Learning Outcomes in Module Report

Module Code	SPC02
Module Name	Steam Production

Learning Outcomes

Code	Name	Hours	Description
2.0	Steam Production	6	After completing this module and associated workbook, the participant should be able to understand the following concepts and apply them in day-to-day work activities. The requirements for a basic boiler. The fire-tube boiler. Convection, natural circulation, and forced circulation. The need for feedwater to compensate for steam generated. Basic control of steam pressure, i.e. steam output flow versus heat input from combustion. Water-wall construction. The use of downcomers to feed riser tubes. Shrink and swell of water level. Heat transfer by radiation and conduction. The function of the steam drum. Steam drum internal hardware. Steam drum external connections. Boiler drains and blowdown valves. Superheater arrangements. Pendant and horizontal superheater construction. Superheater drains. Primary and secondary superheater banks. Attemperation for steam temperature control. Reheat bank arrangements. The air and gas path through the boiler. FD fans and ID fans. Comparison of balanced draft system and the pressurised furnace. Temperature gradient throughout the air and gas path. Function of the economiser and airheater. Boiler insulation and boiler casing. Access ports and doors. Typical construction of the heat recovery steam generator (HRSG). Sources of hot gas for the HRSG. Bypass damper arrangements. The multiple pressure HRSG.

Count: 1