



BIB Cochran Limited

On-Site Training Course Syllabus

Boiler Operation & Awareness Scheme

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Boiler construction in respect of safety in Operation

Illustrated guide to:-

1. identify various elements of the boiler
2. how and why stay bars and tubes are installed
3. pressure vessel strengths
4. access arrangements

Boiler Mountings

1. Operation of Main Stop Valves
2. Operation of Safety Valves
3. Combined Feed Check and Shut off Valves
4. Pressure gauges
5. Boiler Blowdown Valves
6. Operation of Gauge Glass Cocks
7. Gauge Glass Protection Systems

Water Level Control Systems

1. Water control levels
2. Hydraulic Test Devices
3. Float controls
4. On/Off Water Control Systems
5. Modulating Water Control Systems
6. Sequence Blowdown Valves
7. Sequence of Operation of Controls
8. Daily Procedures
9. Evaporation (low water) Testing
10. On/Off Probe Controls
11. Side and Top Mounted Probe Controls

Automatic TDS Control Systems

1. System One
2. System Two

Thermal Energy

1. Conversion Factors
2. Boiler Output
3. From and At Evaporation
4. Worked Examples

Combustion

1. Fuel / Air / Ignition combinations
2. Air distribution and mixing
3. Pressure Jet Atomisation
4. Spinning cup Atomisation
5. The combustion process



Combustion Check Lists

1. Visual checks
2. Measurements
3. Readings
4. Thermal efficiency checks
5. Boiler efficiency
6. Heat balance at full load
7. Combustion curves all fuels

Combustion Practice and Efficiency

1. Atmospheric pollution
2. Sulphur dioxide
3. Carbon Monoxide
4. Combustion performance

Essential Routines

1. Daily checks
2. Weekly checks

Actions in Emergencies

1. What to do
2. What not to do