INTERMOUNTAIN

HP TURBINE UPGRADE

PERFORMANCE TESTING

(A) For guarantees of HP η and HP Shaft Power

Measurements required:

1. Main steam pressure at HP stop valve chest inlet
2. " " temperature " " " "
3. After throttle valve pressure at HP turbine inlet end of steam leads.
4. IP rotor cooling steam flow. (+pressure + temperature)
5. HP extraction to # 8 pressure
6. HP extraction to # 8 temperature
7. HP exhaust pressure
8. HP exhaust temperature

9. Feedwater flow to economiser
10. # 8A & 8B feedheater feedwater inlet temperatures
11. # 8A + 8B feedheater drain temperatures
12. # 8A + 8B feedheater feedwater outlet temperatures
13. Final feedwater temperature (common)
14. HP valves spindle leakage flows.
15. Superheater spraywater flow (+ pressure + temperature)

Full cycle isolation required for determination of boiler flow losses.

Correction factors probably required:

Main steam pressure
Main steam temperature
HP valve pressure drop
Extraction flow to IP rotor cooling
Extraction flow to # 8
HP exhaust pressure

} For flow only. all inter related!

IP7006773

INTERMOUNTAIN

HP TURBINE UPGRADE

PERFORMANCE TESTING

(B) For guarantees of HP η and Swallowing Capacity

Measurements required

1. Main steam pressure at HP stop valve chest inlet
2. " " temperature " " "
3. After throttle valve pressure at HP turbine inlet end of steam leads
4. HP exhaust pressure
5. HP exhaust temperature

6. Feedwater flow to economiser
7. HP valves spindle leakage flows.
8. Superheater spray water flow

Full cycle isolation required for determination of boiler flow losses.

Correction factors probably required

Main steam pressure
Main steam temperature
HP valve pressure drop
} for flow only – simple factors.