	1,326	MM	1	NO	5
19-793	12	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	1,326	MM	1	NO	5
19-793	13	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	164	1,855	MM	1	NO	7
19-793	14	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,221	MM	1	NO	17
19-793	15	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,145	MM	1	NO	16
19-793	16	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,055	MM	1	NO	15
19-793	17	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,064	MM	1	NO	15
19-793	18	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,346	MM	1	NO	17
19-793	19	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,310	MM	1	NO	17
19-793	20	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,100	MM	1	NO	15
19-793	21	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,055	MM	1	NO	15
19-793	22	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,205	MM	1	NO	16
19-793	23	HEADER SHIELD; SHEET3.15	SS SHEET 3.15 MM - SA240TY304	316	2,161	MM	1	NO	16
19-793	24	HEADER BAR; PL.6	PLATE 6.00 MM - SA387GR12CL2(CERT)	20	21,662	MM	3	NO	61
19-793	25	LUG	PLATE 35.0 MM - SA515GR70	154	204	MM	95	NO	733
19-793	26	LUG	PLATE 35.0 MM - SA515GR70	154	204	MM	4	NO	30
19-793	27	PIPE D273X60	PIPE OD 273.00 X 60.00 - SA106GRC	622		MM	1	NO	196



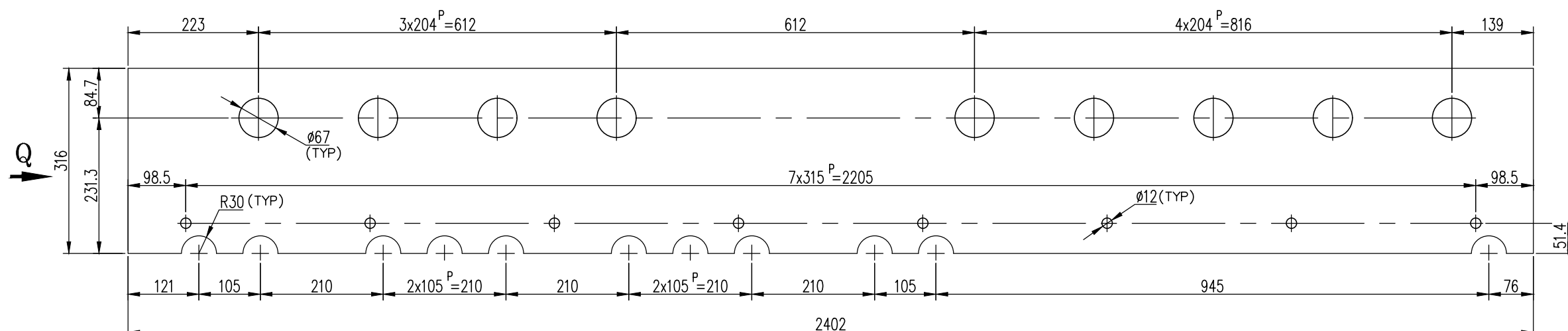
VARIANT No:14
(DEVELOPED VIEW)



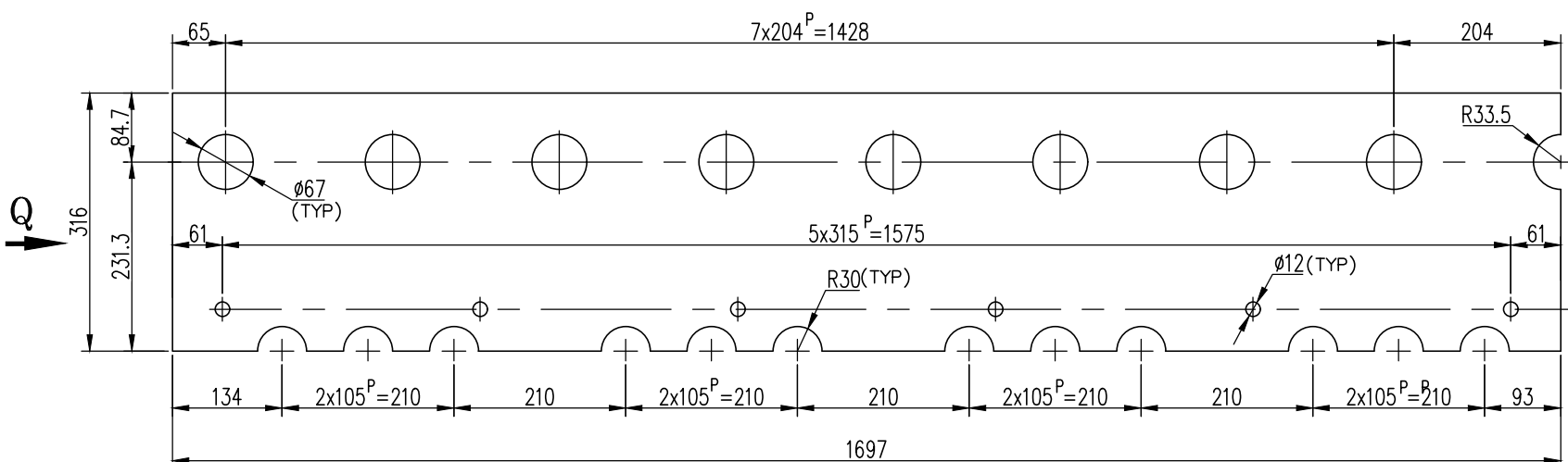
VARIANT No:15
(DEVELOPED VIEW)



