Composite Repair Compliance Review Program

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CRUG Board Member

Phillips 66 Pipeline LLC

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Program Objectives

- Add value for Manufacturers and Operators
- Provide **independent** review of a very complex industry standard
- Increase exposure for composite repair applications
- Build confidence for operators that don't have experience with composite repairs

Regulatory Requirements

- §195.422 Pipeline repairs.
  - (a) Each operator shall, in repairing its pipeline systems, insure that the repairs are made in a safe manner and are made so as to prevent damage to persons or property.
- §192.713 Transmission lines: Permanent field repair of imperfections and damages.
  - (a) Each imperfection or damage that impairs the serviceability of pipe in a steel transmission line operating at or above 40 percent of SMYS must be—
  - (2) Repaired by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe.

Industry Requirements

- B31.4 Section 461.6.2.9 Permanent Repairs.
  - (e) Composite Sleeve. Non-leaking corroded areas and certain other types of defects may be repaired by the installation of a composite sleeve provided that design and installation methods are proven for the intended service prior to application.
- B31.8 Section 841.42 Permanent Repairs of Injurious Dents
  - (e) Nonmetallic composite wrap repairs are not acceptable for repair of injurious dents or mechanical damage, unless proven through reliable engineering tests and analysis.

What is Involved?

- The use of the word 'compliance' by this voluntary program constitutes an expression of a professional opinion regarding documents and information which are submitted by composite repair system manufacturers which are the subject of the compliance review using the requirements of ASME PCC-2 as the compliance standard, and does not constitute a warranty or guarantee, either expressed or implied.

- The Evaluation Team shall be composed of at least three **non-manufacturer** Board Members that are proficient in their understanding of the requirements of Articles 4.1 and 4.2 of ASME PCC-2.

- There will be no remuneration for reviewers.

Who is Involved?

- Review Team Members
- Approved by the CRUG Board of Directors on 09/03/2014:
  - **David M. Wilson, operator, Compliance Review Team Chairman**
  - **Chris Alexander, consultant, Compliance Review Team Secretary**
  - **Tom Walsh, consultant, Compliance Review Team Member**
  - **Mike Collins, operator, Compliance Review Team Member**
  - **Stan Parrish, operator, Compliance Review Team Member**

The Process

- Manufacturer submits submittal form and lab results to Compliance Review Team Secretary
- Compliance Review Team Secretary distributes packet of information to Evaluation Team and places Evaluation Meeting on Calendar.
  - Evaluation Team meetings are scheduled bi-annually in February and September. Any packets submitted less than 30 days before an Evaluation Team Meeting will be placed on the calendar before the SUBSEQUENT Evaluation Team Meeting in order to give the Evaluation Team sufficient time to review the packet of information.
- Each member of the Evaluation Team reviews the packet independently

The Process

- If any of the Evaluation Team Members believe that additional information is required, that Team Member shall submit the request for additional information to the Compliance Review Team Secretary.
  - The Compliance Review Team Secretary shall forward the request for additional information to the Manufacturer. Additional information not received less than 30 days before the Evaluation Team Meeting date will result in the evaluation of that packet being delayed until the next Quarterly Evaluation Team Meeting.
- Evaluation Team will discuss the completeness of the information submitted for each system.
  - A majority vote of the Team members will result in a certificate of compliance being issued for the system.
  - Systems not receiving a majority vote will be sent a letter explaining the reason the system was deemed non-compliant.

The Result

- Once a system has met the requirements for the Composite Repair Certification Program, it will be listed on the CRUG website and also included in announcements to CRUG members / meeting attendees

- A Compliance Review Certificate will be issued to the Manufacturer for acceptable repair systems

- The term of the Certificate will be two years.

COMPLIANCE REPAIR CERTIFICATION

The following Composite Repair System has been reviewed and found to be compliant with ASME PCC2 Specifications:

Composite Repair System Name

Composite Repair Company Name

Signed:_____
Compliance Review Team Chairman

Signed:_____
Compliance Review Team Secretary

Date of Review: 09/11/2014 Expiration: 09/11/2016

Questions?