

SCOPE OF SUPPLY (SOS)

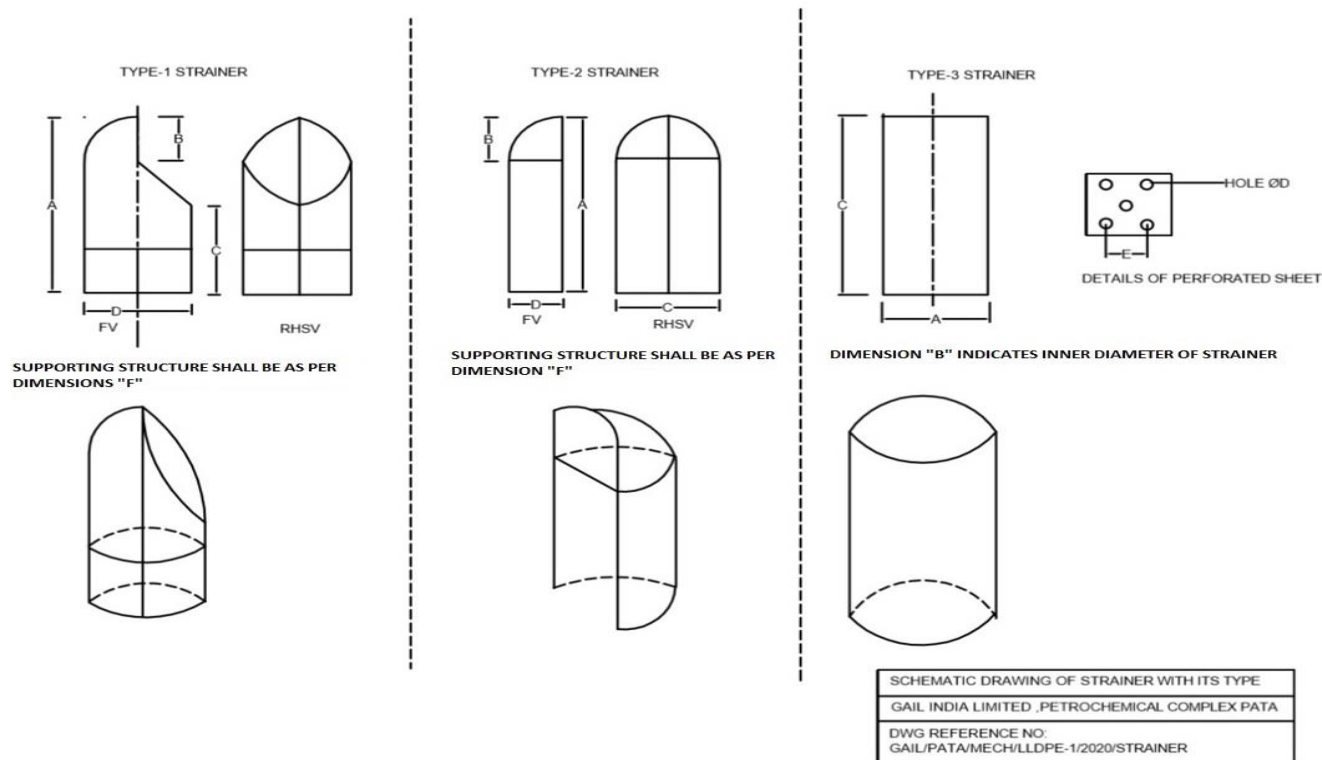
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1. SCOPE OF SUPPLY:

The scope is to supply strainers required at downstream units LLDPE-1, LLDPE-2 HDPE-1 and HDPE-2 plants of GAIL Pata as per following specifications:

A. Specifications for items required for LLDPE-1 plant (Item S.No. 1-16)

												SHEET L1-1, ITEM S.NO. 1-13		
S. NO	Material code	EQUIPMENT NO.	UOM	QTY. PROP.	STRAINER TYPE	DIMENSION (IN mm)						MOC	MESH SIZE	
						A ₁	B ₁	C ₁	D ₁	E ₁	F ₁			
1	1850529253	SUCTION STRAINER OF 12- GA-104	EA	2	1	350	75	115	132	-	10x6	SS-304	20	
2	1914189203	SUCTION STRAINER OF GA-203A&B	EA	4	2	244	59	98	56	-	10	SS-304	20	
3	1926409073	SUCTION STRAINER OF16-PA-202A&B	EA	2	3	32	25	65	6	9		SS-304	40	
4	1822289203	SUCTION STRAINER OF16-PA-205A&B	EA	2	2	165	27	51	31	-	10	SS-304	15	
5	1795219183	SUCTION STRAINER OF 12- GA-402/402S	EA	2	3	162	152	305	6	14		SS-304	20	
6	1782699103	SUCTION STRAINER OF 12- GA-403/403S	EA	2	3	108	98	226	6	14		SS-304	20	
7	1715209153	SUCTION STRAINER OF 12- GA-205/205S	EA	2	1	390	115	132	185	-	12x6	SS-304	80	
8	1716138773	SUCTION STRAINER OF 12- GA-401/401S	EA	2	3	162	152	305	6	14		SS-304	20	
9	1781525113	SUCTION STRAINER OF 12- GA-207/207S	EA	2	1	440	148	130	214	-	12x6	SS-304	40	
10	1795219233	SUCTION STRAINER OF 12- GA-210/210S	EA	2	3	110	100	218	6	14		SS-304	40	
11	1539030033	SUCTION STRAINER OF 12- GA-120/120S	EA	2	2	191	42	75	45	-	10	SS-304	40	
12	1926289373	SUCTION STRAINER OF 12- GA-105-115	EA	8	3	35	25	42	6	14		SS-304	20	
13	1822769123	SUCTION STRAINER OF 12- GA-432/432S	EA	2	2	158	34	45	28	-	8	SS-304	20	



FILTER BASKET (12-FD 202)

1. FILTER BASKET DETAILS:

- 1) Material : SS 316L
- 2) Sheet thickness : 2 mm
- 3) Perforated sheet of hole Φ 5 mm X 10 mm pitch.

2. SCREEN MESH DETAILS:

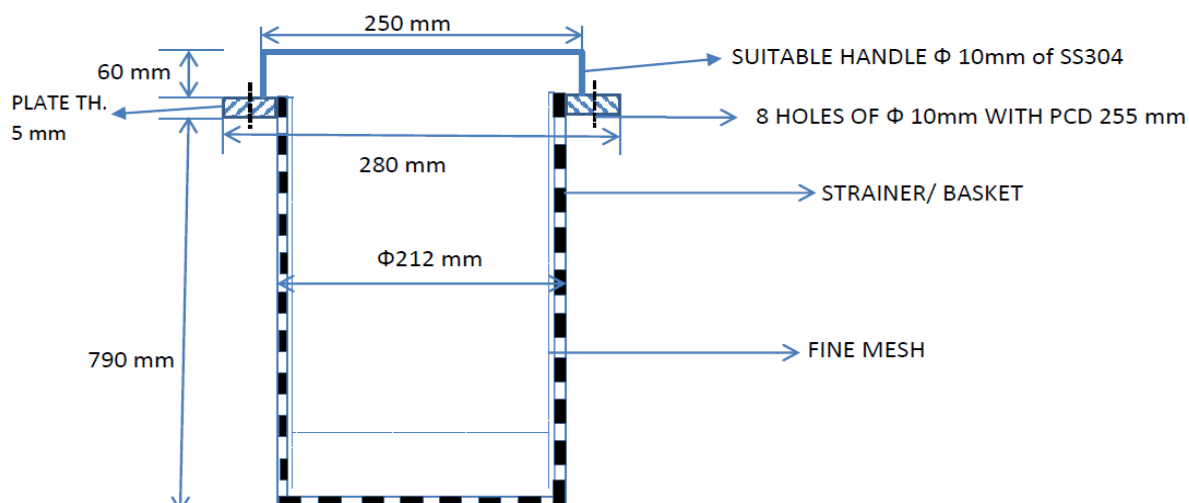
- 1) Removable screen mesh
- 2) Mesh size : 20 us mesh 840 μ m

3. OPERATING CONDITIONS:

FLUID	HYDROCARBON
SUSPENDED SOLIDS	POLYETHELENE FINES
RATED FLOW, M3/H	73.6
MOLECULAR WEIGHT	90.7
SPECIFIC GRAVITY @50°C	0.75
VISCOCITY, cP, @50°C	0.54-0.61
INLET PRESSURE, KG/CM2 GAUGE	0.97
INLET TEMPERATURE, °C	50

4. DESIGN CONDITIONS:

DESIGN CODE	ASME SECTION VIII DIV 1
PRESSURE (KG/CM2)	45
TEMP °C	240
WELD JOINT EFFICIENCY	1.0
DYE PENETRATION TEST	YES
RADIOGRAPHY	100%
CORROSION ALLOWANCE	3.0 MM
MAX ALLOWABLE PRESSURE DROP (CLEAN), KG/CM2	0.05



FILTER BASKET (12-FD 309)

1. FILTER BASKET DETAILS:

- 1) Material : SS 304
- 2) Sheet thickness : 2 mm
- 3) Perforated sheet of hole Φ 3 mm X 5 mm pitch.

