

**Course Title:** High Reliability Maintenance Practices (HRMP)

**Duration:** 2 Days

### **Course Summary:**

At the core of this course is the need to identify and eliminate losses and achieve higher reliability through fundamental maintenance activities. In particular, the course focuses on the basic elements of maintenance and why fitters, engineers, accountants, and management need to have a common focus. If you are interested in reducing maintenance downtime, costs, and economic losses; this course will start you on that path. Or, provide you with additional strategies and tactics if you already have an improvement program in place.

The course covers the maintenance practices of key maintained components such as bolts, nuts, bearings, belts, gears, etc. Do not assume that because these issues are so simple that everyone knows about them – this is not always the case.

The reliability of legacy and advanced equipment types (rotating, reciprocating, static, and mobile) is actually driven by a few individually simple mechanisms: threaded fasteners, welds, soldering, terminations (crimping), protective coatings, and processes such as lubrication and cleaning. To some extent these are the “few critical” mechanisms and processes that must be maintained correctly or reliability will be adversely affected and losses incurred.

This interactive course is a mix of theory and hands-on practical sessions to focus on how to maintain components so as to improve reliability of operational equipment and thus reduce downtime and other losses. By learning from the course material you will then be in a position to look for workplace opportunities to reduce losses through high reliability maintenance practices.

### **Course Content:**

- ❖ **Concept of High Reliability Maintenance**
- ❖ **Primer on Economics, Accounting & Costs**
- ❖ **Loss Identification and Assessment: types, origin & zero defects**
- ❖ **Reliability: drivers and factors**
- ❖ **Material Properties: types of material failures**
- ❖ **Physics for Maintenance: torque, tension, etc**
- ❖ **Four Key Disciplines: Clean, Adjust, Inspect, & Lubricate**
- ❖ **Measuring Maintenance Performance**
- ❖ **Continuous Improvement through Maintenance**
- ❖ **Maintenance Fundamentals for High Reliability**
  - **Fasteners: bolts, nuts, washers, screws, etc**
  - **Welding & Soldering**
  - **Bearings and Seals**
  - **Shafts, Belts and Couplings**
  - **Gears, Gearboxes and Clutches**
  - **Pipes and Flanges**
  - **Electrical and Electronic Equipment**
  - **Protective Finishes: painting, plating, etc**
- ❖ **High reliability strategy, tactics & operations workshop**