

Sr. No.	Description	Qty. Required
	<p align="center"><b>Seal Spot TIG Welding Machine</b></p> <p><b>Application:</b> Automatic Seal Spot TIG Welding of End Plugs</p> <p><b>Job Description:</b></p> <ul style="list-style-type: none"> <li>• Weld Geometry: Seal Spot Welding of hole in End Plug</li> <li>• Tube Dia: 10mm</li> <li>• Tube Length: 800-3200mm</li> <li>• End Plug: As per Attached Drawing</li> <li>• Hole Dia: 1mm</li> <li>• Depth/ penetration: 1mm±0.3</li> <li>• Tube Material: Zr-4/S.S</li> <li>• End Plug Material: Same as tube</li> <li>• Welding Environment: Helium gas</li> </ul> <p><b>Machine Description:</b></p> <p>Machine may consist of following major systems:</p> <ul style="list-style-type: none"> <li>• Job feed System (loading &amp; unloading)</li> <li>• Tube Transfer system</li> <li>• Sealed Welding Chamber (under vacuum and pressure)</li> <li>• Tube holding &amp; forward/Reverse moving mechanism</li> <li>• Adjustment of distance between electrode &amp; Plug</li> <li>• Vacuum system for welding chamber</li> <li>• Welding machine with tungsten electrode</li> <li>• End product tray</li> <li>• Viewing System (runtime video)</li> </ul> <p><b>Process Sequence:</b></p> <ul style="list-style-type: none"> <li>• Transfer tube from feed tray to weld position</li> <li>• Loading Tube in Welding chamber</li> <li>• Sealing the chamber</li> <li>• Weld chamber evacuation</li> <li>• Maintaining 21 bar helium pressure in chamber</li> <li>• Adjustment of distance between plug &amp; electrode (0.5 - 3mm)</li> <li>• Perform seal welding</li> <li>• Exhaust helium gas</li> <li>• Unloading of work piece</li> <li>• Tube transfer to end product tray</li> </ul> <p><b>Process Control:</b></p> <ul style="list-style-type: none"> <li>• PLC Based Control</li> <li>• Touch Screen HMI</li> <li>• Operating Mode: Manual/ Automatic/semi-automatic</li> <li>• Equipped with all necessary interlocks &amp; safeties.</li> </ul> <p><b>Welding Machine Specifications:</b></p> <ul style="list-style-type: none"> <li>• Welding Process: TIG/MMA Welding</li> <li>• Welding Current: DC 0-150 A</li> <li>• Gas Pre Flow Time: 0-20 sec.</li> <li>• Gas Post Flow Time: 0-10 sec.</li> </ul>	01 Complete Unit

- Up-Slope Time: 0-10 sec.
- Down-Slope Time: 0-10 sec.
- Weld Start: High Frequency weld start
- Weld Cycle Start: PLC Control
- Weld Torch Type: Straight torch to be used with welding chamber

**B** Maintenance Spares for 05 years:

- TIG Welding Unit: 01 No.
- PLC: 01 No.
- Vacuum Pump: 01 No.
- O-Rings/Seal of chamber: 03 sets.
- Viewing system camera
- Manufacturer's suggested spares: 01 set.