2. SCREEN MESH DETAILS:

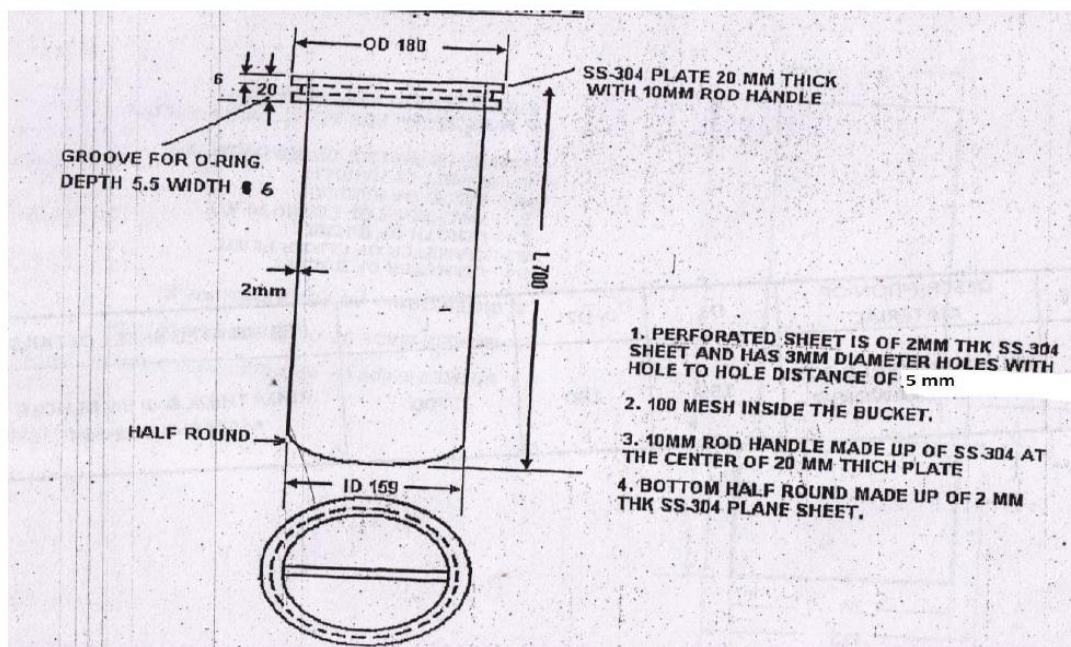
- 1) Removable screen mesh SS316
- 2) Mesh size : 100 MESH

3. OPERATING CONDITIONS:

FLUID	WATER
SUSPENDED SOLIDS	POLYETHELENE FINES
RATED FLOW, M3/H	594.7
SPECIFIC GRAVITY @50°C	0.985-1
VISCOCITY, cP, @50°C	0.5
INLET PRESSURE, KG/CM2 GAUGE	0.97
INLET TEMPERATURE, °C	40-70

4. DESIGN CONDITIONS:

DESIGN CODE	ASME SECTION VIII DIV 1
PRESSURE (KG/CM2)	8
TEMP °C	110
WELD JOINT EFFICIENCY	1.0
DYE PENETRATION TEST	YES
RADIOGRAPHY	100%
MAX ALLOWABLE PRESSURE DROP (CLEAN), KG/CM2	0.07



FILTER BASKET (12-HX-201)

1. FILTER BASKET DETAILS:

- 1) Material : SS 316
- 2) Sheet thickness : 2 mm
- 3) Perforated sheet of hole Φ 6 mm X 10 mm pitch.

2. SCREEN MESH DETAILS:

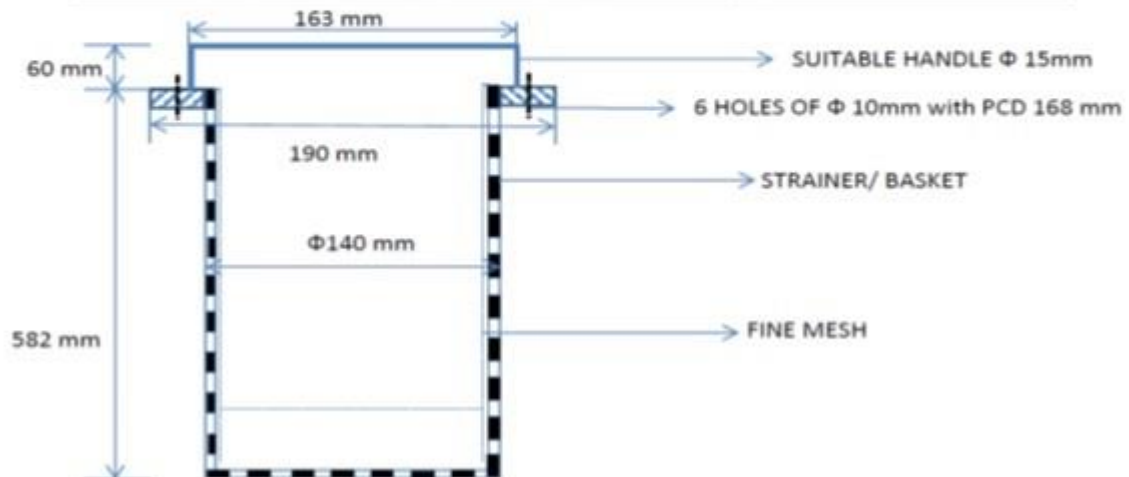
- 1) Removable screen mesh
- 2) Mesh size : 20 us mesh 840 μ m

3. OPERATING CONDITIONS:

FLUID	HYDROCARBON
SUSPENDED SOLIDS	POLYETHELENE FINES
RATED FLOW, M3/H	14.1
MOLECULAR WEIGHT	84
SPECIFIC GRAVITY @50°C	0.75
VISCOCITY, cP, @50°C	0.62
INLET PRESSURE, KG/CM2 GAUGE	0.73
INLET TEMPERATURE, °C	50

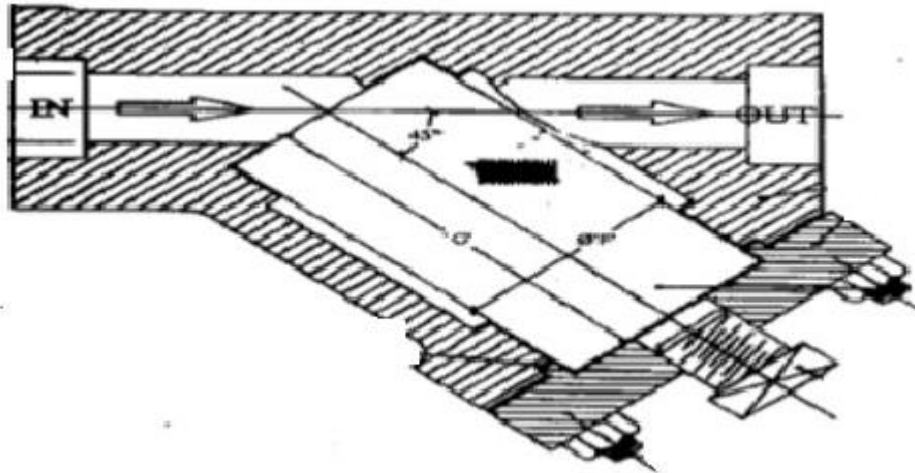
4. DESIGN CONDITIONS:

DESIGN CODE	ASME SECTION VIII DIV 1
PRESSURE (KG/CM2)	11
TEMP °C	240
WELD JOINT EFFICIENCY	1.0
DYE PENETRATION TEST	YES
RADIOGRAPHY	100%
CORROSION ALLOWANCE	3.0 MM
MAX ALLOWABLE PRESSURE DROP (CLEAN), KG/CM2	0.05



B. Specifications for items required at LLDPE-2 plant (Item S.No.17-99)

I) Specifications of Y-Type Strainers: Sheet No. L2-1, ITEM S.NO. 17-72



Sheet No. L2-1, ITEM S.NO. 17-72

S. NO	Material code	Description	SIZE	UOM	REQ. QTY	DIMENSION (IN mm)		MOC	MESH SIZE	SWG
						F(OD)	G(Length)			
17	4423750513	STRAINER,Y-TYPE, 1.5IN,107-PA-203B/A	1.5"	EA	4	55	101	SS304	8	22
18	4423750193	STRAINER,Y-TYPE, 0.5IN,102-WG-534	0.5"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH	
19	4423750283	STRAINER,Y-TYPE, 0.5IN,102-WG-552	0.5"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH	
20	4423750253	STRAINER,Y-TYPE, 0.75IN,102-WG-549	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH	
21	4423750273	STRAINER,Y-TYPE, 0.75IN,102-WG-551	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH	
22	4423750293	STRAINER,Y-TYPE, 0.75IN,102-WG-553/554	0.75"	EA	4	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH	

23	4423750433	STRAINER,Y-TYPE, 3 IN,102-WG-923/924	3"	EA	4	120	210	SS304	40 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
24	4423750413	STRAINER,Y-TYPE, 3IN,102-WG-902/903	3"	EA	4	120	210	SS304	60 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
25	4423750203	STRAINER,Y-TYPE, 3IN,102-WG-535	3"	EA	2	120	210	SS304	100 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
26	4423750313	STRAINER,Y-TYPE, 3IN,102-WG-628	3"	EA	2	120	210	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
27	4423750013	STRAINER,Y-TYPE, 0.75IN,102-WG-120	0.75"	EA	2	30	65	SS304	100 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
28	4423750033	STRAINER,Y-TYPE, 0.75IN,102-WG-116	0.75"	EA	2	30	65	SS30	100 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
29	4423750063	STRAINER,Y-TYPE, 0.75IN,102-WG-125	0.75"	EA	2	30	65	SS304	100 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
30	4423750133	STRAINER,Y-TYPE, 0.75IN,102-WG-204	0.75"	EA	2	30	65	SS304	100 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
31	4423750143	STRAINER,Y-TYPE, 0.75IN,102-WG-205	0.75"	EA	2	30	65	SS304	100 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH
32	4423750053	STRAINER,Y-TYPE, 1IN,102-WG-124	1"	EA	2	30	65	SS304	60 MESH WITH PERF.SHEET 8MM HOLE*10MM

