

Experiment No: 07

Experiment Name: Study on Boiler & its Function.

Theory:

Boiler:

Objectives:

1. To identify different parts of the machine.
2. To draw the diagram of the machine.
3. To observe function of different parts of the machine.
4. To run the machine and check different functional parameters of the machine.
5. To supply steam in washing machine and dryer.

Requirements:

Machine Specification:

Working Procedure:

1. Find the specification of boiler.
2. Observe different parts of the machine.
3. Draw a diagram of the machine by labeling different parts of the boiler.
4. Observe functions of different parts of the machine.
5. Input water into the boiler.
6. Then run the machine.
7. Check different functional parameters of the machine.
8. Finally supply steam to washing machine and dryer.

Diagram:

Machine Description:

Sl. No	Name of Parts	Description and Function
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		

Working Principle of the Machine:

Boiler is simply a heat exchange in which, water is work as cold fluid and the flue gases works as hot fluid. The heat is transfer from hot fluid to cold fluid through convection which increases the energy of water and converts it into steam. To understand working of a boiler, considered a container half filled with water. The fuel is burn and the flue gases flow over the container as shown in figure. These gases heat the water and convert it into steam. This steam taken out from a tube situated upper side of the container. As the steam taken out from container, the equal amount of water is feed into the container by the feed valve which maintain the boiler pressure unchanged.

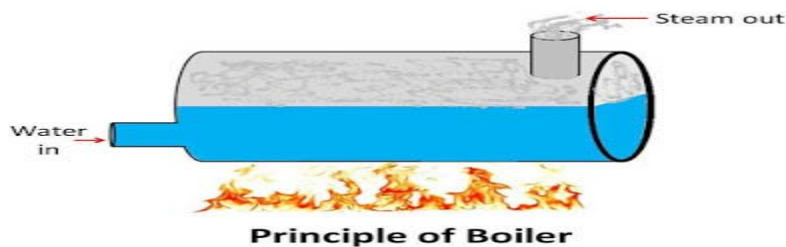


Figure 6.2: Principle of boiler.

If the steam escaping rate is high compare to water feeding rate, the pressure of the boiler decreases. And if the water feeding rate is high compare to steam escaping rate the pressure of the boiler increases. Thus the boiler pressure is controlled by the fuel supply and water supply of the container. This is the basic working of a boiler.

Conclusion and Comments: