



## Department of Mechanical Engineering

Government College of Engineering, Bargur

(An Autonomous Institution Affiliated to Anna University)

Krishnagiri District – 635104, Tamil Nadu.

### Center of Excellence in Advanced Welding (COE-AW)

#### List of Facilities

S.No.	Name of the Facility	Features	Qty
1.	<b>CMT Power Source</b>	<ul style="list-style-type: none"> <li>• 400 Amps</li> <li>• Cold Metal Transfer (CMT) welding technology</li> <li>• Pulse GMAW</li> <li>• Push Pull Feeding unit</li> <li>• Water Cooled Power source</li> <li>• WAAM enabled</li> </ul>	<b>1</b>
2.	<b>Six Axis Robotic Welding Setup</b>	<ul style="list-style-type: none"> <li>• 1.2 meter arm range</li> <li>• Six Axis Welder</li> </ul>	<b>1</b>
3.	<b>TIG Welding with Automation</b>	<ul style="list-style-type: none"> <li>• Current - 230 amps</li> <li>• Circular and Straight path deposition can be welded</li> </ul>	<b>1</b>
4.	<b>Manual GMAW and SMAW Welding</b>	<ul style="list-style-type: none"> <li>• 400 Amps</li> <li>• Synergic Welding Power source</li> <li>• Pulse GMAW</li> <li>• Push Pull Feeding unit</li> <li>• Water Cooled Power source</li> </ul>	<b>1</b>
5.	<b>Autodesk - NETFABB Welding Simulation</b>	<ul style="list-style-type: none"> <li>• Heat source modeling for Welding &amp; WAAM</li> <li>• Thermo Mechanical Analysis of Welding project</li> <li>• Thermo Mechanical Analysis of WAAM Project</li> </ul>	<b>1</b>
6.	<b>Autodesk - Powermill Software</b>	<ul style="list-style-type: none"> <li>• Deposition path modeling for Welding &amp; WAAM</li> <li>• Code Generation for Deposition path of WAAM &amp; Welding</li> </ul>	<b>1</b>
7.	<b>Metallography Sample Preparation Setup</b>	<ul style="list-style-type: none"> <li>• Low Speed Abrasive Cutting</li> <li>• Hot &amp; Cold Molding</li> <li>• Rough Grinding</li> <li>• Diamond Cutting Machines</li> <li>• Polishing Machine</li> </ul>	<b>1 set</b>
8.	<b>Stereo Microscope (Macroscopic)</b>	<ul style="list-style-type: none"> <li>• Min 10X Magnification</li> </ul>	<b>1</b>
9.	<b>IR Thermal Camera</b>	<ul style="list-style-type: none"> <li>• IR Images for temperature 1200°C</li> <li>• IR Video Recording</li> </ul>	<b>1</b>
10.	<b>UT and MPT Testing</b>	<ul style="list-style-type: none"> <li>• Normal &amp; Angular Probe</li> <li>• A&amp;B scan report can be provided</li> <li>•</li> </ul>	<b>1 set</b>
11.	<b>AWS Handbooks and Standard Books</b>	<ul style="list-style-type: none"> <li>• AWS Handbooks – 5 Vol</li> <li>• AWS Welding Codes &amp; Standards etc</li> </ul>	<b>1 set</b>



## Department of Mechanical Engineering

Government College of Engineering, Bargur

(An Autonomous Institution Affiliated to Anna University)

Krishnagiri District – 635104, Tamil Nadu.

### Center of Excellence in Advanced Welding (COE-AW)

#### List Services

S.No.	Name of the Facility	Features	Duration
1.	<b>Robotic Welding Operator Training</b>	<ul style="list-style-type: none"><li>• Kawasaki Robot – CMT, GMAW Welding</li></ul>	<b>10 days</b>
2.	<b>Hands on Training Welding, Welder Qualification &amp; certification</b>	<ul style="list-style-type: none"><li>• All position SMAW welding Training</li><li>• All position GMAW welding Training</li><li>• All position GTAW welding Training</li><li>• Any Material trial welding and Any Position and design</li><li>• As per ASME Codes and Standards</li></ul>	<b>10 days / Process</b>
3.	<b>Optimization of Welding parameters</b>	<ul style="list-style-type: none"><li>• Any Material trial welding</li></ul>	<b>1 day</b>
4.	<b>PQR Preparation and WPS Qualification</b>	<ul style="list-style-type: none"><li>• Any Material trial welding and Any Position and design</li><li>• As per ASME Codes and Standards</li></ul>	<b>10 days</b>
5.	<b>Hands on Training in PQR Preparation and WPS Qualification</b>	<ul style="list-style-type: none"><li>• Any Material trial welding and Any Position and design</li><li>• As per ASME Codes and Standards</li></ul>	<b>10 days</b>
6.	<b>Hands on Training in NDT</b>	<ul style="list-style-type: none"><li>• UT</li><li>• MPT</li><li>• LPT</li></ul>	<b>1 day</b>