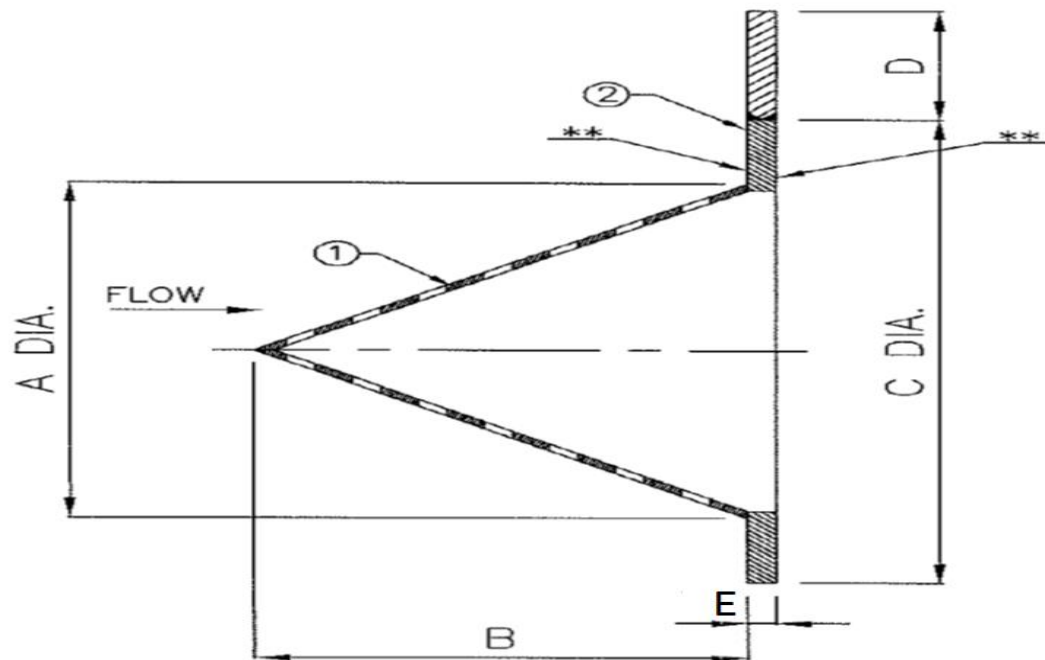
									TRAIINGULAR PITCH
33	4423750333	STRAINER,Y- TYPE, 0.75IN,102- WG-632	0.75"	EA	2	30	65	SS304	60 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
34	4423750343	STRAINER,Y- TYPE, 0.75IN,102- WG-633	0.75"	EA	2	30	65	SS304	60 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
35	4423750263	STRAINER,Y- TYPE, 0.75IN,102- WG-550	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
36	4423750363	STRAINER,Y- TYPE, 0.75IN,102- WG-636	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
37	4423750383	STRAINER,Y- TYPE, 0.75IN,102- WG-686	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
38	4423750233	STRAINER,Y- TYPE, 0.75IN,102- WG-544	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
39	4423750393	STRAINER,Y- TYPE, 0.75IN,102- WG-687	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
40	4423750163	STRAINER,Y- TYPE, 0.75IN,102- WG-207	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIINGULAR PITCH
41	4423750183	STRAINER,Y- TYPE, 0.5IN,102- WG-533	0.5"	EA	2	55	101	SS316	100 MESH WITH PERF.SHEET 6MM HOLE*8MM TRAIINGULAR PITCH
42	4423750173	STRAINER,Y- TYPE, 1.5 IN,102-WG-	DN40	EA	2	42	125	SS304	SCREEN 100 MESH*41 SWG. with 6mm PERF. &

		532							8mm PITCH THK 1.2mm
43	4423770103	STRAINER,Y- TYPE, 0.5IN,102- WG-545	0.5"	EA	2	55	101	SS316	40 MESH WITH PERF.SHEET 6MM HOLE*8MM TRAIINGULAR PITCH
44	4423770113	STRAINER,Y- TYPE, 0.5IN,102- WG-546	0.5"	EA	2	55	101	SS316	40 MESH WITH PERF.SHEET 6MM HOLE*8MM TRAIINGULAR PITCH
45	4423770123	STRAINER,Y- TYPE, 0.5IN,102- WG-547	0.5"	EA	2	55	101	SS316	40 MESH WITH PERF.SHEET 6MM HOLE*8MM TRAIINGULAR PITCH
46	4423750603	STRAINER,Y- TYPE, 1.5IN,107-PA- 402B	DN40	EA	2	42	125	SS304	SCREEN 8 MESH*22 SWG. with 6mm PERF. & 8mm PITCH THK 1.2mm
47	4423750593	STRAINER,Y- TYPE, 1.5IN,107-PA- 402A	DN40	EA	2	42	125	SS304	SCREEN 8 MESH*22 SWG. with 6mm PERF. & 8mm PITCH THK 1.2mm
48	4423750463	STRAINER,Y- TYPE, 1.5IN,107-PA- 102	DN40	EA	2	42	125	SS304	SCREEN 8 MESH*22 SWG. with 6mm PERF. & 8mm PITCH THK 1.2mm
49	4423750493	STRAINER,Y- TYPE, 1.5IN,107-PA- 202	DN40	EA	2	42	125	SS304	SCREEN 8 MESH*22 SWG. with 6mm PERF. & 8mm PITCH THK 1.2mm
50	4423750613	STRAINER,Y- TYPE, 1.5IN,107-PA- 605	DN40	EA	2	42	125	SS304	SCREEN 8 MESH*22 SWG. with 6mm PERF. & 8mm PITCH THK 1.2mm
51	4423750073	STRAINER,Y- TYPE, 0.5IN,102- WG-126/127	DN15	EA	2	AS PER DRW SHEET L2-6		SS316	SCREEN 80 MESH*38 SWG. 6mm PERF. & 8mm PITCH THK 1.2mm
52	4423750023	STRAINER,Y- TYPE, 1.5IN,107- WG-115	DN40	EA	2	42	125	SS304	SCREEN 60 MESH*37 SWG. with 6mm PERF. & 8mm PITCH THK 1.2mm
53	4422990213	STRAINER,Y- TYPE, 2IN,107-WG- 839	2"	EA	2	65	165	SS304	40 MESH* 36 SWGWITH PERF. SHEET BACKING
54	4423750223	STRAINER,Y- TYPE,	0.5"	EA	2	30	65	SS304	100 MESH WITH PERF.SHEET

		0.5IN,102-WG-538							6MM HOLE*8MM TRAINGULAR PITCH	
55	4423750443	STRAINER,Y-TYPE, 0.75IN,STR-Y-102-92206	0.75"	EA	8	30	65	SS304	7	21
56	4423750473	STRAINER,Y-TYPE, 1.5IN,107-PA-201A/B	1.5"	EA	4	55	101	SS304	8	22
57	4423750453	STRAINER,Y-TYPE, 0.75IN,STR-Y-102-92209	0.75"	EA	8	30	65	SS304	7	21
58	4423750083	STRAINER,Y-TYPE, 0.75IN,102-WG-128	0.75"	EA	2	30	65	SS304	SCREEN 80 MESH*38 SWG. 6mm PERF. & 8mm PITCH THK 1.2mm	
59	4423750093	STRAINER,Y-TYPE, 0.75IN,102-WG-129	0.75"	EA	2	30	65	SS304	SCREEN 80 MESH*38 SWG. 6mm PERF. & 8mm PITCH THK 1.2mm	
60	4423750113	STRAINER,Y-TYPE, 0.75IN,102-WG-134	0.75"	EA	2	30	65	SS304	SCREEN 80 MESH*38 SWG. 6mm PERF. & 8mm PITCH THK 1.2mm	
61	4423750213	STRAINER,Y-TYPE, 0.75IN,102-WG-537	0.75"	EA	2	30	65	SS304	SCREEN 60 MESH*37 SWG. 6mm PERF. & 8mm PITCH THK 1.2mm	
62	4423750253	STRAINER,Y-TYPE, 0.75IN,102-WG-549	0.75"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH	
63	4423750323	STRAINER,Y-TYPE, 0.75IN,102-WG-630	0.75"	EA	2	30	65	SS304	100 MESH WITH PERF.SHEET 6MM HOLE*8MM TRAINGULAR PITCH	
64	4423750103	STRAINER,Y-TYPE, 1IN,102-WG-133	1.0"	EA	2	30	30	SS304	100 MESH WITH PERF.SHEET 6MM HOLE*8MM TRAINGULAR PITCH	
65	4423750243	STRAINER,Y-TYPE, 1IN,102-WG-548	1.0"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAINGULAR PITCH	

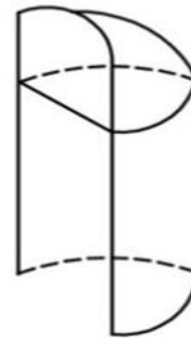
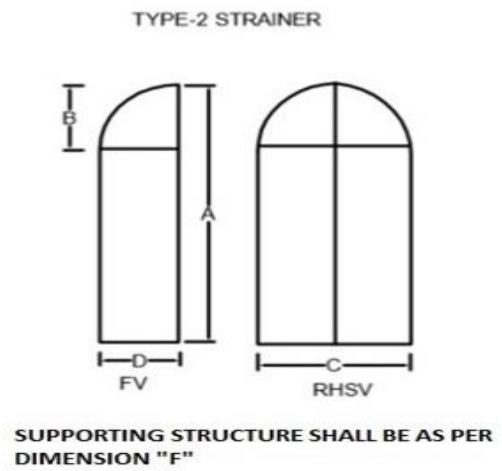
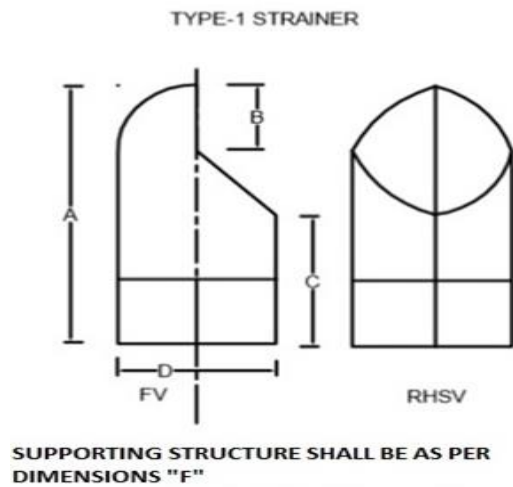
66	4423750353	STRAINER,Y-TYPE, 1IN,102-WG-635	1"	EA	2	30	65	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIANGULAR PITCH	
67	4423750373	STRAINER,Y-TYPE, 2IN,102-WG-685	2"	EA	2	55	125	SS304	80 MESH WITH PERF.SHEET 8MM HOLE*10MM TRAIANGULAR PITCH	
68	4423750633	STRAINER,Y-TYPE, 2IN,102-WG-601	2"	EA	4	55	95	SS304	8	22
69	4422992703	STRAINER,Y-TYPE, 2IN,102-92703-A1A	2"	EA	4	55	95	SS304	8	22
70	4423750563	STRAINER,Y-TYPE, 1.5IN,107-PA-303	1.5"	EA	2	50	130	SS304	8	22
71	4423750573	STRAINER,Y-TYPE, 1.5IN,107-PA-304A/B	1.5"	EA	4	40	100	SS304	8	22
72	4423750523	STRAINER,Y-TYPE, 1.5IN,107-PA-204A/B	1.5"	EA	4	40	100	SS304	8	22

