

Paint Creek Plant:

PNT-801 Steam Turbine and Generator Unit

Mfr: General Electric – Unit No. 1

S&L Contract No's: J-1129 & K-1236

Type: 33,000 KW ASME-AIEE, Single Cylinder, Single Flow, Preferred Standard, Hydrogen Cooled Unit

Rate Capacity: 33,000 KW

Speed: 3,600 RPM

No. of Stages: 19

No. of Extraction Points: 4

W/ Generator

Mfr: General Electric

Rating: 35,294 KVA

0.85 Performance Factor

0.5 PSIG Hydrogen Pressure

13,800 Volts

Phase 3

Cycle 60

Turbine Performance Data:

Generator Output -

KW: 15,000 / 22,500 / 30,000 / 35,294

Power Factor –

.85 / .85 / .85 / 1.00

Throttle Steam Pressure –

PSIG: 850 / 850 / 850 / 850

Throttle Steam Temperature –

DEG F: 900 / 900 / 900 / 900

Exhaust Pressure –

IN HG: 1.5 / 1.5 / 1.5 / 1.5

Condenser Flow –

LBS/HR: 103,620 / 147,900 / 194,650 / 228,930

Throttle Flow –

LBS/HR: 127,400 / 187,500 / 252,900 / 302,000

Generator Performance Data:

Generator Capability –

With Air : KVA 21,200

With 15 PSIG Hydrogen: KVA 40,588

With 30 PSIG: KVA 44,118

PNT-801 (Cont.)

W/ Auxiliary Turbine Generator Equipment:

Main Exciter Rating:

125 KW, 250 Volts, 3600 RPM

Pilot Exciter Rating:

4 KW, 250 Volts, 3600 RPM

Exciter Ventilation: Air

Generator Hydrogen Coolers:

Four Vertical Coolers

300 GPM Cooling Water

Turbine Oil Coolers:

Two Cone Required for Operation

200 GPM Cooling Water

200 GPM Oil

Main Oil Pump:

210 GPM at 200 PSIG Shaft Driven

Auxiliary Oil Pump:

180 GPM at 185 PSIG Steam Driven

Turning Gear Oil Pump:

2 HP, 440 Volt A-C Motor

Hydrogen Seal Oil Pump:

3 HP, 440 Volt A-C Motor

Emergency Hydrogen Seal Oil Pump:

3 HP, 125 Volt D-C Motor

Vapor Extractor:

2 HP, 440 Volt A-C Motor

TAG Data:

1 – Turbine – Generator Steam Turbine

Unit, No. 1

Mfr: General Electric

Consisting of:

-Steam Turbine-

Rated KW: 30,000

RPM: 3,600

Stages: 19

Maximum Capacity: KW: 33,000

Steam Pressure: 850 PSIG

Temperature: 900 Deg. F

Exhaust Pressure: 1.5 IN HG ABS

Serial Number: 93395

PNT-801 (Cont.)

- Generator – Hydrogen Cooled
Type: ATB, 3 Phase Y Connected
Poles: 2 for 13,800 Volts
Cycles: 60
Gas Pressure: Rating .05 PSIG
Capacity 15 PSIG
KVA: Rating 35,294
Capacity 40,588
Kilowatts: Rating 30,000
Capacity 34,500
Armature AMP: Rating 1477
Capacity 1699
Field Amp: Rating 428
Capacity 470
Power Factor: Rating .85
Capacity .85
Excitation: 250 Volts
Temperature rise not to exceed: 60 C on Armature by Detector
85 C on Field by Resistance
Generator Serial Number: 6862977

PNT-802 Steam Turbine and Generator Unit

Mfr: General Electric – Unit No. 2
S&L Contract No's: J-1129 & K-1236
Type: 33,000 KW ASME-AIEE, Single Cylinder, Single Flow, Preferred
Standard, Hydrogen Cooled Unit
Rate Capacity: 33,000 KW
Speed: 3,600 RPM
No. of Stages: 19
No. of Extraction Points: 4

W/ Generator

Mfr: General Electric
Rating: 35,294 KVA
0.85 Performance Factor
0.5 PSIG Hydrogen Pressure
13,800 Volts
Phase 3
Cycle 60

PNT-802 (Cont.)