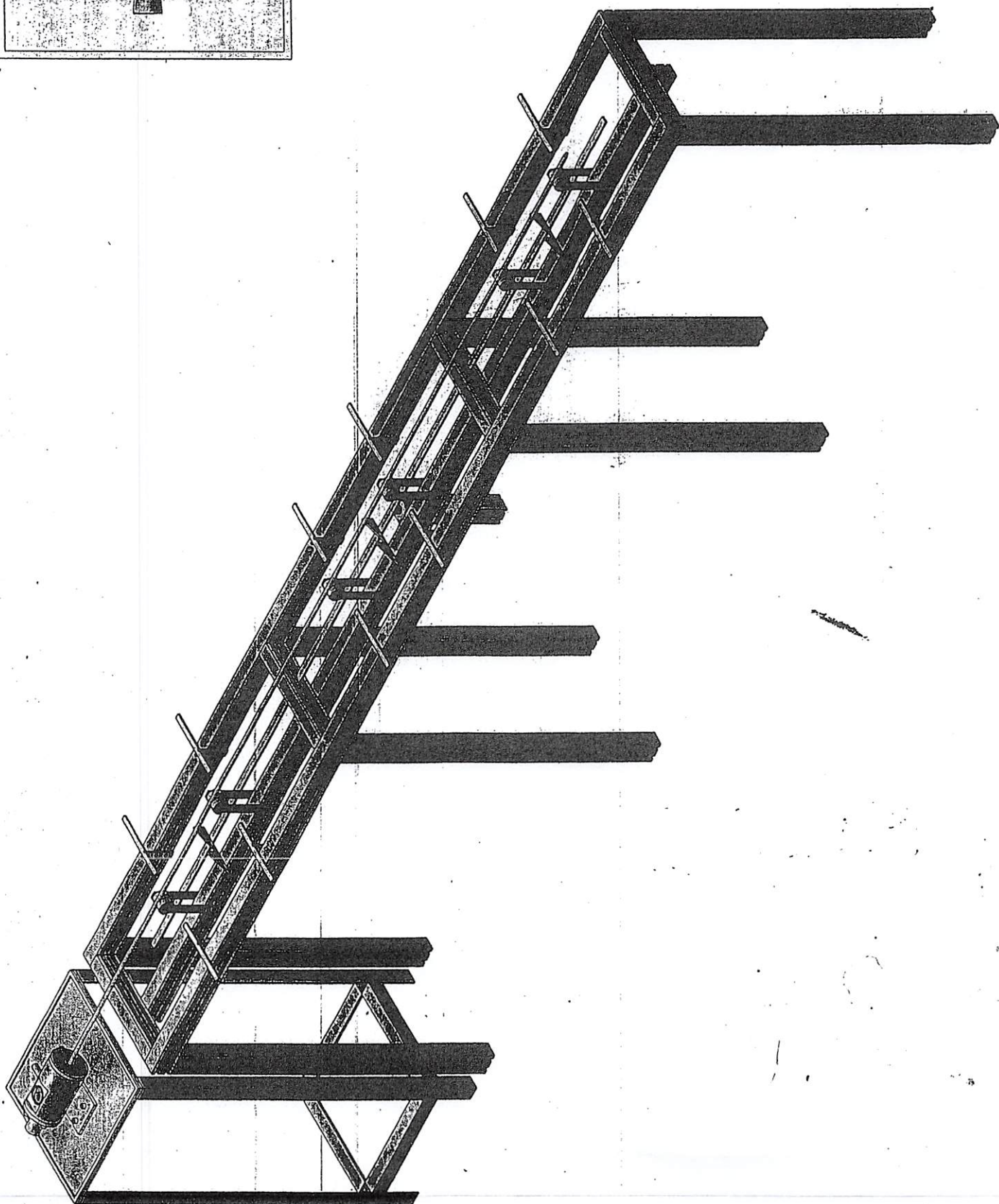
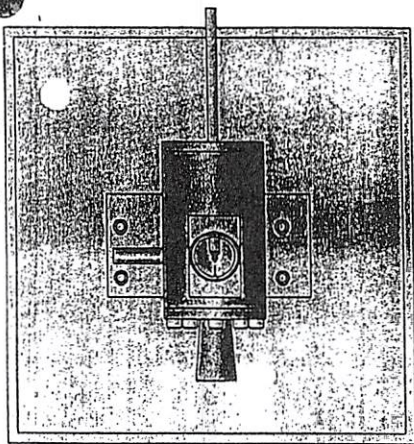
**C**

