Heat Balance Diagrams & Table Data

Standard Conditions:
VWO / 1000 MSH no sprays / 1000 HRH (no sprays)
Backpressure: (actual ΔP)
Reheat Pressure Drop: actual
NO BD NO MU NO FGR NO APR
Standard Defn for NTC HR

1) GE Original Design HBD (latest revision) w/FGR w/APH ✓
2) GE Design corrected to standard conditions 2400 ok
3) GE Design 5TOP 2520 / VWO ok

4) GE Guaranteed Conditions 820 / 2400 / VWO
for reference (nameplate)

Acceptance Testing

5 6 U1 + U2 2400 / VWO test conditions w/FGR w/APH
8 → correct to standard conditions no sprays no FGR no APH
10 U1 + U2 2520 / VWO test conditions
12 → correct to standard conditions

Current Conditions

3 14 U1 + U2 2400 / VWO test conditions
16 → correct to standard conditions
18 U1 + U2 2520 / VWO test conditions
20 → correct to standard conditions

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Key Info Needed

MW — BKGRO - 1

Steam flow WW 30

throttle press PP 30

M Stm temp TT 30

HRH temp TT 140

BPA

B

C

BHPP — comp load power.

NTC HR

HP Turb η OPVB 103

MW — OPVB 201

% mw total 212

IP Turb η OPVB 119

MW — 203

% tot 213

LP Turb η

MW — 209

% tot 214

total 211 — ~~BBTGBG~~

BBTURG — 0

* New HBD @ Current Op Cond.

RH ΔP

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New Turbine Design

Use U1 / U2 existing conditions

Use 91 / 92 / 93 HP turbine % Efficiency

(although we don't have their turb design details) assume we can bring our existing turbines to that %)

Study 1 hold steam flow / how much additional MW?

hold MW / how much additional Perf (NTCHR) → MHR

Study 2 increase steam flow

93 HP	2400 / 6300	MW	____
	2400 / 6600	MW	____
	2400 / 6900	MW	____

Study 3 establish conditions

93 HP	MW ____	/ 2400	Steam flow ____
	MW ____	/ 2375	Steam flow ____
	MW ____	/ 2350	Steam flow ____

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