Composite Repair Qualification and Selection for On-Stream Repairs to Critical Equipment

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Composite Repairs to “Critical” Equipment

- Oxy uses composite repair systems across all business units
- Temporary and Permanent repairs are permitted
- “Critical” equipment repairs must follow corporate procedure and select from qualified composite repair systems
Composite Repair Qualification

- Qualification of products to ASME PCC-2 requirements using 3rd party testing
- Company has engineering support for repair design and can provide field installation support/training
- Company has primary focus in composite repairs in upstream/downstream industry
- Material availability and qualified installers align with Oxy’s field locations
- Practical application limits and requirements...keep it simple
- Ability to accommodate through wall defects, or defects that are projected to go through wall during life of repair
Managing Risks

Is this an acceptable application for composite repair system?
Permanent vs. Temporary

Permanent Repair requires ALL of the following to be “yes”:

- Damage mechanism is identified, controlled, and monitored to prevent continued damage beyond the design limits of the repair.

- **External corrosion**: corrosion is arrested and surface is cleaned/coated to stop further degradation and ensure good bond between temporary repair and substrate, and no internal corrosion potential.

- **Internal corrosion**: corrosion mechanism is identified, and acceptable preventive measures are implemented along with a monitoring plan to ensure the defect does not grow beyond the design limits of the repair.

- If damage is defined as **cracking**, the crack must be completely removed by grinding or hot tapping.
Questions and Discussion