Process Parameters
DA tank Height from Pump Center line
Boiler Drum Height from Pump Center line
DA Tank Pressure
Boiler Drum Pressure
Feed Water Temperature
Specific Gravity at t

calculate → SH=(h2-h1)+(P2-P1)*(10/SG)

Name Plate Reading
Flow
Head
BKW
Efficiency
Speed (N1)

Calculate → k1={Hnp-SH}/(Qnp*Qnp)
SRC=SH+k1*Qi*Qi → Plot SRC (Theoretical SRC)

Upload Pump QnpHnp → Plot QnpHnp (pump Test

Actual Requirement
Actual Flow - 24 hrs (Totalizer Reading)
Actual running Speed (N2)

N1=N2 → Yes →
Qact=(Mact/24)/SG
Actual head developed by pump
Hact=(Pd-Ps)*(10/SG)
BKWact1={ Qact*Hact*SG/(367*ŋact)}/ (ŋmact)
BKWact2= {(sqrt 3) *Voltage*Current*PF/1000}/(ŋmact)
BKWact = whoever is bigger in BKWact1 & BKWact2
k2=(Hact-SH)/(Qact*Qact).
SRC2=SH+k2*Qi*QI

1st Column will define the range for Qi—to Qmax

No →
plot Q'H' curve with
Q'=(N2/N1) Q,
H'=(N2/N1)*(N2/N1)*H
evaluate at Qact ,what will be Value of H ? This H will become TDH.
At Qact. K3=(TDH'-SH)/(Qact*Qact)
SRC3=SH+k3*Qi*Qi