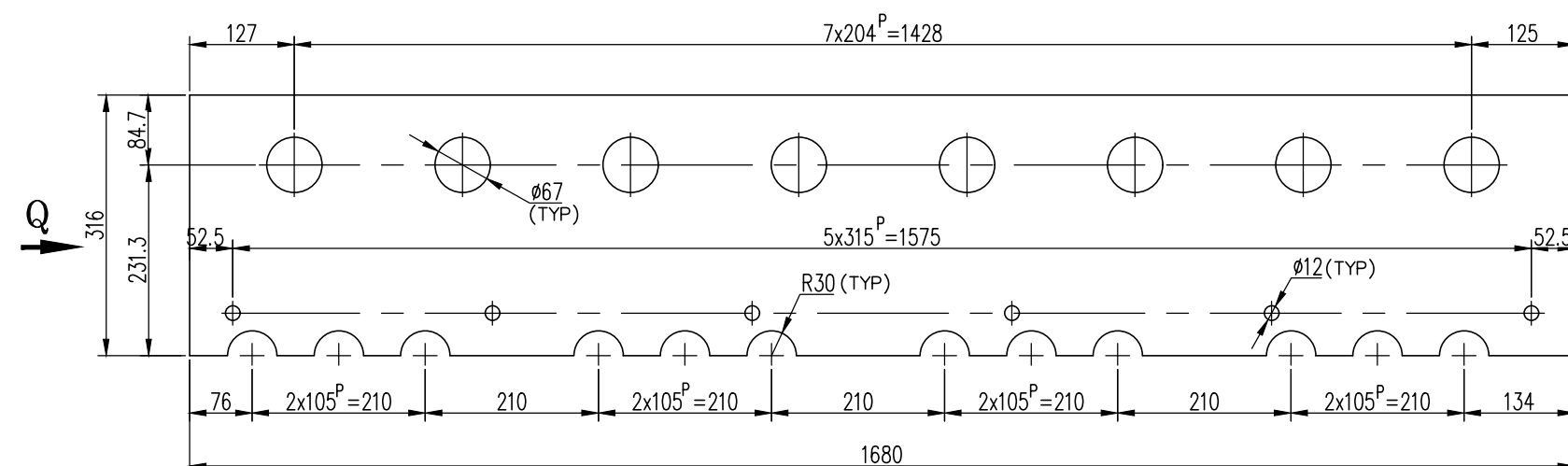
VARIANT No:10
(DEVELOPED VIEW)