Turbine Performance Data:

Generator Output -

KW: 15,000 / 22,500 / 30,000 / 35,294

Power Factor –

.85 / .85 / .85 / 1.00

Throttle Steam Pressure –

PSIG: 850 / 850 / 850 / 850

Throttle Steam Temperature –

DEG F: 900 / 900 / 900 / 900

Exhaust Pressure –

IN HG: 1.5 / 1.5 / 1.5 / 1.5

Condenser Flow –

LBS/HR: 103,620 / 147,900 / 194,650 / 228,930

Throttle Flow –

LBS/HR: 127,400 / 187,500 / 252,900 / 302,000

Generator Performance Data:

Generator Capability –

With Air : KVA 21,200

With 15 PSIG Hydrogen: KVA 40,588

With 30 PSIG: KVA 44,118

W/ Auxiliary Turbine Generator Equipment:

Main Exciter Rating:

125 KW, 250 Volts, 3600 RPM

Pilot Exciter Rating:

4 KW, 250 Volts, 3600 RPM

Exciter Ventilation: Air

Generator Hydrogen Coolers:

Four Vertical Coolers

300 GPM Cooling Water

Turbine Oil Coolers:

Two Cone Required for Operation

200 GPM Cooling Water

200 GPM Oil

Main Oil Pump:

210 GPM at 200 PSIG Shaft Driven

Auxiliary Oil Pump:

180 GPM at 185 PSIG Steam Driven

Turning Gear Oil Pump:

2 HP, 440 Volt A-C Motor

Hydrogen Seal Oil Pump:

3 HP, 440 Volt A-C Motor

Emergency Hydrogen Seal Oil Pump:

3 HP, 125 Volt D-C Motor

PNT-802 (Cont.)

Vapor Extractor:

2 HP, 440 Volt A-C Motor

TAG Data:

Steam Turbine – Generator Unit No. 2

Mfr: General Electric

Steam Turbine –

Rating: 33,000 Max. KW

RPM: 3,600

Stages: 19

Steam Pressure: 850 PSIG

Steam Temperature: 900 DEG F

Exhaust Pressure: 2.5 IN HG ABS.

Serial Number: 101631

- Generator – Hydrogen Cooled

Type: ATB

Poles: 2

Cycles: 60

3 Phase Y Connected for 13,800 Volts

Gas Pressure: Rating: .5 PSIG

Capability: 15 PSIG

Capability: 30 PSIG

KVA: Rating: 35,294

Capability: 40,588

Capability: 44,118

Kilowatts: Rating: 30,000

Capability: 34,500

Capability: 37,500

Armature Amp: Rating: 1477

Capability: 1699

Capability: 1846

Field Amp: Rating: 428

Capability: 467

Capability: 498

Power Factor: Rating: .85

Capability: .85

Capability: .85

PNT-802 (Cont.)

Excitation-

Volts: 250

Temperature Rise Guaranteed Not to Exceed:

60 C on Armature by Detector

85 C on Field by Resistance

Generator Serial Number: 6943809

PNT-803 Tag Data-

Steam Turbine- Generator Unit- Unit No. 3

Mfr: General Electric

- Steam Turbine:

Rated KW: 50,000

Rated RPM: 3600

No. Stages: 18

Steam Pressure: 1450 PSIG

Steam Temperature: 1000 Deg. F

Exhaust Pressure: 1.5 IN HG. ABS.

Reheat Temperature: 1000 Deg. F.

