### TEST FIXTURE CERTIFICATION PROGRAM DESIGNED FOR ELECTRONIC TEST

WHERE TEST GETS TRAINED

**Joule University** 

## WHY GET CERTIFIED?



Get your entire test support team trained in the proper methods to maintain and repair their test fixtures.

# INCREASE VIELDS

Learn how to manage an effective maintenance schedule by doing the right things at the right time.



Eliminate excess inventory by learning how to standardize hardware, where to order parts and specify accessible parts.

HOW? DECIDE TO INVEST IN YOUR COMPANY'S FUTURE COMPANY'S FUTURE

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#### JOULE TECHNOLOGIES

### Electronics Manufacturing Test Technician Certification Program

| CLASS                         | TEST FIXTURE<br>HARDWARE<br>OVERVIEW  | TEST FIXTURE<br>MAINTENANCE<br>LEVEL 1  | TEST FIXTURE<br>MAINTENANCE<br>LEVEL 2   | TROUBLE SHOOTING<br>LEVEL 1   | TROUBLE SHOOTING<br>LEVEL 2  | DEVELOPING FIXTURE<br>STATEMENTS OF<br>WORK AND DESIGN<br>STANDARDS   |
|-------------------------------|---|---|--|---|--|---|
| COURSE<br>DESCRIPTION         | Introductory course<br>designed to introduce the<br>participant to test fixture<br>nomenclature and test<br>fixture operation.  | Course 1 of 2 intended for<br>personnel who will be<br>conducting periodic test<br>fixture maintenance.   | Course 2 of 2 intended for<br>personnel who will be<br>conducting periodic test<br>fixture maintenance.  | Course 1 of 2 intended to<br>provide technicians and<br>engineers with the<br>knowledge to trouble shoot<br>and repair test fixtures                  | Course 2 of 2 intended to<br>provide technicians and<br>engineers with the<br>knowledge to trouble shoot<br>and repair test fixtures | This course will enable<br>the participant to write<br>fixture specs that ensures<br>higher yields and<br>maintenance standards   |
| TARGET<br>AUDIENCE            | Test technicians with little<br>or no background in test<br>fixtures  | Technicians and engineers<br>responsible for test fixture<br>performance and<br>production yields   | Technicians and engineers<br>responsible for test fixture<br>performance and<br>production yields  | Technicians and engineers<br>responsible for test fixture<br>performance and<br>production yields   | Technicians and engineers<br>responsible for test fixture<br>performance and<br>production yields                                    | Technicians and engineers responsible for specifying test fixtures  |
| COURSE<br>OBJECTIVES          | <ul> <li>A test fixture's purpose</li> <li>Fixture hardware basics</li> <li>Vacuum fixture<br/>operation</li> <li>Mechanical fixture<br/>operation</li> <li>Pneumatic fixture<br/>operation</li> <li>ESD</li> </ul> | <ul> <li>Monthly maintenance<br/>checklist</li> <li>Cleaning a fixture</li> <li>Gasket check and<br/>replacement</li> <li>Probe replacement</li> <li>Gas shock check</li> </ul> | <ul> <li>Annual maintenance<br/>checklist</li> <li>Tooling pin replacement</li> <li>Targeting</li> <li>Travel</li> <li>Top access alignment</li> <li>Gas shock</li> <li>Replacing sockets</li> </ul> | <ul> <li>Bottom targeting issues</li> <li>Top targeting issues</li> <li>Vacuum Leaks</li> <li>Shorts / opens</li> <li>Intermittent contact</li> </ul> | <ul> <li>Uneven actuation</li> <li>Side access unit repair<br/>and alignment</li> <li>Strain gauge<br/>measurements</li> </ul>       | <ul> <li>What is a SOW</li> <li>Why have a SOW</li> <li>Vacuum standards</li> <li>Labelling standards</li> <li>How to generate a test<br/>fixture RFQ</li> <li>The fixture build process</li> <li>Pre-shipping<br/>requirements</li> <li>Incoming inspection<br/>standards</li> </ul> |
| COURSE<br>PREREQUISITES       | None  | None  | Test Fixture Maintenance<br>Level 1  | Test Fixture Maintenance<br>Level 2   | Trouble Shooting Level 1   | None  |
| MINIMUM CLASS<br>REQUIREMENTS | 4 pp / 6 pp   | 6 People  | 6 People   | 3 People  | 3 People   | 1/4   |
| FACILITY<br>REQUIREMENTS      | Remote / On-Site  | On-Site<br>Vacuum and Shop Air  | On-Site<br>Vacuum and Shop Air   | On-Site<br>Vacuum and Shop Air  | On-Site<br>Vacuum and Shop Air   | Remote / On-Site  |
| CLASS HOURS                   | 3.5 hours of classroom<br>4.0 hours total   | 3.5 hours of classroom  | 3.5 hours of classroom   | 3.5 hours of classroom  | 3.5 hours of classroom   | 3.5 hours of classroom  |
| PROVIDED BY<br>INSTRUCTOR     | Workbook  | Workbook and Toolset  | Workbook and Toolset   | Workbook  | Workbook   | Workbook  |
| CERTIFICATE<br>ISSUED         | Yes   | Yes   | Yes  | Yes   | Yes  | Yes   |