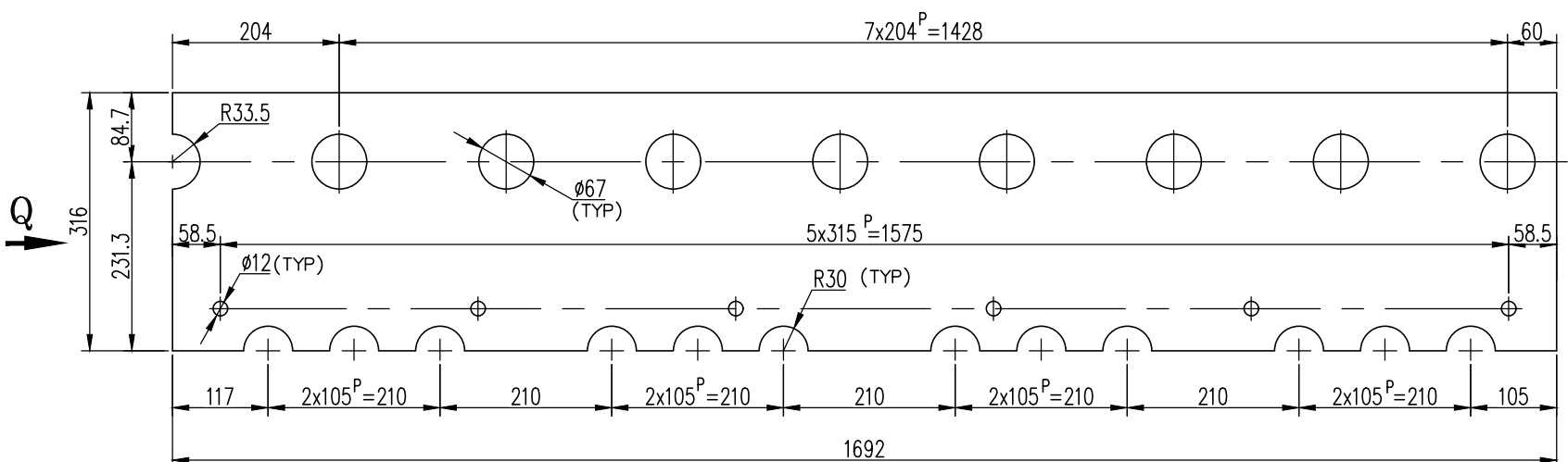
VARIANT No:04
(DEVELOPED VIEW)



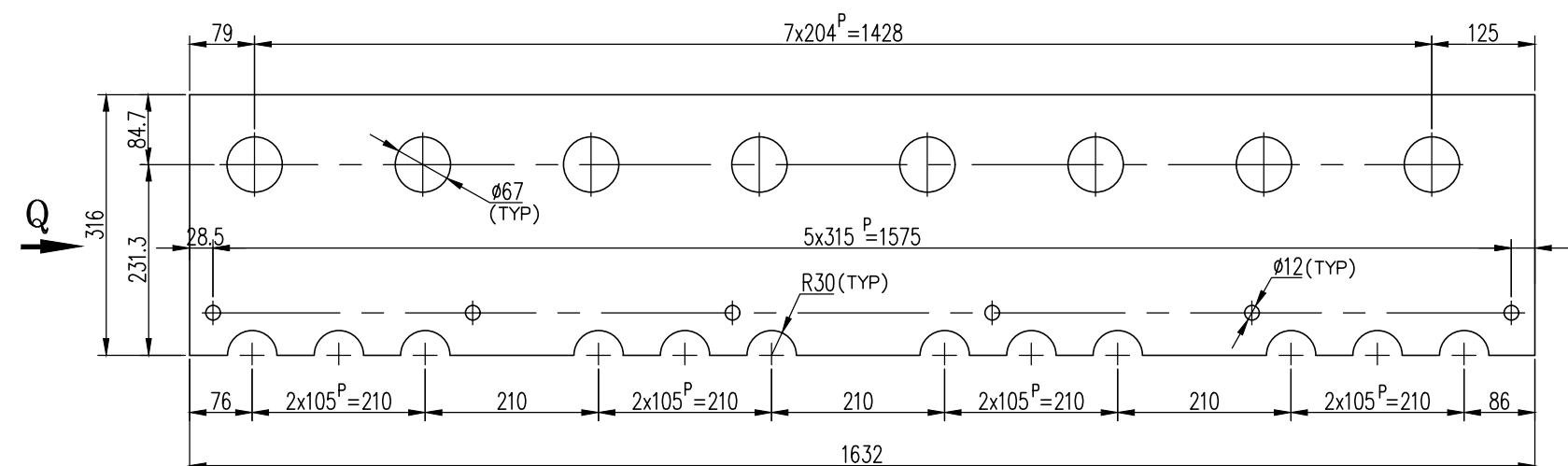
VARIANT No:05
(DEVELOPED VIEW)



