

PUMPING SYSTEMS

- **STEP 3 ; Draw system resistance curve**
- **Choose the condenser loop as it offers maximum resistance and is also having a static head component**
- **Static head: 15 M**
- **Dynamic head at full load; 39 M**
- **Compute system resistance at different flow rates**

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S.No.	Flow (%)	Dynamic head $= 39x (\%flow)^2$	Static head M	Total head M
1.	100	39	15	54
2.	75	21.9	15	36.9
3.	50	9.75	15	24.75
4.	25	2.44	15	17.44

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- **STEP 4 - Plot the system resistance against flow in the pump efficiency curves provided by the vendor and compare actual operating duty point and see whether it operates at maximum efficiency.**
- **In the example provided it is found that the pump system efficiency is lower by 4 % due to change in operating conditions.**

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SYSTEM RESISTANCE CURVE