II) Specifications of Cone-Type Strainers: Sheet No. L2-2, ITEM S.NO. 73-94

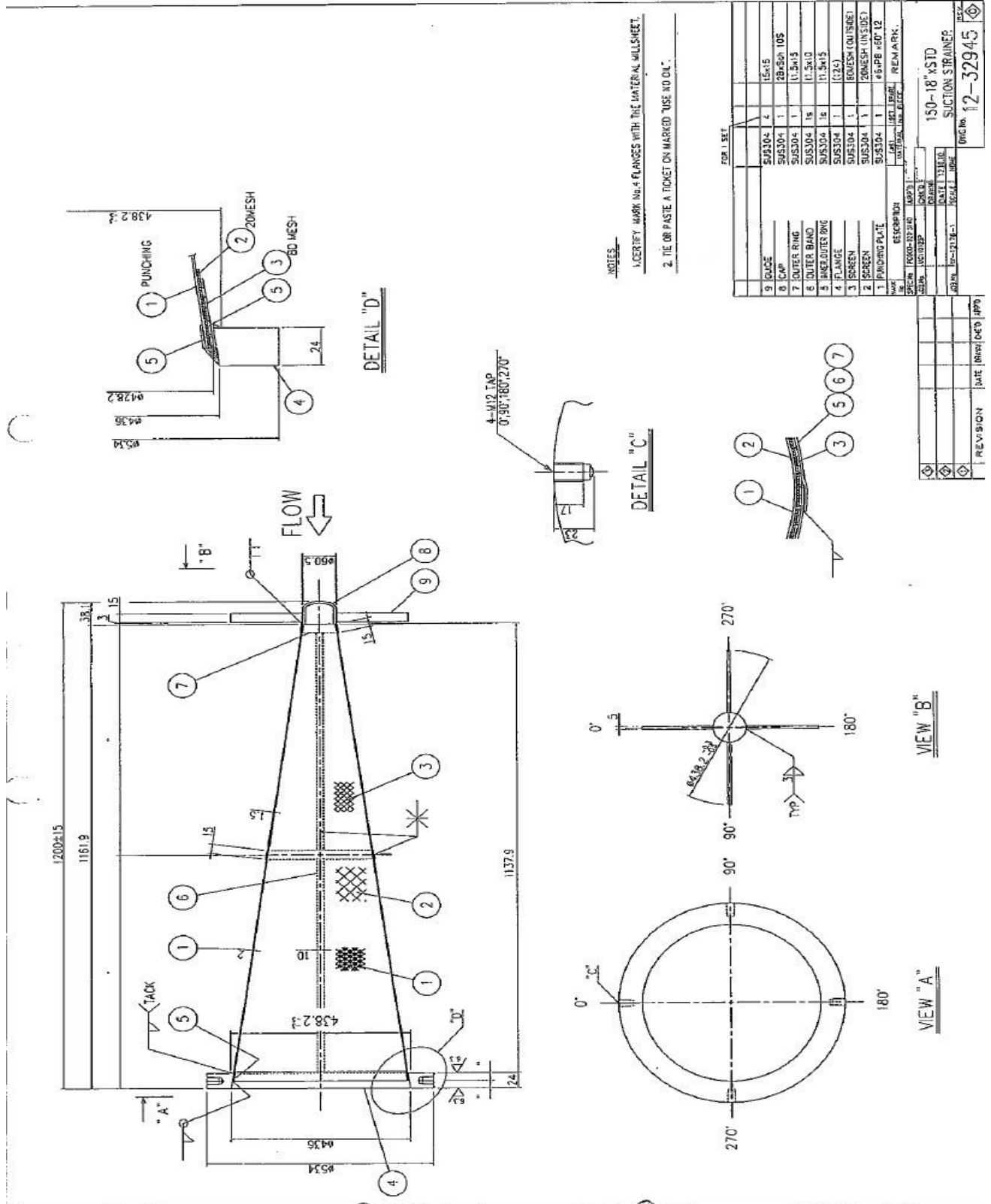


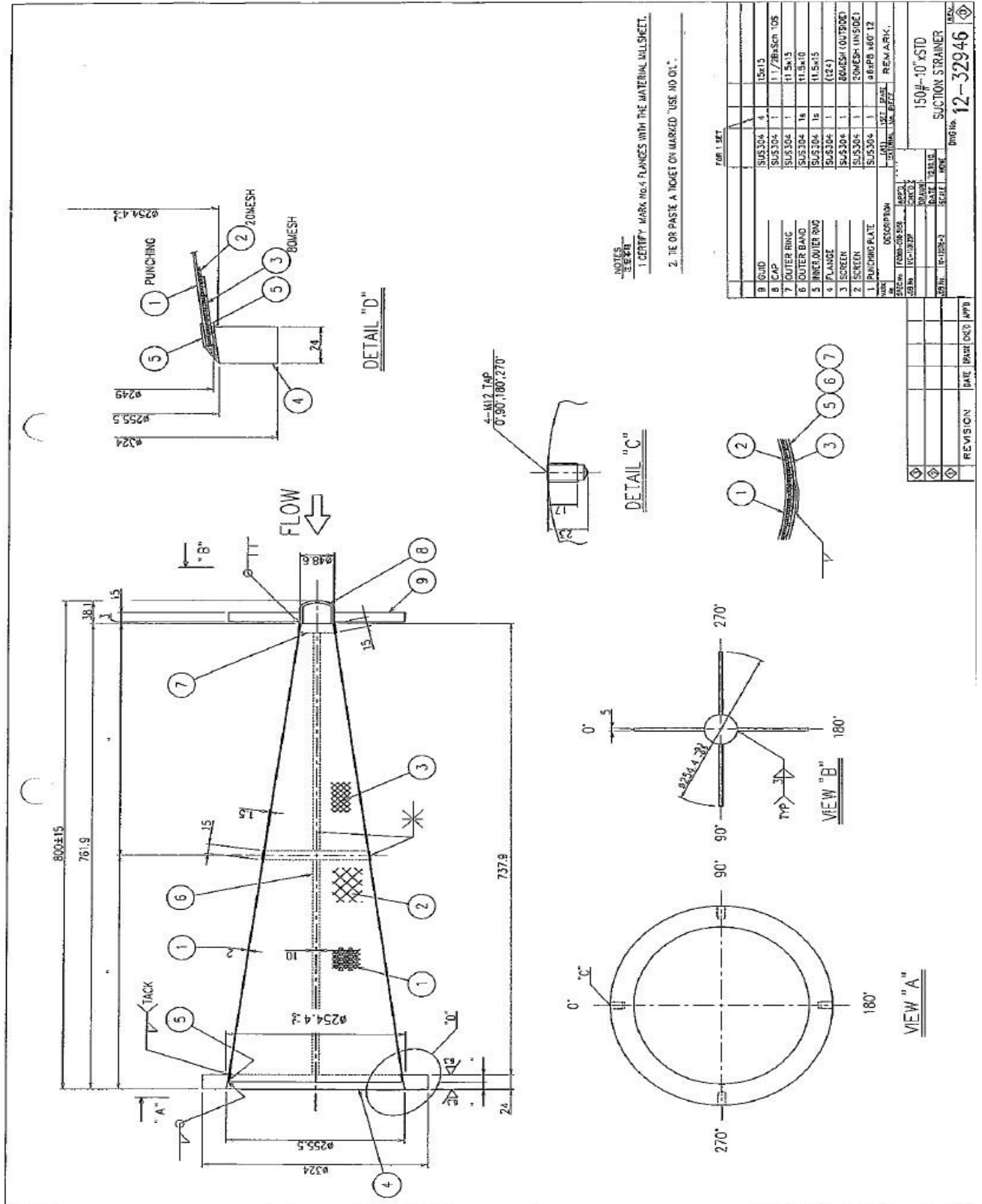
Sheet No. L2-2, ITEM S.No. 73-94															
S. No	Material code	Description	SIZE	U M	REQ QNTY	DIMENSION (IN mm)					NO OF STIFFENER	PLATE (2) MOC	MOC	MESH SIZE	SWG
						A	B	C	D	E					
73	4423800053	STRAINER, CONE, 4IN ,102-WG-117 & 102-WG-118	4"	EA	4	95	83	157	140	3	4	SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
74	4422992503	STRAINER, CONE, 4IN ,102-WG-121 & 102-WG-122	4"	EA	4	95	83	157	140	3	4	SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
75	4423800113	STRAINER, CONE, 3IN, STR-C-107-PA-501B	3"	EA	4	70	67	127	130	3	3	SA 516 GR 70	SS304	3*3 STD. STOCK S.S WIRE MESH- 0.080" DIA. WIRE,0.253" SQ. CLEAR, 57.6% OPEN AREA	
76	4423800193	STRAINER, CONE, 3IN, STR-C-107-PA-603	3"	EA	2	70	67	127	130	3	3	SA 516 GR 70	SS304	3*3 STD. STOCK S.S WIRE MESH- 0.080" DIA. WIRE,0.253" SQ. CLEAR, 57.6% OPEN AREA	
77	4423800143	STRAINER, CONE, 3IN, STR-C-107-PA-503A/B	3"	EA	4	70	67	127	130	3	3	SA 516 GR 70	SS304	3*3 STD. STOCK S.S WIRE MESH- 0.080" DIA. WIRE,0.253" SQ. CLEAR, 57.6% OPEN AREA	
78	4423800283	STRAINER, CONE, 1.5IN, STR-C-107-PA-101A/B	1.5"	EA	4	35	32	73	90	3		SA 516 GR 70	SS304	4*4 STD. STOCK S.S WIRE MESH- 0.047" DIA. WIRE,0.203" SQ. CLEAR, 65.9% OPEN AREA	
79	4423800163	STRAINER, CONE, 1.5IN, STR-C-107-PA-601A/B	1.5"	EA	4	35	32	73	90	3		SA 516 GR 70	SS304	4*4 STD. STOCK S.S WIRE MESH- 0.047" DIA. WIRE,0.203" SQ. CLEAR, 65.9% OPEN AREA	
80	4423800183	STRAINER, CONE, 3IN, STR-C-107-PA-602	3"	EA	2	70	67	127	130	3	3	SA 516 GR 70	SS304	3*3 STD. STOCK S.S WIRE MESH- 0.080" DIA. WIRE,0.253" SQ. CLEAR, 57.6% OPEN AREA	
81	4423800213	STRAINER, CONE, 10IN , 102-WG-623	10"	EA	2	238	850	324	190	3	6	SA 516 GR 70	SS304	20 MESH * 26 SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
82	4423800083	STRAINER, CONE, 4IN, STR-C-107-PA-401A/B	4"	EA	4	95	83	157	140	3	4	SA 516 GR 70	SS304	3*3 STD. STOCK S.S WIRE MESH- 0.080" DIA. WIRE,0.253" SQ. CLEAR, 57.6% OPEN AREA	
83	4422990233	STRAINER, CONE, 1.5IN, STR-C-107-PA-502A/B	1.5"	EA	4	35	32	73	90	3		SA 516 GR 70	SS304	4*4 STD. STOCK S.S WIRE MESH- 0.047" DIA. WIRE,0.203" SQ. CLEAR, 65.9% OPEN AREA	
84	4423800223	STRAINER, CONE, 4IN, STR-C-102-FT-51201	4"	EA	2	95	400	157	140	3	4	SA 516 GR 70	SS304	20 MESH * 26 SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
85	4423800063	STRAINER, CONE, 2IN ,102-WG-136 & 102-WG-137	2"	EA	4	44	38	92	100	3		SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
86	4423800243	STRAINER, CONE, 2IN ,102-WG-639 & 102-WG-640	2"	EA	4	44	38	92	100	3		SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
87	4423800253	STRAINER, CONE, 2IN ,102-WG-641 & 102-WG-642	3"	EA	4	70	67	127	130	3	3	SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
88	4423800263	STRAINER, CONE, 2IN ,102-WG-643 & 102-WG-644	8"	EA	4	191	200	270	165	6	6	SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
89	4423800233	STRAINER, CONE, 2IN ,102-WG-637 & 102-WG-638	2"	EA	4	44	38	92	100	3		SA 516 GR 70	SS304	40 MESH * 34SWG. WITH 6MM PERFORATION 8MM PITCH,1.2MM THK.	
90	1579080023	CONICAL STRAINER, 18 INCH, VRC 1ST SUCTION	18"	EA	4	As per drawing Sheet L2-4, Drawing No. 12-32945						SS304	SS304	Mesh Size: 20 (inside), 80 (outside), Perforated Support Plate: dia 6 mm x 8 Pitch x 60 degree thickness 2 mm	
91	1579080033	CONICAL STRAINER, 10 INCH, VRC 2ND SUCTION	10"	EA	4	As per drawing Sheet L2-5, Drawing No. 12-32946						SS304	SS304	Mesh Size: 20 (inside), 80 (outside), Perforated Support Plate: dia 6 mm x 8 Pitch x 60 degree thickness 2 mm	
92	1512110023	CONICAL STR, 18IN, C2 FEED SUCTION	18"	EA	2	As per drawing Sheet L2-7, Detailed Dwg: 12-0380-1						SS304	SS304	Mesh Size: 20 Perforated Support Plate Details: dia 10mm	
93	1572010013	CONICAL STR, 3IN, HPPN SUCTION	3"	EA	2	As per drawing Sheet L2-8, Detailed Dwg: 12-32896						SS304	SS304	Mesh Size: 20 (inside), 80 (outside) Perforated Support Plate Details: dia 6mm x 7.5mm Pitch x 60 degree thickness 1 mm	
94	9999999903	STRAINER, CONE, 14IN ,102-KA-572A/B	14"	EA	4	340	490	430	0	6.2		SS304	SS304	14 MESH * 27SWG. WITH 5MM PERFORATION 8.5 MM PITCH, 3MM THK.	