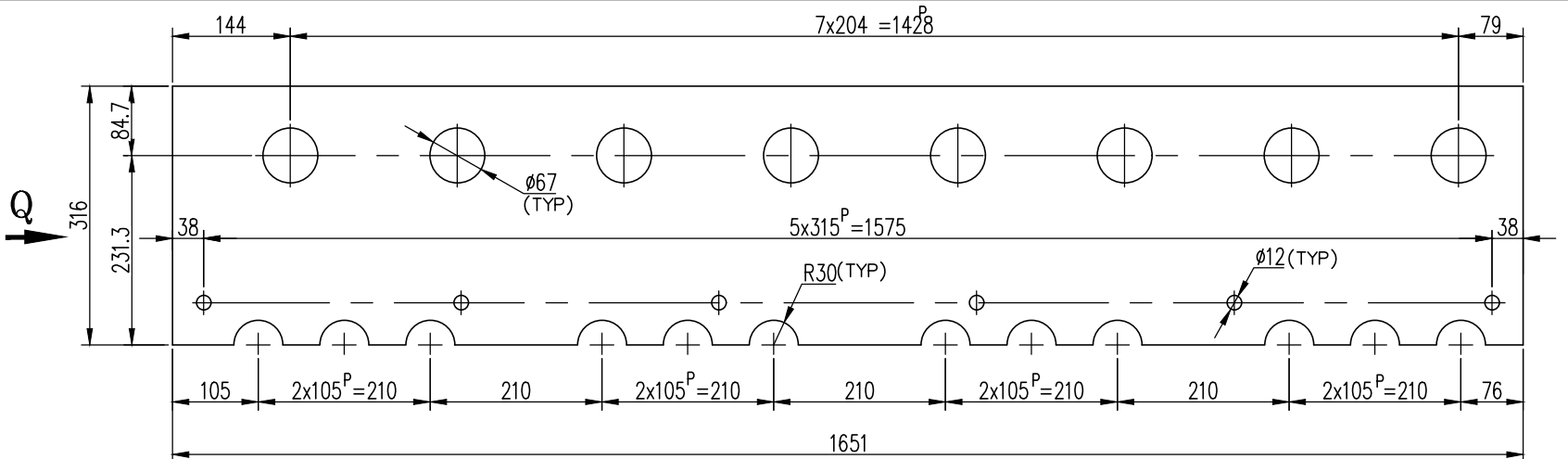
VARIANT No:11
(DEVELOPED VIEW)



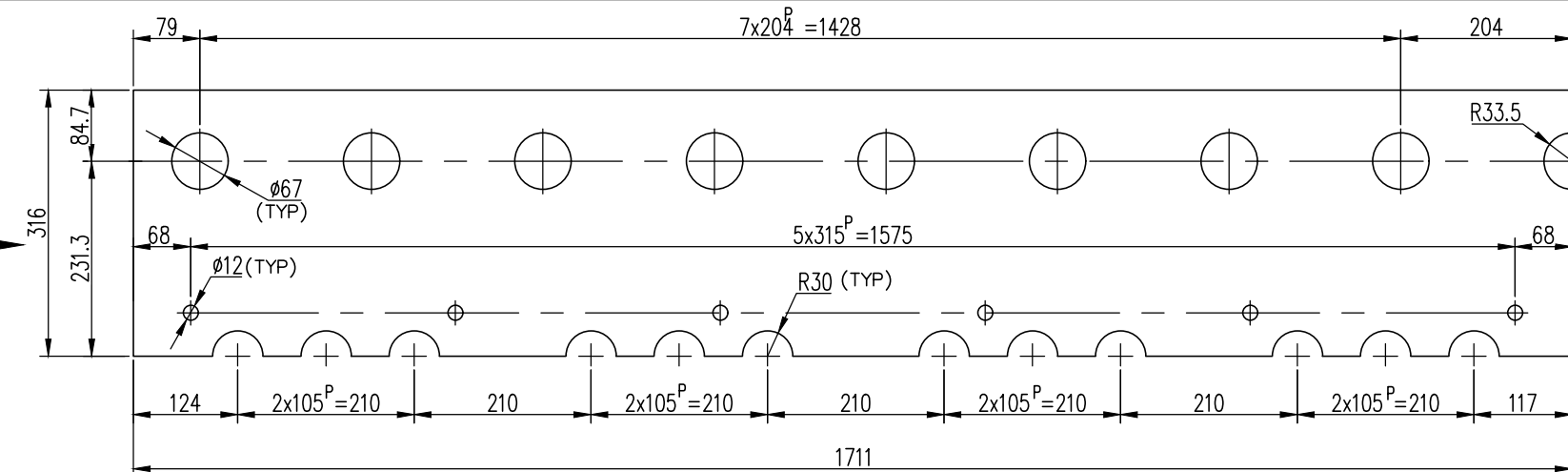
VARIANT No:06
(DEVELOPED VIEW)