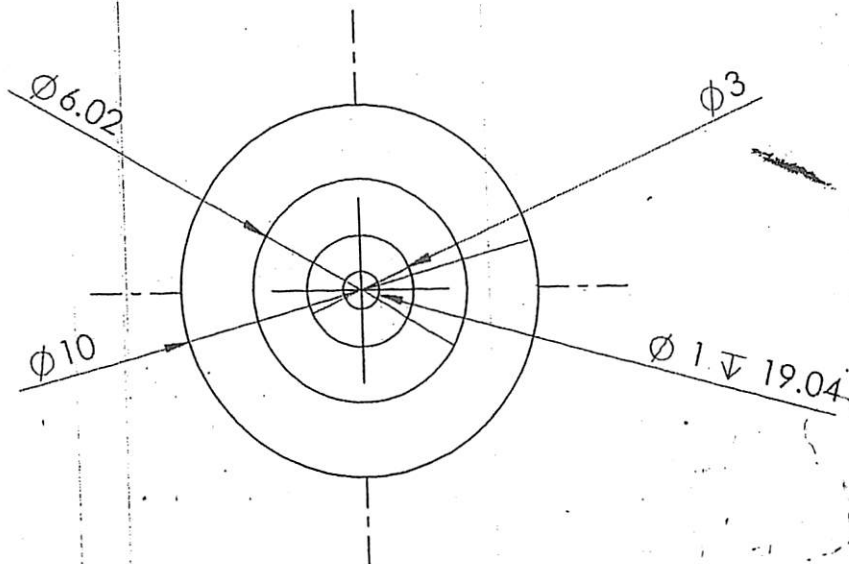
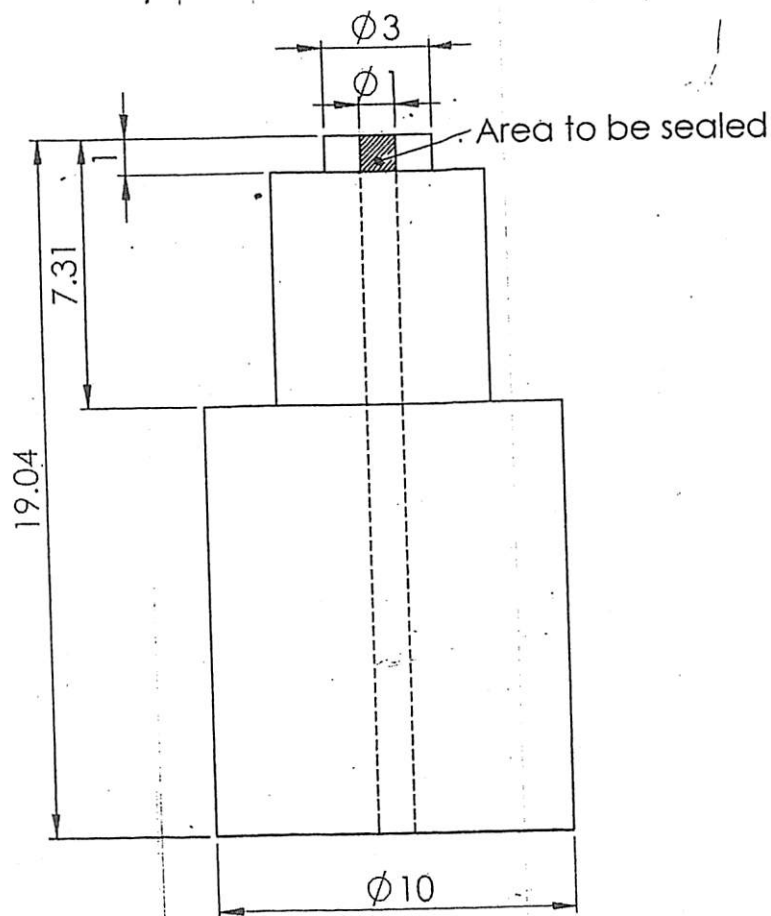
Documents:

02 copies of following documents in English

- Installation & Commissioning Manual
- Operational Manual
- Maintenance Manual
- Exploded Drawings for maintenance
- Electronic Control System drawings
- PLC Program







UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN MILLIMETERS  
SURFACE FINISH:  
TOLERANCES:  
LINEAR:  
ANGULAR:

FINISH:

DEBURR AND  
BREAK SHARP  
EDGES

DO NOT SCALE DRAWING

REVISION

	NAME	SIGNATURE	DATE		
DRAWN					
CHKD					
APPV'D					
MFG					
Q.A					

TITLE:

MATERIAL:

DWG NO.

End Plug

A4

WEIGHT:

SCALE: 5:1

SHEET 1 OF 1