Serial Number: 128311

- Generator – Hydrogen Cooled

Type: ATB,

Poles: 2

Cycles: 60

Gas Pressure: Rating: 30 PSIG

Capability: 15 PSIG

Capability: 0.5 PSIG

KVA: Rating: 64,000

Capability: 58,824

Capability: 51,200

Kilowatts: Rating: 54,400

Capability: 50,000

Capability: 43,520

Armature AMP: Rating: 2678

Capability: 2461

Capability: 2142

Field Amp: Rating: 632

Capability: 597

Capability: 551

Power Factor: Rating: 0.85

Capability: 0.85

Capability: 0.85

3 Phase Y Connected for : 13,800 Volts

PNT-803 (Cont.)

Temperature Rise Guaranteed not to Exceed:

60 C on Armature by Detector

85 C on Field by Resistance

Generator Serial Number: 8287150

PNT-804 Tag Data-

Steam Turbine – Generator Unit – Unit No. 4

Mfr: General Electric

Steam Turbine

Rating: 105,145 KW

RPM: 3600

No. of Stages: 22

Steam Conditions –

Pressure: 1800 PSIG

Temperature: 1000 Deg. F.

Exhaust Pressure: 2 In HG. ABS.

Reheat Temperature: 1000 Deg. F.

Turbine Serial Number: 178752

Generator, Hydrogen Cooled –

Poles: 2

Phase: 3 WYE CONN.

Hertz: 60

Gas 98% Purity: Rating: 30 PSIG

Capability: 15 PSIG

Capability: .05 PSIG

KVA: Rating: 128,000

Capability: 117,760

Capability: 89,600

Armature Amps: Rating: 5132

Cap: 4722

Cap: 3593

Armature Volts: Rating: 14,400

Cap: 14,400

Cap: 14,400

Field Amps: Rating: 668

Cap: 632

Cap: 534

Excitation Volts: Rating: 375

Cap: 375

Cap: 375

Power Factor: Rating: 0.90

Cap: 0.90

Cap: 0.90

PNT-804 (Cont.)

Total Temperature at Rating Guaranteed not to Exceed:

