Fuel Cell Standards

XV. On-Board Hydrogen Storage

XV.d Hydrogen Storage Systems on Tank Valve

Overview:

Classroom instruction on basic hydrogen on tank valves operation

- Review of applicable DOT and FVMSS specifications
- Types of on tank valves, their operation and integrated functions
- Inspection and test criteria
- Inspection and test techniques
- Repair, removal and replacement

Description:

Along with the pressure vessel the on tank valve (OTV) is the most critical component for fuel cell vehicle safety. Understanding of its operation and possible defects is important to overall operation and service safety.

Outcome (Goal):

Student will be able to identify OTV types, ports, sensors and defueling features and utilize OEM service information for all servicing and testing. They will be able to inspect for external physical damage and leaks.

Objectives:

Student shall be able to:

1. Identify OTV type and operational limitations
2. Articulate OTV service life
3. List possible OTV defects and
4. Inspect OTV for defects
5. Utilize DOT and FMVSS resource documents for specifications.
6. Reference OEM service information to find critical dimensional information.

Tasks:

Students will

1. Perform a bubble leak test of primary valve
2. Test, remove and replace any installed sensors or field replaceable seals and o-rings using OEM service information
3. Remove and replace OTV utilizing OEM service information.
4. Locate pertinent requirements and specifications information in DOT and FMVSS resource documents.

To comment or offer suggestions on this standard, contact Ken Mays:

Ken Mays **NEVTEX**

541-383-7753 kmays@cocc.edu