



Fuel Cell Standards

XV. On-Board Hydrogen Storage

XV.e Pressure Regulation and Regulators

Overview:

Classroom and lab instruction on single and two stage regulator operation

- Review of applicable specifications
- Types of gas regulators and their operation
- Operation and application
- Inspection and test criteria
- Inspection and test techniques
- Repair, removal and replacement

Description:

Overview of pressure regulation from ambient to 700 bar. In classroom study of onboard and offboard pressure regulation and regulators, their functions, safety functions, features and operating parameters.

Outcome (Goal):

Student will be able to identify types of regulators, gauges and pressure sensors. They will understand how to inspect for external physical damage and leaks. The student will be able to describe regulator functions, features, operating parameters and limitations.

Objectives:

Student shall be able to

1. Identify regulators type and operation limitations



2. Identify regulator ports and any sensors
 3. List possible defects and inspect for those defects
 4. Reference OEM service procedures to find critical dimensional information and service bulletins.
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Tasks:

Student will

1. Perform a leak test
 2. Test, remove and replace any installed sensors or field replaceable seals and o-rings
 3. Remove and replace regulator utilizing OEM service instructions
 4. Install and remove a regulator on a standard industrial compressed gas cylinder.
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