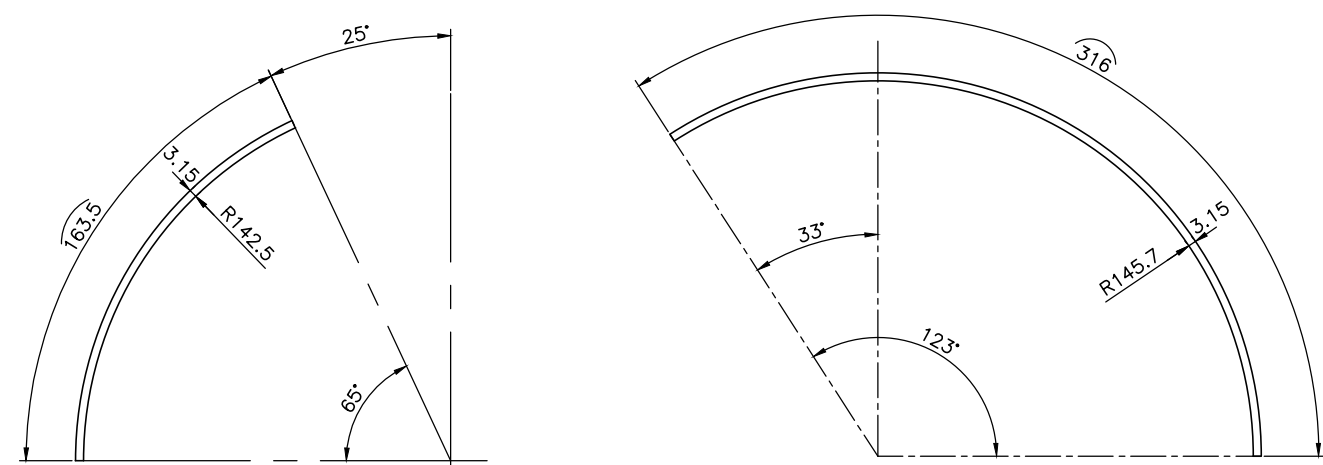
VARIANT No:12
(DEVELOPED VIEW)



VARIANT No:07
(DEVELOPED VIEW)



VARIANT No:13
(DEVELOPED VIEW)

