

# ANNEXURE-I

## SCOPE OF WORK - MECHANICAL WORKS AT BALANCING TUNNEL

SL.No.	Description of work	Qty	Unit
	The scope of work involves collection of materials / equipment from stores / yard, shifting, laying, erection of pipe lines, Equipments, tanks, valves, flanges , elbows, Tees, reducers etc and fabrication and erection of support structures/trusses, tee hangers, planum chamber etc, alignemnet of gear box and motor. Pipelines are to be aligned and joined as per directions of site engineer, by TIG root welding & arc welding / flange joint/arc welding with bolts, nuts, washers and gaskets and clamped on supports at a height of +12 Mtrs. to 0 Mtrs level as per drawing / BHEL Engineer's instructions. CS, SS pipe, pipe fittings, Valves Structural materails like angles and channels only will be provided by BHEL free of cost. The rates quoted includes all the above work with contractor's welding electrodes,consumables and equipments. The Contractor has to arrange own transportation for material shifting from BHEL stores to work site. Tools & tackles, welding rods & equipment are in the contractor's scope. All necessary safety precautions like usage of safety belts at height works, usage of relevant PPEs etc. have to be taken care off by the contractor.		
<b>1</b>	<b>Laying of Pipeline</b>		
a	SS Pipe dia 1"	36	RM
b	CS Pipe dia 3"	12	RM
c	CS Pipe dia 4"	12	RM
d	SS Pipe 3/4"	6	RM
e	SS Pipe 1/2"	18	RM
f	SS Pipe 1/4"	18	RM
<b>2</b>	<b>Erection of existing pipes in PPI room</b>		
a	CS Pipe dia 6"	6	RM
b	CS Pipe dia 3"	5	RM
c	CS Pipe dia 2"	4	RM
<b>3</b>	<b>Joints</b>		
a	SS Pipe dia 1"	98	Jts.
b	CS Pipe dia 3"	30	Jts.
c	CS Pipe dia 4"	25	Jts.
d	SS Pipe 3/4"	60	Jts.
e	SS Pipe 1/2"	18	Jts.
<b>4</b>	Dismantling & shifting of existing Vacuum oil skid - Scope of work includes dismantling of existing skid and equipments and shifting as per the instructions of the site engineer.	500	kg
<b>5</b>	Shifting & Erection of New Vacuum oil skid - Scope of work includes Shifting, erection of New vacuum oil skid with proper alignment as per the instructions of the site engineer.	500	kg
<b>6</b>	Shifting & Erection of Motor for PPI vacuum pump - Scope of work includes shifting and erection of Motor for PPI vacuum pumps with proper alignment as per the instructions of the site engineer	400	kg
<b>7</b>	Unpacking, Shifting & Erection of Jacking Oil Skid for OBT: Scope of work includes shifting and erection of Jacking Oil skid complete with proper alignment as per the instructions of the site engineer	400	Kg
<b>8</b>	Installation of pressure & temperature gauges, transducers by fixing vertical inserts	10	Nos.
<b>9</b>	<b>Fabrication</b> : The scope includes fabrication and erection of existing structures, fabrication of columns, pipe racks, hanger supports, pipe supporting brackets tee hangers, coupling guards in various skids, support for cardenshafts, Bogie pipes, support plateform for bearing at 125T, support structure for TPJ bearings at OBT, laying of trench covers/ gratings at 125T and OBT, Fabrication of strainers for 125T leakage oil, support ladder for Cooling tower at NBT, support boxes for RHS cables at NBT, 125T etc. Contractor has to arrange for transport to shift the material from BHEL stores to site and has to hand over the balance material to stores. Required plates, channels, angles, valves, elbows, T joints and pipes will be supplied by BHEL free of cost.	6000	Kgs
<b>10</b>	<b>Painting</b> : Supply of paints and painting materials; painting of pipes, pipe fittings, equipments and other structurals by thoroughly cleaning all the surfaces free from scales,dirt and other foreign matter. Each coat shall be applied in an even and uniform film free from lumps, streaks, runs and uncoated spots. Make: ASIAN/BURGER/SHALIMAR/NEROLAC. One coat of rust preventive oxide primer with 40 microns thick and one coat of Synthetic enamel paint as approved by BHEL.	180	Sq m

Note:

1. GST is extra

2. The agencies are advised to visit the site to understand the nature of work/quantum of work in its true perspective to avoid any complications.

3. The manpower should be at the discretion of the site engineer.