III) Specifications of T-Type Strainers: Sheet No. L2-3, ITEM S.NO. 95-99



Sheet No. L2-3, ITEM NO. 96-99														
SL. NO	MATERIAL CODE	Description	UOM	REQ QNTY	TYPE	SIZE	DIMENSION (IN mm)				STIFFNER DIA	MOC	MESH SIZE	SWG
							A	B	C	D				
95	4423770143	STRAINER, T-TYPE, 4IN, 102-WG-922	EA	2	T-TYPE-2	4"	232	50	100	56	6	SS304	SCREEN 40 MESH * 34 SWG WITH 6MM PERF. 8MM PITCH, THK=1.2MM	
96	4423770033	STRAINER, T-TYPE, 4IN, STR-T-107-PA-302	EA	2	T-TYPE-2	4"	241+5	50	100	56	6	SS304	8	22
97	4423770053	STRAINER, T-TYPE, 2IN, STR-T-107-PA-701A/B	EA	4	T-TYPE-2	2"	153	25	50	31	6	SS304	8	22
98	4423770133	STRAINER, T-TYPE, 6IN, STR-T-102-WG-840	EA	2	T-TYPE-1	6"	308+5	75	121	151	BARS 10*5 AND 10*10	SS304	7	21
99	4423770093	STRAINER, T-TYPE, 6IN, STR-T-107-PG-536	EA	2	T-TYPE-1	6"	315	75	121	141	BARS 10*5 AND 10*10	SS304	100 MESH WITH PERF. SHEET 6MM HOLE*8MM TRAINGULAR PITCH	





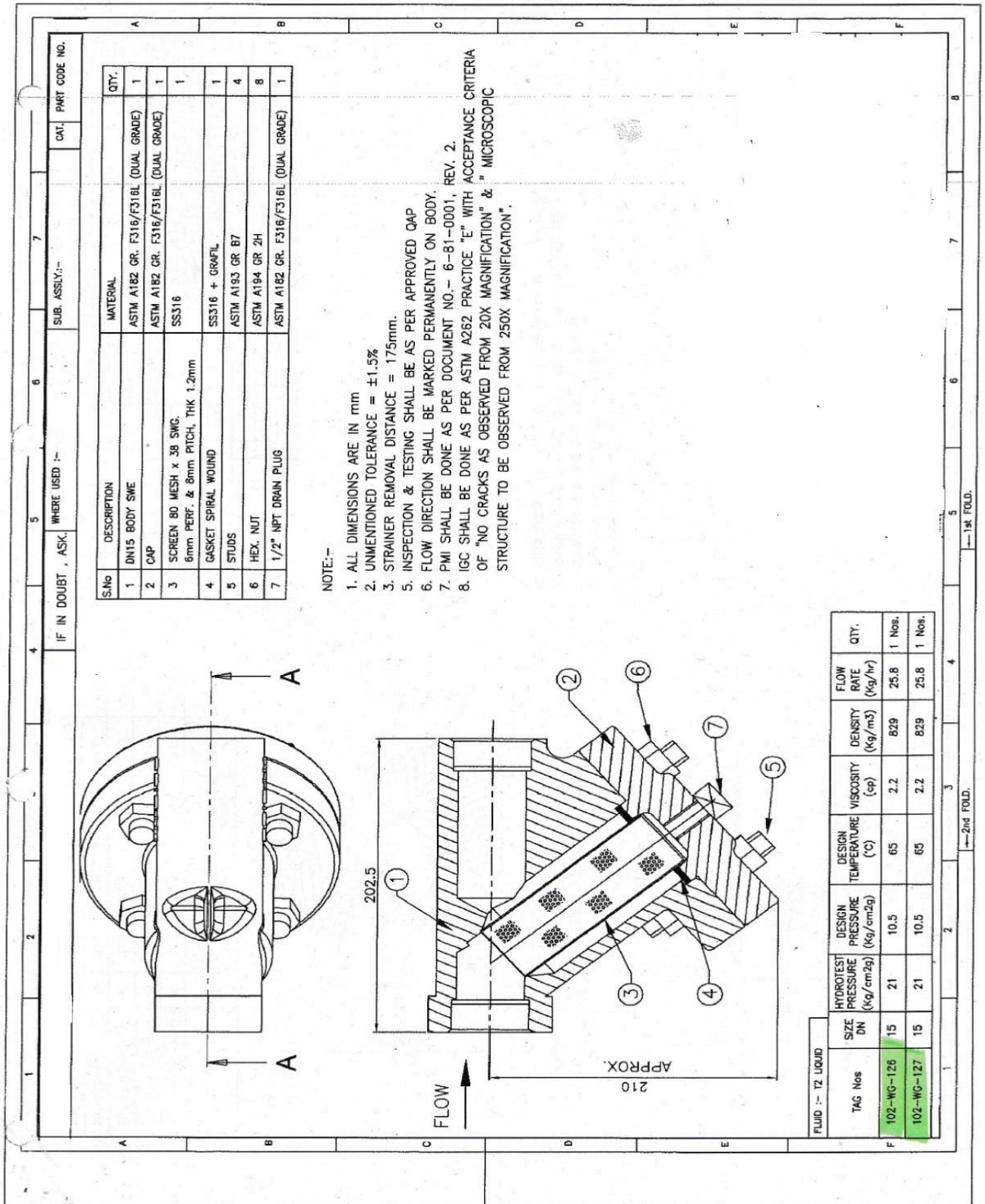
NOTES
1. CERTIFY MARK NO. 4 PLUNGE WITH THE MATERIAL MILLSWELL.
2. TE OR PASTE A TICKET ON MARKED "USE NO. 01".