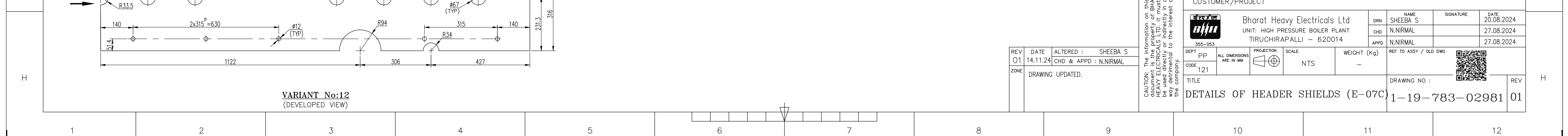
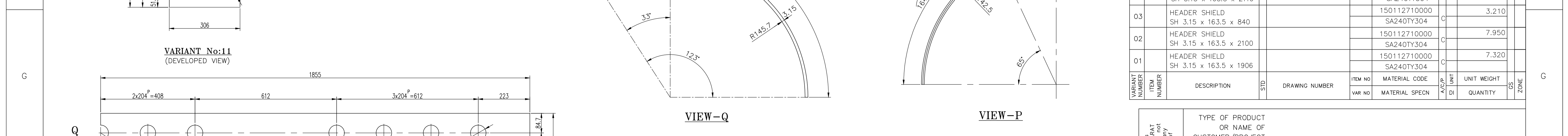
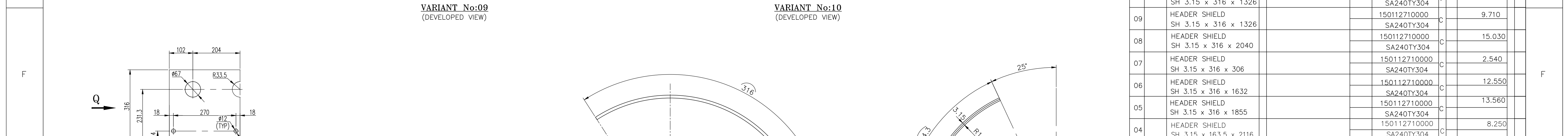
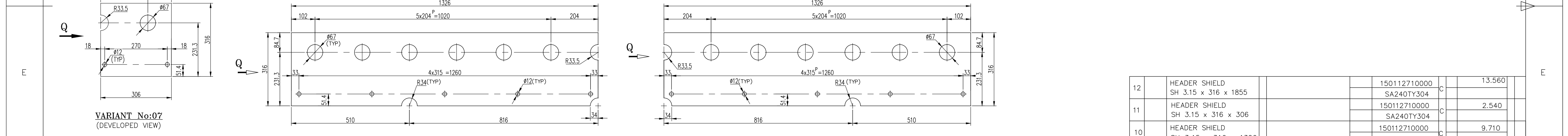
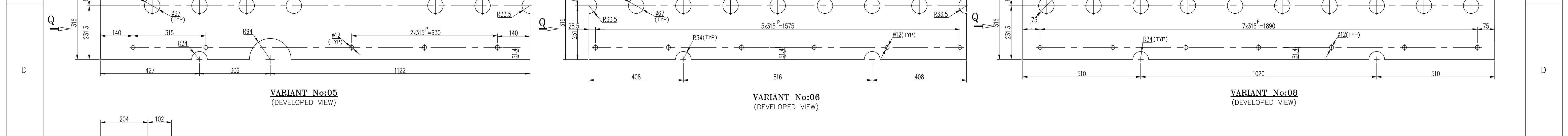
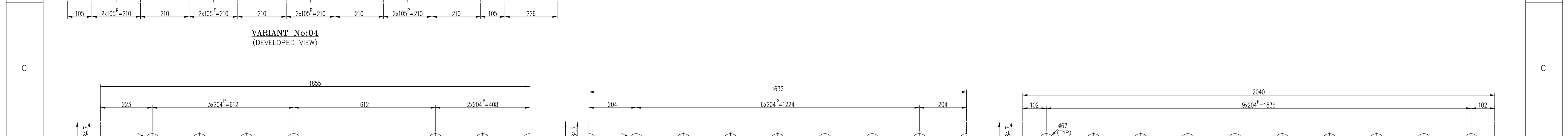
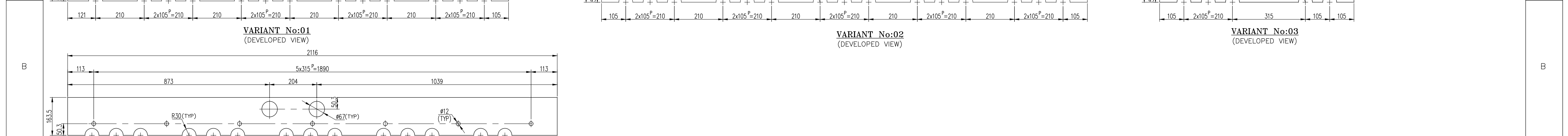
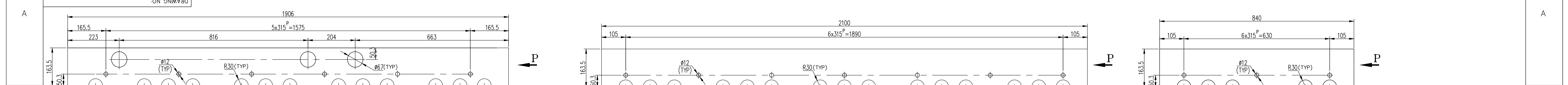


