

## **TECHNICAL SPECIFICATION** **SEAL STRIP BENDING AND ROLLING MACHINE**

### **1.0 PURPOSE :**

The machine shall be used for seal strip bending and rolling in running length of alloy steel strips to be assembled in Casings and Rotors of Steam turbines.

### **2.0 SEAL STRIP MATERIAL :**

Stainless steel cold rolled strip of material grade X20 Cr Mo 13 having tensile strength 750 N / mm<sup>2</sup> . Chemical composition shall be C : 0.17-0.22 % , Cr : 12-13 % , Mo : 0.80-1.20 % .

### **3.0 TECHNICAL SPECIFICATIONS :**

- 3.1 Bending Accuracy : 0.1 mm
- 3.2 Rolling range : 100 - 1500 mm
- 3.3 Roller size : OD. 75mm , ID. 28mm , Thk. 18mm
- 3.4 Motor power : 2 H.P.
- 3.5 Speed of motor : to be informed by the supplier
- 3.6 Roller material : High Carbon high Chromium steel
- 3.7 The machine shall be mounted on a trolley for easy movement .
- 3.8 Electrical lamp to be provided at suitable location .
- 3.9 Set of spanners to be used during operation of the machine to be provided.

### **4.0 MANUALS :**

5 sets of Operation & Maintenance manuals, containing electrical circuit diagram, detailed assembly drawings of each sub assembly with part list shall be provided.

### **5.0 COLOUR :**

Colour of the machine shall be apple green.

### **6.0 WARRANTY :**

Supplier shall provide full and complete warranty / guarantee for 18 months (including bought out items , if any) trouble free operation after successful commissioning of the machine.

### **7.0 SPARES :**

Spares for two years trouble free operation are to be provided. Item-wise cost of each spare shall be indicated.

**8.0 COMMISSIONING & ACCEPTANCE :**

8.1 The machine shall be supplied with complete electrical equipment ready for the connections to the power mains.

8.2 Provisional acceptance of the machine can be made by BHEL at supplier's work prior to despatch to ensure specification compliance and functioning of the machine . Test material shall be provided by BHEL on request and it shall be the responsibility of the supplier to take it to their works . Used test samples shall be returned to BHEL along with the machine . Test samples shall be checked at BHEL .The machine shall only be despatched only after approval of the test samples by BHEL .

8.3 Final acceptance shall be made at BHEL, Hardwar following successful erection, assembly, commissioning and job proving within specified accuracy.

8.4 It shall be the sole responsibility of the supplier to rectify any shortcoming in the Design or Operation of the machine observed during commissioning, free of cost.

**9.0 TECHNICAL SUPPLY CONDITION :**

The machine should be able to operate in following technical conditions :

**Power :**

Machine should be suitable to operate on 3-phase A.C. supply of 415 Volts  $\pm$  15%, 50Hz  $\pm$  3%

**Environment :**

Tropical environment consists of dust- laden atmosphere during some part of the year.

Temperature Minimum 3° C - Maximum 45° C

Relative Humidity 95% Maximum

**10.0 QUALIFYING CONDITIONS :**

10.1 This is a special purpose Machine and therefore the design and operation of the Machine should preferably be similar to existing machine working at BHEL , Hardwar to ensure similarity in machine operation and interchangeability of toolings . Machine manufacturers interested in the development of the Machine may discuss and study the working of the existing machine at BHEL , Hardwar and shall give a compliance certificate along with the offer .

10.2 The supplier should be a reputed original machine tool manufacturer.