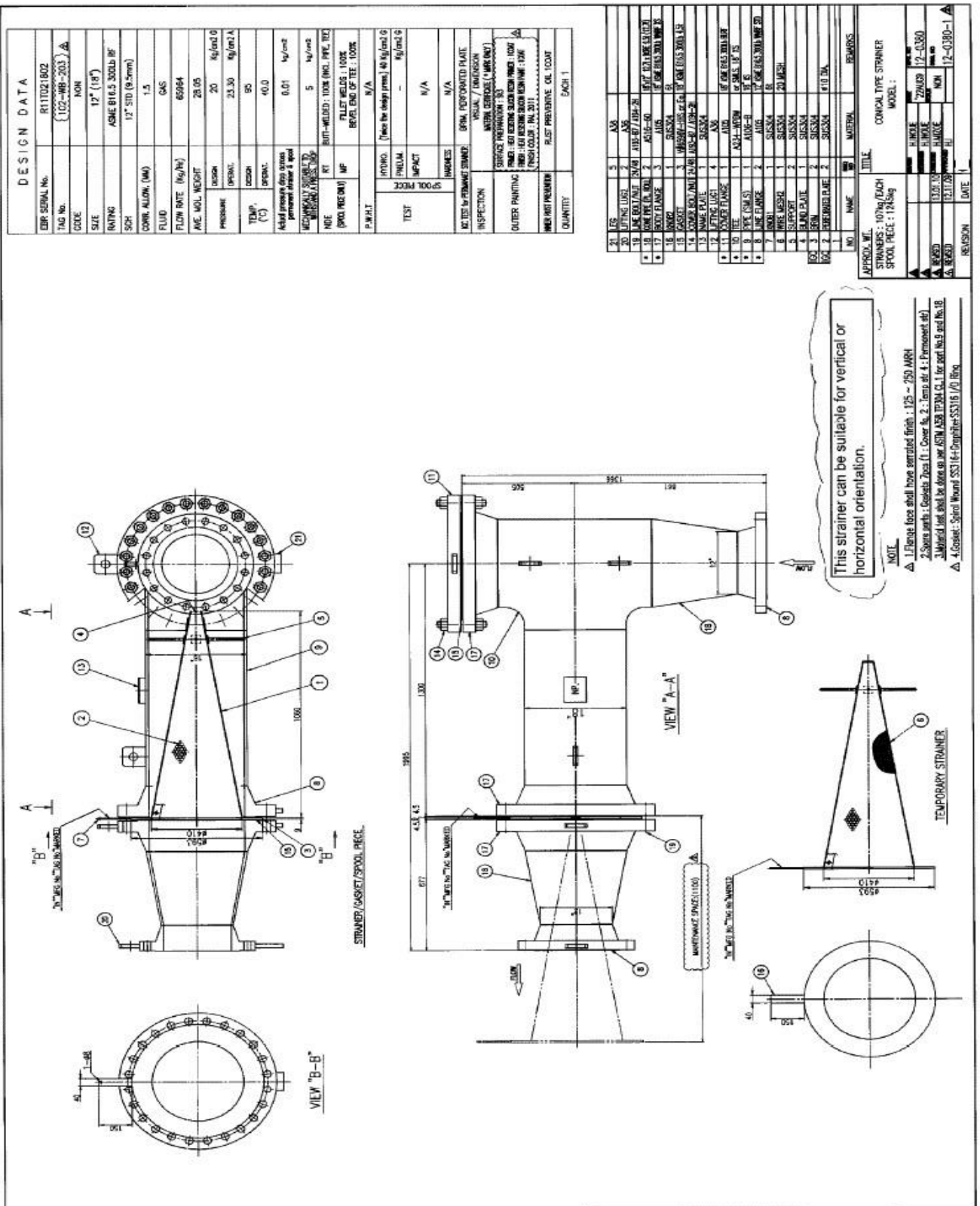
FOR 1 SET		150#-10" STD	
ITEM	DESCRIPTION	QTY	REMARKS
1	304 SS	1	
2	304 SS	1	
3	304 SS	1	
4	304 SS	1	
5	304 SS	1	
6	304 SS	1	
7	304 SS	1	
8	304 SS	1	
9	304 SS	1	
10	304 SS	1	
11	304 SS	1	
12	304 SS	1	
13	304 SS	1	
14	304 SS	1	
15	304 SS	1	
16	304 SS	1	
17	304 SS	1	
18	304 SS	1	
19	304 SS	1	
20	304 SS	1	
21	304 SS	1	
22	304 SS	1	
23	304 SS	1	
24	304 SS	1	
25	304 SS	1	
26	304 SS	1	
27	304 SS	1	
28	304 SS	1	
29	304 SS	1	
30	304 SS	1	
31	304 SS	1	
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33	304 SS	1	
34	304 SS	1	
35	304 SS	1	
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37	304 SS	1	
38	304 SS	1	
39	304 SS	1	
40	304 SS	1	
41	304 SS	1	
42	304 SS	1	
43	304 SS	1	
44	304 SS	1	
45	304 SS	1	
46	304 SS	1	
47	304 SS	1	
48	304 SS	1	
49	304 SS	1	
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51	304 SS	1	
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65	304 SS	1	
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87	304 SS	1	
88	304 SS	1	
89	304 SS	1	
90	304 SS	1	
91	304 SS	1	
92	304 SS	1	
93	304 SS	1	
94	304 SS	1	
95	304 SS	1	
96	304 SS	1	
97	304 SS	1	
98	304 SS	1	
99	304 SS	1	
100	304 SS	1	

12-32946

150#-10" STD
SUCTION STRAINER

REVISION (DATE) (QTY) (APP)





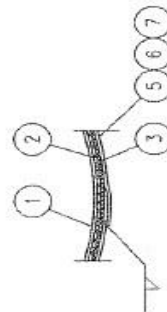
DESIGN DATA									
DRP SERIAL No.	R11021802								
TAG No.	{102-MB-203} A								
CODE	NON								
SIZE	12" (14")								
RATING	ASME B16.5 300Lb RF								
SCH	12" STD (9.5mm)								
CONV. ALLOW. (MM)	1.5								
FLUID	GAS								
FLOW RATE (kg/hr)	60000								
AVE. MOL. WEIGHT	28.05								
DESIGN PRESSURE (PSI)	20								
DESIGN TEMP. (°C)	50								
Actual pressure drop across permanent strainer & spool	0.01								
MATERIALS	N/A								
RT	BUTT-WELDED: 100% (NCL. INCL. TEE, TEE, FLAT END OF TEE: 100%								
RF	N/A								
INSULATION	N/A								
PAINT	N/A								
TEST	N/A								
INSPECTION	N/A								
OUTER PAINTING	N/A								
WEIGHT	N/A								
QUANTITY	EACH 1								

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	CONICAL TYPE STRAINER	1	EA	
2	FLANGE	1	EA	
3	FLANGE	1	EA	
4	FLANGE	1	EA	
5	FLANGE	1	EA	
6	FLANGE	1	EA	
7	FLANGE	1	EA	
8	FLANGE	1	EA	
9	FLANGE	1	EA	
10	FLANGE	1	EA	
11	FLANGE	1	EA	
12	FLANGE	1	EA	
13	FLANGE	1	EA	
14	FLANGE	1	EA	
15	FLANGE	1	EA	
16	FLANGE	1	EA	
17	FLANGE	1	EA	
18	FLANGE	1	EA	

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	CONICAL TYPE STRAINER	1	EA	
2	FLANGE	1	EA	
3	FLANGE	1	EA	
4	FLANGE	1	EA	
5	FLANGE	1	EA	
6	FLANGE	1	EA	
7	FLANGE	1	EA	
8	FLANGE	1	EA	
9	FLANGE	1	EA	
10	FLANGE	1	EA	
11	FLANGE	1	EA	
12	FLANGE	1	EA	
13	FLANGE	1	EA	
14	FLANGE	1	EA	
15	FLANGE	1	EA	
16	FLANGE	1	EA	
17	FLANGE	1	EA	
18	FLANGE	1	EA	

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	CONICAL TYPE STRAINER	1	EA	
2	FLANGE	1	EA	
3	FLANGE	1	EA	
4	FLANGE	1	EA	
5	FLANGE	1	EA	
6	FLANGE	1	EA	
7	FLANGE	1	EA	
8	FLANGE	1	EA	
9	FLANGE	1	EA	
10	FLANGE	1	EA	
11	FLANGE	1	EA	
12	FLANGE	1	EA	
13	FLANGE	1	EA	
14	FLANGE	1	EA	
15	FLANGE	1	EA	
16	FLANGE	1	EA	
17	FLANGE	1	EA	
18	FLANGE	1	EA	

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	CONICAL TYPE STRAINER	1	EA	
2	FLANGE	1	EA	
3	FLANGE	1	EA	
4	FLANGE	1	EA	
5	FLANGE	1	EA	
6	FLANGE	1	EA	
7	FLANGE	1	EA	
8	FLANGE	1	EA	
9	FLANGE	1	EA	
10	FLANGE	1	EA	
11	FLANGE	1	EA	
12	FLANGE	1	EA	
13	FLANGE	1	EA	
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16	FLANGE	1	EA	
17	FLANGE	1	EA	
18	FLANGE	1	EA	



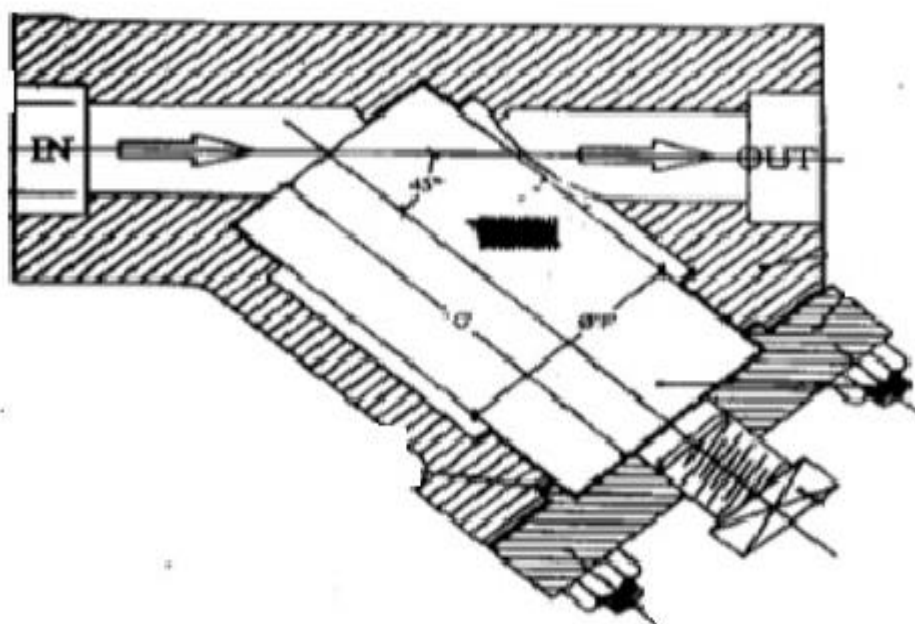
〔44〕*神皇正統記* 卷之四 神武天皇 二 神武天皇 二 神武天皇 二

DATE	REVISION	DATE	DRAWN BY	APP'D
12-32896				
150# 300H-3XSCH40				
SUCTION STRAINER				
QTY	SCALE	DATE	BY	CHKD BY
1	AS SHOWN	12-27-21	JANUS	WILLIAMS
PROJ NO.	PROJ NAME	PROJ DATE	PROJ DRAWN BY	PROJ APP'D
150# 300H-3XSCH40	SUCTION STRAINER	12-27-21	JANUS	WILLIAMS

U.S. No.	W-12151
Job No.	WFT JCB. No.

