

EXPERIMENT NO 8

Aim:- To study the constructional details of gear pump and draw its characteristic curve.

Apparatus Used:- Model of oil gear pump.

Theory:- The gear pump is a rotary pump in which two gear mesh to provide the pumping action. This type of pump is mostly used for cooling water and pressure oil to be supplied for lubrication to turbine, machine tool etc. Although the gear pump is rotating machinery yet its action on liquid to be pumped is not dynamic it nearly displaces. The liquid from one side to other. The flow of liquid to be supplied is continuous and uniform.

Constructional details:- A gear pump has following parts:-

- (1) Casing
- (2) Gear wheel
- (3) Suction and delivery pipe

Casing:- The function of casing in this type of pump is only to make the liquid which is to be transferred in contact with gear wheel. The width of gear wheel casing also contains bearing in its body.

Gear wheel:- In gear wheel pump there are two identical intermeshing gear working in a fine clearance. One of the gear is keyed to shaft known as driving shaft. The other gear revolves due to driving shaft. These two gears are constructed with a definite clearance. The space between gear teeth and casing is filled with oil. The oil is carried between the gears from suction pipe to delivery pipe.

Suction pipe:- These pipes are in circular shape connect the gear to suction and delivery.

Viva Questions:-

1. Define working of rotary pump?
2. Which type of pump is mostly used in cooling water?