**Problem Description:**

For boilers to produce steam, water is required. HP feed pumps transport the feed water at high pressure from LP to HP Drum. HP feed water control valves regulate the water flow as required matched with HP steam flow/STG Load (Active Power).

Here a set of data has been provided for **two different periods**. In the data set some parameters are input variables (i.e., Feed water Inlet pressure, Active Power of ST, 6.6 kV voltage, current, Turbine speed, Feed water Inlet Temperature, De-aerator tank/LP Drum Temperature, control valve opening etc.), some are output variables (i.e., HP Feed water Outlet pressure, Temperature, flow etc.) and some parameters indicates the health status of HP Feed Pump (winding Temperature, vibration etc.) which can be treated as output also.

The task is to design a model establishing a correlation between input and output variables; to predict the output variable with the change of input variables and measure the error percentage between actual and predicted output for feed water **pump A**.

**Note:** 2 out of 3 Feed water pumps run together, other remains in standby. The output flow is the summation of flows of individual pump. You need to calculate the flow of individual pump by weighted average of current drawn by each pump.