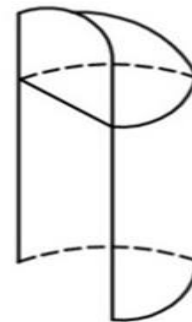
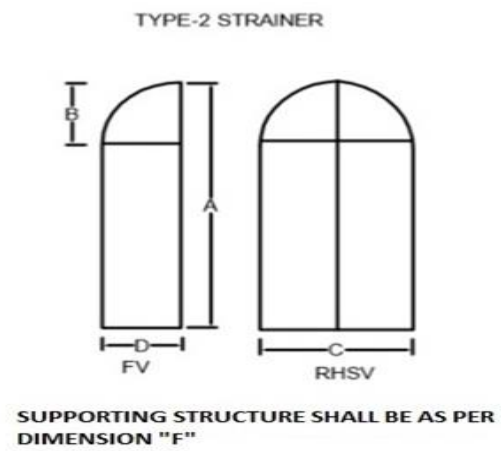
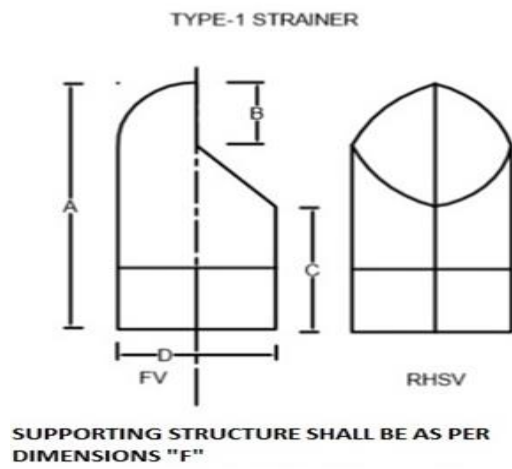
C. Specifications for items required at HDPE-1 plant (Item S.No.100-106)

Sheet H1-1, Item S. No. 100, Y-Type strainer, Item code: 1822809353



S. NO	Material code	EQUIPMENT NO.	UOM	REQD QTY	DIMENSION (IN mm)		MOC	MESH SIZE	SWG
					F(OD)	G(Length)			
100	1822809353	ELEMENT,STRAINER, Y-TYPE,1 IN, COND HEXANE PUMP	EA	2	34	65	SS304	PERFORATED SHEET WITH 2 MM HOLE * 6 MM TRIANGULAR PITCH WITHOUT MESH	

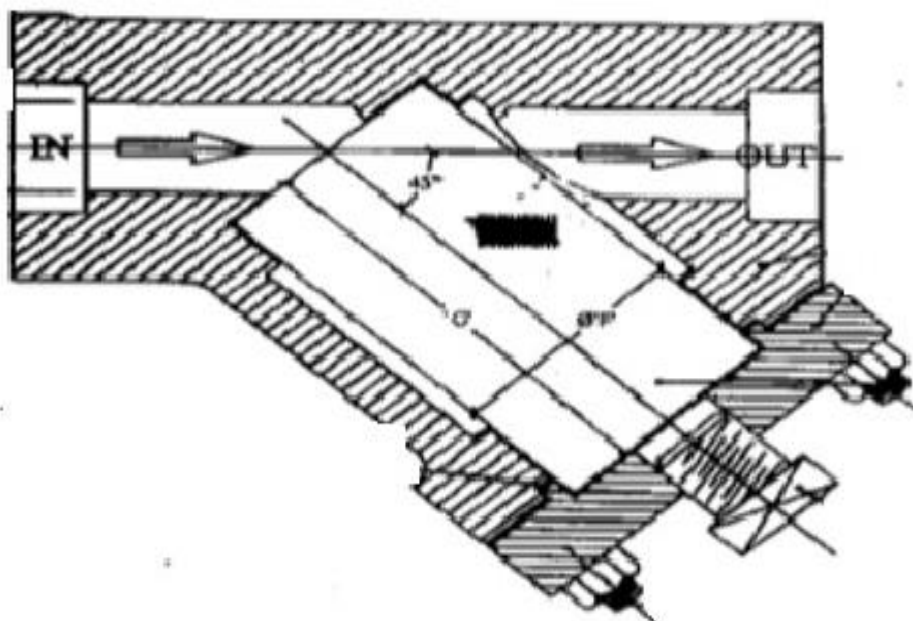
Sheet H1-2, ITEM S.No. 101-106,T-Type strainer



							Sheet H1-2, ITEM S.No. 101-106,T-Type strainer							
SL. NO	MATERIAL CODE	DESCRIPTION	TYPE	SIZE	UOM	REQD. QTY	DIMENSION (IN mm)				STIFFNER DIA	MOC	MESH SIZE	SWG
							A	B	C	D				
101	1784599723	ELMT,STRNR,T-TYPE-2,4 IN,DEHYD PUMP	T-TYPE-2	4	EA	2	228	50	99	55	RECT. BAR 6*10	SS304	20	24 SWG W/O PERF.
102	1784599733	ELMT,STRNR,T-TYPE-1,6 IN,DEHYD FEED PUMP	T-TYPE-1	6	EA	2	308	107	105	140	RECT. BAR 6*10	SS304	20	34 SWG W/O PERF.
103	1785748673	ELMT,STRNR,T-TYPE-2,4 IN,COND TRANS PUMP	T-TYPE-2	4	EA	2	233	64	98	50	CIRCULAR BAR DIA. 6	SS304	20	34 SWG W/O PERF.
104	1793609243	ELMT,STRNR,T-TYPE-1,6 IN,COND TRANS PUMP	T-TYPE-1	6	EA	2	310	70	106	140	RECT. BAR 5*12	SS304	20	34 SWG W/O PERF.
105	1822599783	ELMT,STRNR,T-TYPE-2,4 IN,DESUP PUMP	T-TYPE-2	4	EA	2	230	46	98	60	CIRCULAR BAR DIA. 6	SS304	40	34 SWG W/O PERF.
106	1783149213	ELMT,STRNR,T-TYPE-2,2 IN,COND TRANS PUMP	T-TYPE-2	2	EA	1	153	26	52	25	CIRCULAR BAR DIA. 6	SS304	20	24 SWG W/O PERF.

D. Specifications for items required at HDPE-2 plant (Item S.No.107-118)

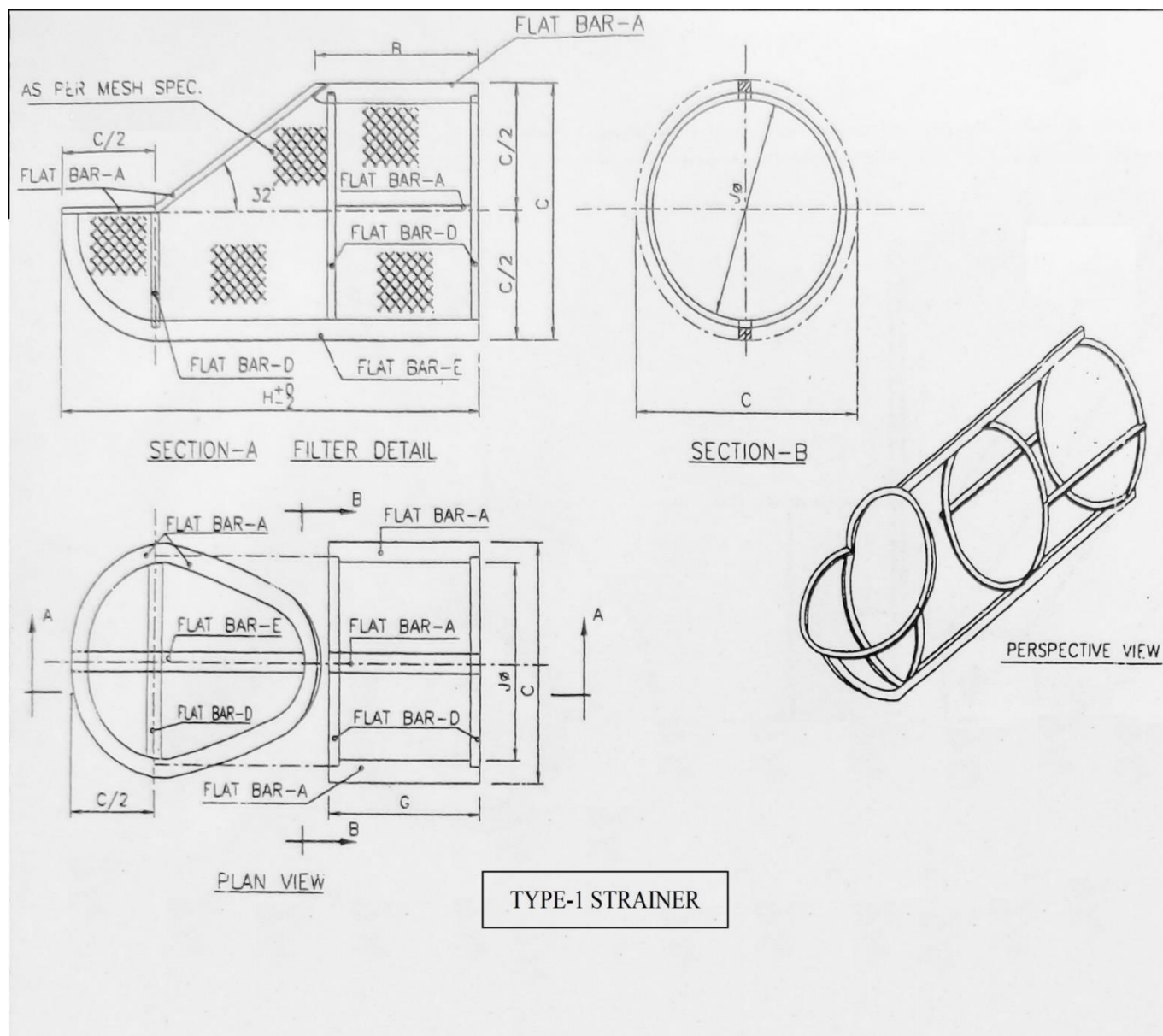
Sheet H2-1, Y-Type, ITEM S.No. 107-112



Sheet H2-1,Y-Type, ITEM S.No. 107-112										
S. NO	Material code	ITEM DESCRIPTION	SIZE	UOM	REQD QTY	DIMENSION (IN mm)		MOC	MESH SIZE	SWG
						F(OD)	G(Length)			
107	4423758453	ELMT,STRNR,Y-TYPE,1 IN, 18-PA-714A/B	1	EA	2	34	65	SS316	PERFORATED SHEET WITH 2 MM HOLE * 6 MM TRIANGULAR PITCH WITHOUT MESH	
108	4423758403	ELMT,STRAINER,Y-TYPE,0.5IN,NL-18-10101-A1K	0.5	EA	3	30	65	SS316	120 WIRE MESH, 45 S.W.G. WIRE, 43.6% OPENING AREA	
109	4423758413	ELMT,STRAINER,Y-TYPE,0.75IN,AP-18-30201-A3A	0.75	EA	5	30	65	SS316	20 WIRE MESH, 32 S.W.G. WIRE, 61.5% OPENING AREA	
110	4423758423	ELMT,STRAINER,Y-TYPE,0.75IN,NL-18-10202-A1K	0.75	EA	3	30	65	SS316	120 WIRE MESH, 45 S.W.G. WIRE, 43.6% OPENING AREA	
111	4423758433	ELMT,STRAINER,Y-TYPE,1IN,HSO-18-80307-A24A	1	EA	4	30	65	SS316	200 WIRE MESH, 48 S.W.G. WIRE, 46.2% OPENING AREA	
112	4423758443	ELMT,STRAINER,Y-TYPE,3IN,HSO-18-80301-A24A	3	EA	2	120	210	SS316	200 WIRE MESH, 48 S.W.G. WIRE, 46.2% OPENING AREA	

