Metallurgy Principles, Damage Mechanisms & Fitness for Service for SynGas & Downstream Plants

Potential PDH: 40

Description:

Training Module Description

- M1 Basic Metallurgy Principles – Steels & Alloy Steels
- M2 Basic Metallurgy Principles – Austenitic Materials
- M3 Elevated Temperature Damage Mechanisms
- M4 Corrosion Damage Mechanisms
- M5 Mechanical Damage Mechanisms
- M6 Welding Technology & Equipment Repair
- M7 Heat Treatment Principles
- M8 Introduction to Fitness for Service
- M9 Brittle Fracture Assessment
- M10 Fatigue and Fracture Mechanics
- M11 Corrosion Wastage Assessment
- M12 Creep Assessment

Who should attend: Reliability Engineers, Mechanical Engineers, Process Engineers & Inspectors

Outline:

- Basic metallurgy principles for steels, alloy steels & cast irons
- Basic metallurgy principles for stainless steels & austenitic materials
- In-depth study of 20 syngas plant elevated temp damage mechanisms
- In-depth study of 23 syngas plant corrosion / SCC damage mechanisms
- Fatigue & brittle fracture damage mechanisms in syngas plant
- Welding technology & repair methods pertaining to syngas plants
- Heat Treatment principles pertaining to syngas plants
- Introduction to completing a fitness for service assessment

Subject Matter Expert (SME):

David Keen is a qualified Metallurgist with over 45yrs domestic and international experience in fertilizer and explosives manufacturing facilities across 12 countries globally. These facilities

include Ammonia, Urea, Nitric Acid, Sulphuric Acid, Phosphoric Acid, Ammonium Nitrate, Fertilizer plants and Steam Generation utilities. David is a Subject Matter Expert (SME) on equipment integrity management and has in recent years downloaded this knowledge into a series of training modules focused on preventing equipment failures through experiential learning and team problem solving sessions.