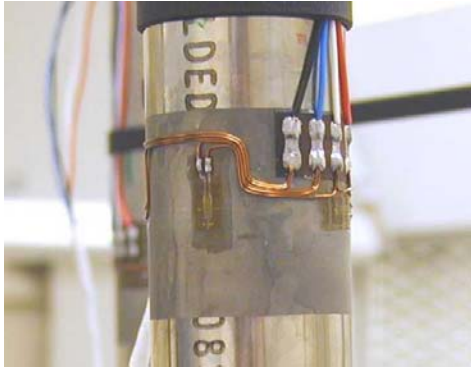




Procter & Chester Measurements

STRAIN GAUGE INSTALLATION

Cryogenic –269 DegC



APPLICATIONS

- Covers virtually all industries that operate in temperature ranging of -269 to $+95$ DegC.
- FEA correlation predictive analysis.
- Static and dynamic measurements.
- Magnetic fields.

With temperatures decreasing, strain gauges, adhesive and components choice suddenly decreases.

Particular attention is required on:

- Material thermal contraction coefficient between the material and the strain gauge.
- Expected strain limits at test temperature and number of temperature cycles.
- Modulus effects with overall performance.
- Environmental sealing is critical for a successful the installation.
- Solder melting points and use of fluxes to get quality solder joints.
- Interbridge wires and cables need to be Pfte based materials.

There are two adhesives that will cover most installations. They are either: two part epoxy, epoxy-phenolic. Each has there advantages which would be decided upon based on the project specification and ease for clamping during the cure process.

An installation of this nature should only be carried out by experience technicians that appreciates the detail required to provide a long term solution. If working on super conductor systems it is very important that clamping pressure is correct as the glue lines need to be thin and soldering techniques are also considered as some components are virtually impossible to solder to once the strain gauge is bonded !

By providing clear details of the project, environment, accuracy, expectations, Procter & Chester will provide the ideal solution and final product.

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