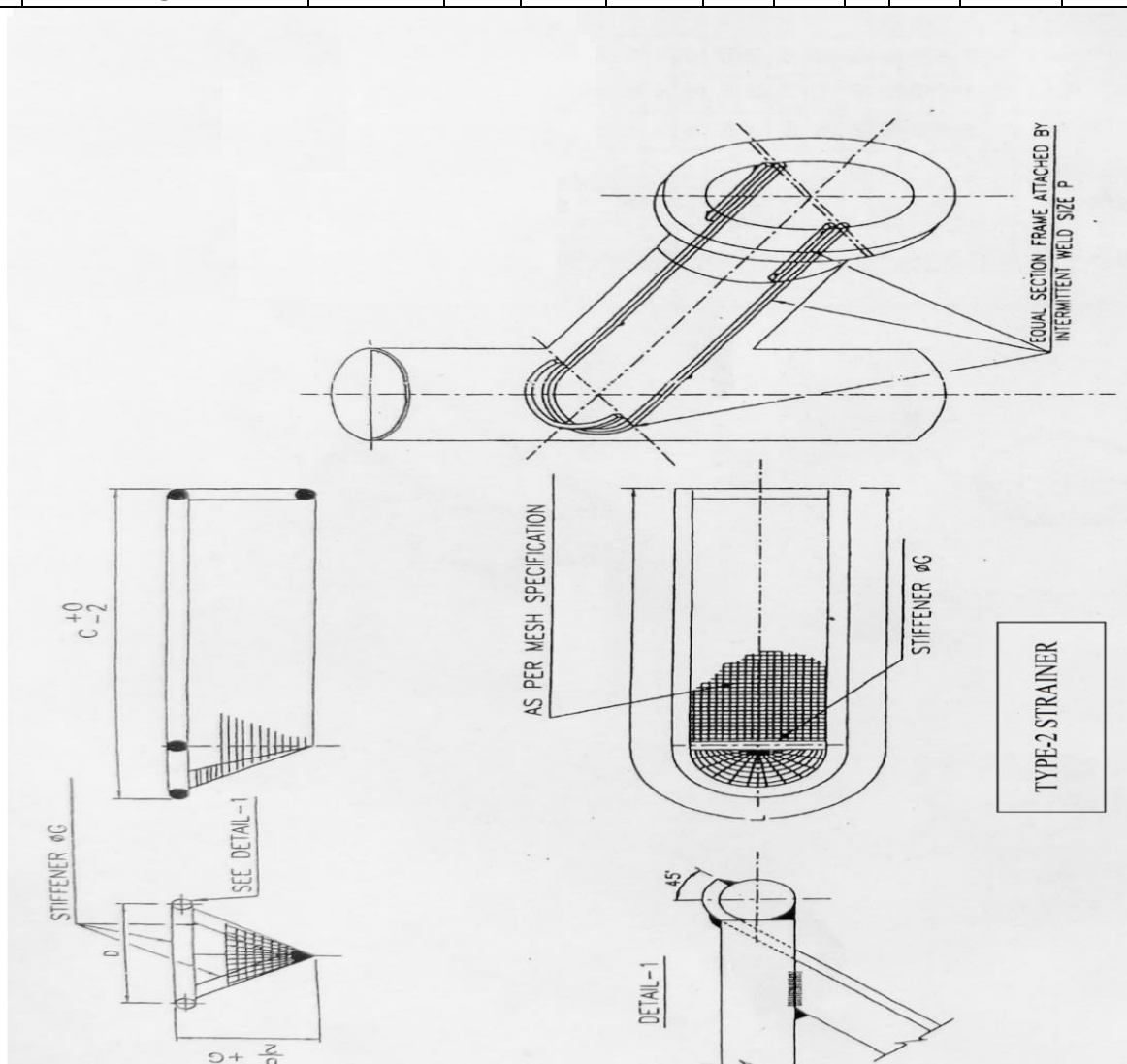
Sheet H2-2,T-Type, ITEM S.No. 113-114

SL. NO	MATERIAL CODE	EQUIPMENT NO.	TYPE	SIZE	UOM	REQD. QTY	H	C	J	B	G	FLAT BAR			MOC	MESH SIZE	SWG
												D	E	A			
113	4423771243	ELMT,STRNR,T-TYPE-1,6 IN,18-PA-852/706AB	T-TYPE-1	6	EA	2	301	137	117	115	133	10x5	10x5	10x5	SS304	20	32 SWG
114	4423771253	ELMT,STRNR,T-TYPE-1,6 IN,18-PA-202/222	T-TYPE-1	6	EA	4	308	151	131	115	121	10x5	10x5	10x5	SS304	20	32 SWG



Sheet H2-3, ITEM S.No. 115-118

SL. NO	MATERIAL CODE	TYPE	SIZE	UOM	REQD. QTY	DIMENSION (IN mm)				MOC	MESH SIZE	SWG
						C	D	G	P			
115	ELMT,STRNR,T-TYPE-2,4 IN,18-PA-707A/B	T-TYPE-2	4	EA	2	232	100	6	6x6	SS304	20	24 SWG
116	ELMT,STRNR,T-TYPE-2,4 IN,18-PA-851A/B	T-TYPE-2	4	EA	2	232	100	6	6x6	SS304	20	32 SWG
117	ELMT,STRNR,T-TYPE-2,4 IN,18-PA-853 A/B	T-TYPE-2	4	EA	2	232	100	6	6x6	SS304	40	32 SWG
118	ELMT,STRNR,T-TYPE-2,2 IN,18-PA-751	T-TYPE-2	2	EA	1	164	51	6	6x6	SS304	20	24 SWG



2. **STANDARDS & SPECIFICATIONS:**

- 2.1 The strainers shall be manufactured as per the relevant standard and procedure.
- 2.2 MOC and dimensions of the strainers should be as per above details.
- 2.3 No deviation in respect of any provision in this document shall be accepted.

3. **INSPECTION AND TESTING**

- 3.1 Necessary Inspection / Quality Assurance Plan (QAP) based on relevant standards for the strainers shall be submitted by the Vendor for approval of GAIL within 20 days of placement of P.O.
- 3.2 Vendor's QAP shall be in line with Inspection & Test Plan submitted by GAIL and which is part of this document (Clause 4). The vendor has to get QAP approved from GAIL before starting of manufacturing.
- 3.3 All the Testing / Inspection arrangement and clearance shall be carried out as per the approved Q.A.P. The material shall be inspected by a GAIL or GAIL Nominated 3rd party inspection (TPI) agency.

4. **Inspection & Test Plan shall be as follows:**

SL NO.	STAGE/ ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SUPPLIER	GAIL/TPIA
1.0	Procedure					
1.1	Hydrostatic Test, Heat Treatment, NDT and Other Procedures	Documented Procedures	100%	Procedure Documents	P	R
1.2	WPS,PQR & WPQ	Welding Parameters & Qualification Record	100%	WPS,PQR & WPQ	P	W- New R- Existing
2.0	Material Inspection					
2.1	Raw Material Inspection	Chemical , Mechanical ,Impact, IGC, Heat Treatment, NDT, Hardness and other properties as applicable	100%	Test Certificates	P	R
3.0	In Process Inspection					
3.1	Welding	Welding Parameters as per WPS / PQR	100%	Inspection Reports	P	R
3.2	Heat Treatment	PWHT as applicable	100%	HT chart	P	R
3.3	RT As Applicable	Surface & Internal Imperfections	AT random	RT films & Reports	P	R
3.4	UT / LPT / MPT As applicable	Surface & Internal Imperfections	AT random	Test Reports	P	R
4.0	Final Inspection					
4.1	Visual and Dimensional Inspection (VDI)	Surface Condition & Dimensions	100% By Supplier & At Random By TPIA	Inspection Report	P	H
4.2	PMI Check	Chemical Check	100% By Supplier & At Random By TPIA	Inspection Report	P	W / R
4.3	Final Stamping	Stamping Of Accepted Strainers	Strainers to have Supplier QC Stamp.	Inspection Report	P	H
5.0	Documentation & IC					
5.1	Documentation & Inspection Certificate(IC)	Review of Stage Inspection Reports / Test Reports & Issue of IC	100%	Supplier TC & IC	P	H

Legend: H- Hold (Do not proceed without approval), Random -10% , P-Perform, R-Review, RW- Random Witness, W-Witness

5.0 TRANSPORTATION.

- 5.1 Transportation from Vendor's works to GAIL Pata after Pre dispatch Inspection clearance shall be under Vendor's scope. The strainers should be supplied with proper tags with description for proper identification. Unloading of the materials at GAIL, Pata shall be done by GAIL.
- 5.2 The strainers should be delivered at GAIL, PATA in intact condition. The strainers shall be rejected in the event of even slight damage/dents/distortion on the external and internal surfaces. Proper packing and care in transportation is to be ensured in this regard.

5.0 GUARANTEE / WARRANTY PERIOD

As per GAIL General Condition of Contract / Purchase condition.

6.0 DELIVERY PERIOD

The material will be supplied within 10 Weeks from the date of Fax of Acceptance/ Purchase Order/GeM contract whichever is earlier.

7.0 SUBMISSION OF DOCUMENTS

7.1 Documents to be submitted with bid:

- Signed & stamped copy of 'Special Conditions of Contract (SCC) & Job Specification' i.e. this document as token of acceptance of it. Vendor to submit draft ITP along with bid.

7.2 Documents to be submitted after placement of order & before manufacturing:

- The vendor shall submit QAP within 20 days from the date of issue of purchase order/FOA for review and approval of GAIL. Approved copy of QAP & drawings shall be returned to vendor within seven days from date of receipt. Seven days of review/approval period shall deem to be included in delivery period. In case, M/s GAIL takes more than seven days for approval for the reasons attributable to GAIL, vendor shall be compensated accordingly in delivery period. In case, vendor is required to submit revised QAP due to non-inclusion of proper technical parameters, no compensation in delivery period shall be provided to vendor.

7.3 Documents to be submitted along with supply of items:

- Soft copy of fabricated drawings 'As built' with all details for all items as mentioned in SOS.
- Material Test reports showing location, heat number, chemical analysis and physical properties of all materials used for the fabrication of items mentioned above.
- Inspection release note by the TPIA and warranty/guarantee certificate by supplier.

8.0 PAYMENT TERMS:

100% payment shall be released within 30 days of receipt and acceptance of material at site.

SIGNATURE OF VENDOR:

NAME OF VENDOR:

COMPANY SEAL