

SCHEDULE OF TECHNICAL REQUIREMENT FOR MANUFACTURING AND SUPPLY OF OIL COOLER RADIATOR FOR CONVERTOR/TRANSFORMER OF S PHASE LOCO.

Scope: The schedule of technical requirement (STR) specifies the requirement to be met by vendors who manufacture, test and supply the oil cooler radiator for converter/transformer of 3-phase loco, this STR should be read in conjunction with the CLW's technical specification for this item. The firm should satisfy themselves having complied with the requirements of the specification and this STR.

(A) M&P Requirements:

SN	M&P Requirement	Type/rating	Remarks
1.	Shearing machine	5mm	For Shearing plate.
2.	Swing machine	Dia 4"	For cutting pipe & tubes
3.	Al. Tube Flushing Berth	3 mtr	For Tube/slab flushing
4.	Hydraulic Press	300 Ton	For tank forming/Banding
5.	Power press machine	60 Ton	For Mech. press operation
6.	Over Head Crane	5 Ton	For handling equipt.
7.	Air Compressor	15 HP	For cleaning and leak test
8.	Grinder	-	For surface and other grinder
9.	Drilling machine	50mm	For drilling different holes
10.	Tube Expander M/c	-	For tube expanding
11.	Baking Oven	3mtr x 1.5mtr	For backing the cors/slab
12.	Assembly Jig	-	For fin & tube assembly
13.	Fin M/c	200 Ton	For forming flat & Z Fin type
14.	End Dipping	-	For solder dipping
15.	Lathe M/c	-	For welding the assly part
16.	Welding M/c	300 Amps	For heating the tube.
17.	Wind Tunnel M/c	10-12 sec	For blow air.
18.	Cleaning	-	Hot water/Hot degraging process
19.	Paint Booth	-	For painting the finish product.
20.	No-flux vaccum brazing Facility	-	For Brazing aluminium component.
21.	Fin Punching M/c	-	-
22.	Zn cromatization arrangement	-	-
23.	Oil Flushing M/c	-	-

(B) Measuring & Testing Facility:

SN	M&P Requirement	Type/rating	Remarks
1.	Micrometer, Steel tape, Vernier Caliper	Standard rating	For measuring length, Diameter
2.	Temperature indicator	Standard rating 400deg C	Measuring Temp
3.	Vibration testing	1.50 ton, 1500Kgf	For Vibration testing
4.	Weighing M/c	Up to 500 Kg	For Weighting
5.	Thread ring gauge	-	Measuring thread pitch
6.	Pressure gauge	1200 Kgf	Measuring Air pressure
7.	Dry Leakage Testing M/c	-	For leakage test
8.	Heat dissipation testing facility in wind runnel for suitable size.	As per spec	For testing heat dissipation
9.	Oil pressure drop test arrangement	-	-

(C) Quality Control Requirements:

Welder, Painter and Brazer should be qualified / certified.

27/11/17
SEE/D/CON

Dy.CEE/D-T:

CEE/D&D:

Dy. (D)

30/11