VIEW-P

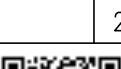
VIEW-Q

15		HEADER SHIELD SH 3.15 x 316 x 2402			150112710000 SA240TY304	C		17.860		
14		HEADER SHIELD SH 3.15 x 316 x 1697			150112710000 SA240TY304	C		12.340		
13		HEADER SHIELD SH 3.15 x 316 x 1711			150112710000 SA240TY304	C		12.510		
12		HEADER SHIELD SH 3.15 x 316 x 1632			150112710000 SA240TY304	C		11.930		
11		HEADER SHIELD SH 3.15 x 316 x 1680			150112710000 SA240TY304	C		12.310		
10		HEADER SHIELD SH 3.15 x 316 x 1709			150112710000 SA240TY304	C		12.490		
09		HEADER SHIELD SH 3.15 x 316 x 1709			150112710000 SA240TY304	C		12.490		
08		HEADER SHIELD SH 3.15 x 316 x 1680			150112710000 SA240TY304	C		12.310		
07		HEADER SHIELD SH 3.15 x 316 x 1651			150112710000 SA240TY304	C		12.080		
06		HEADER SHIELD SH 3.15 x 316 x 1692			150112710000 SA240TY304	C		12.400		
05		HEADER SHIELD SH 3.15 x 316 x 1697			150112710000 SA240TY304	C		12.400		
04		HEADER SHIELD SH 3.15 x 316 x 2402			150112710000 SA240TY304	C		17.860		
03		HEADER SHIELD SH 3.15 x 163.5 x 2281			150112710000 SA240TY304	C		14.310		
02		HEADER SHIELD SH 3.15 x 163.5 x 1425			150112710000 SA240TY304	C		5.750		
01		HEADER SHIELD SH 3.15 x 163.5 x 2281			150112710000 SA240TY304	C		8.800		
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT WEIGHT	OS	ZONE
					VAR NO	MATERIAL SPECN	DI	QUANTITY		

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be disclosed or used in any way detrimental to the interest of the company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT										
	 355-053		Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014			DRN	NAME SHEEBA S	SIGNATURE	DATE 30.8.2024		
						CHD	R.DHANANJAYAN		03.09.2024		
						APPD	N.NIRMAL		03.09.2024		
						REF TO ASSY / OLD DWG					
DEPT PP	ALL DIMENSIONS ARE IN MM		PROJECTION 	SCALE NTS	WEIGHT (Kg) —						
CODE 121						DRAWING NO :				REV	
TITLE DETAILS OF HEADER SHIELDS(E-07B)						1-19-763-02985				00	



12		HEADER SHIELD SH 3.15 x 316 x 1855			150112710000 SA240TY304	C		13.560		
11		HEADER SHIELD SH 3.15 x 316 x 306			150112710000 SA240TY304	C		2.540		
10		HEADER SHIELD SH 3.15 x 316 x 1326			150112710000 SA240TY304	C		9.710		
09		HEADER SHIELD SH 3.15 x 316 x 1326			150112710000 SA240TY304	C		9.710		
08		HEADER SHIELD SH 3.15 x 316 x 2040			150112710000 SA240TY304	C		15.030		
07		HEADER SHIELD SH 3.15 x 316 x 306			150112710000 SA240TY304	C		2.540		
06		HEADER SHIELD SH 3.15 x 316 x 1632			150112710000 SA240TY304	C		12.550		
05		HEADER SHIELD SH 3.15 x 316 x 1855			150112710000 SA240TY304	C		13.560		
04		HEADER SHIELD SH 3.15 x 163.5 x 2116			150112710000 SA240TY304	C		8.250		
03		HEADER SHIELD SH 3.15 x 163.5 x 840			150112710000 SA240TY304	C		3.210		
02		HEADER SHIELD SH 3.15 x 163.5 x 2100			150112710000 SA240TY304	C		7.950		
01		HEADER SHIELD SH 3.15 x 163.5 x 1906			150112710000 SA240TY304	C		7.320		
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	Z/P UNIT	UNIT WEIGHT	GS	ZONE
					VAR NO	MATERIAL SPECN	DI	QUANTITY		

CAUTION: The information on this drawing is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way without the approval of the concerned department of the interest of this company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT								
	355-053 		Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014			DRN CHD APPD	NAME SHEEBA S N.NIRMAL N.NIRMAL	SIGNATURE 	DATE 20.08.2024 27.08.2024 27.08.2024
	DEPT PP	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE NTS	WEIGHT (Kg) —	REF TO ASSY / OLD DWG			
	CODE 121								
	TITLE DETAILS OF HEADER SHIELDS (E-07C)					DRAWING NO :		REV	
					1-19-783-02981		01		