91 C on Armature by Detector

120 C on Field by Resistance

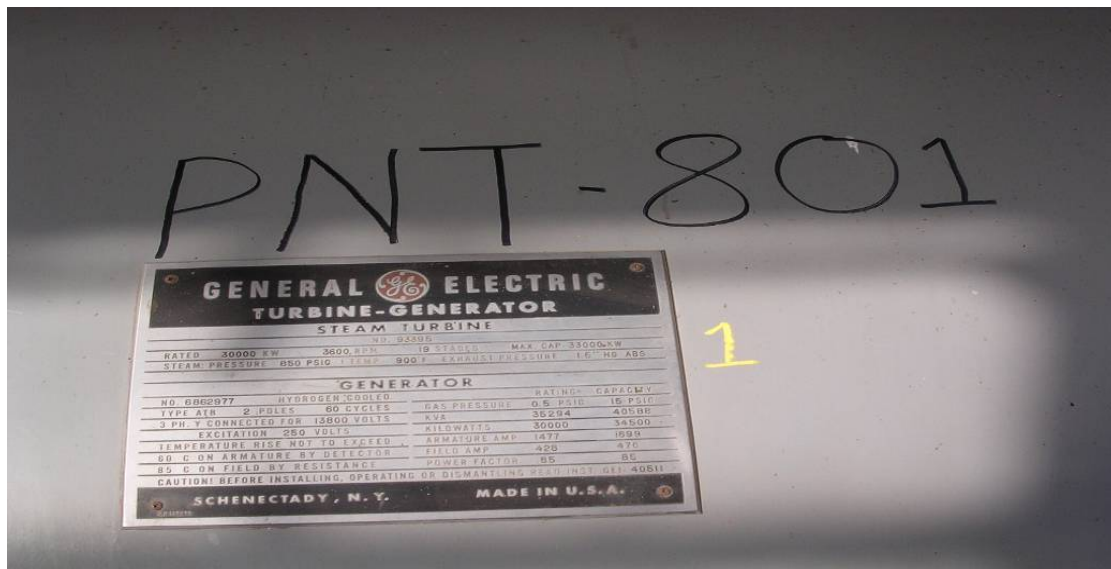
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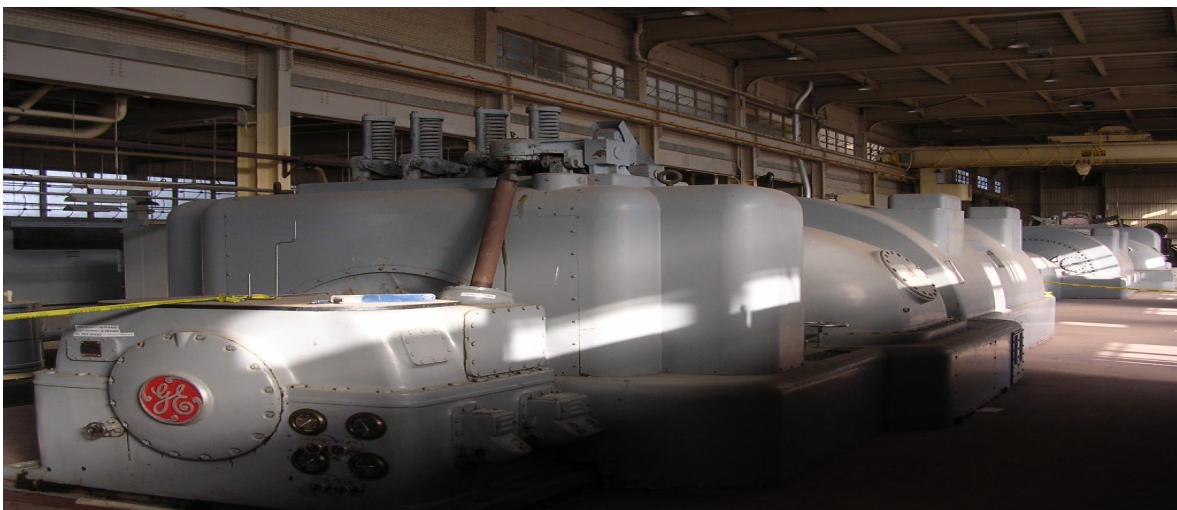
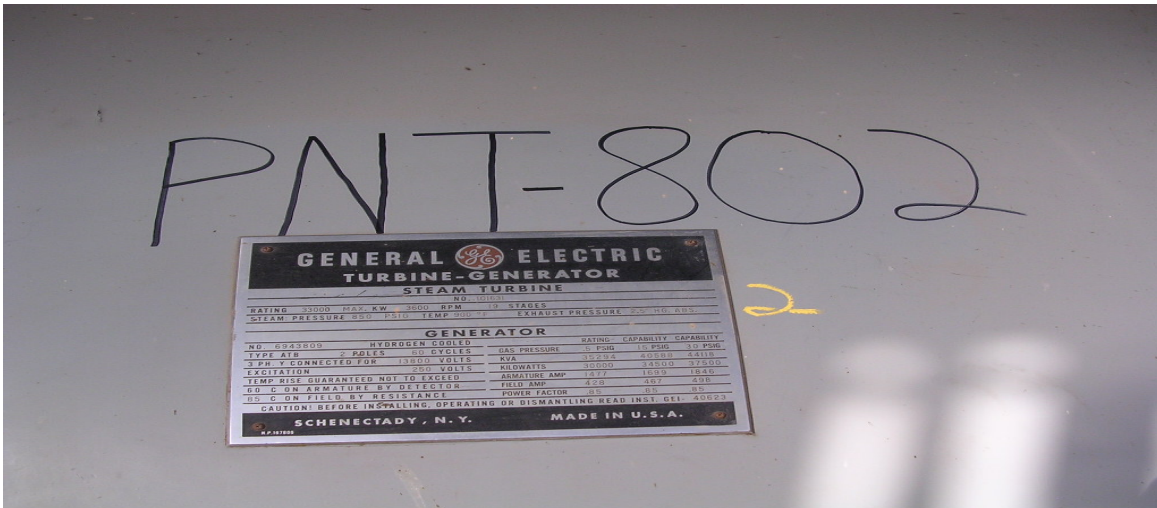
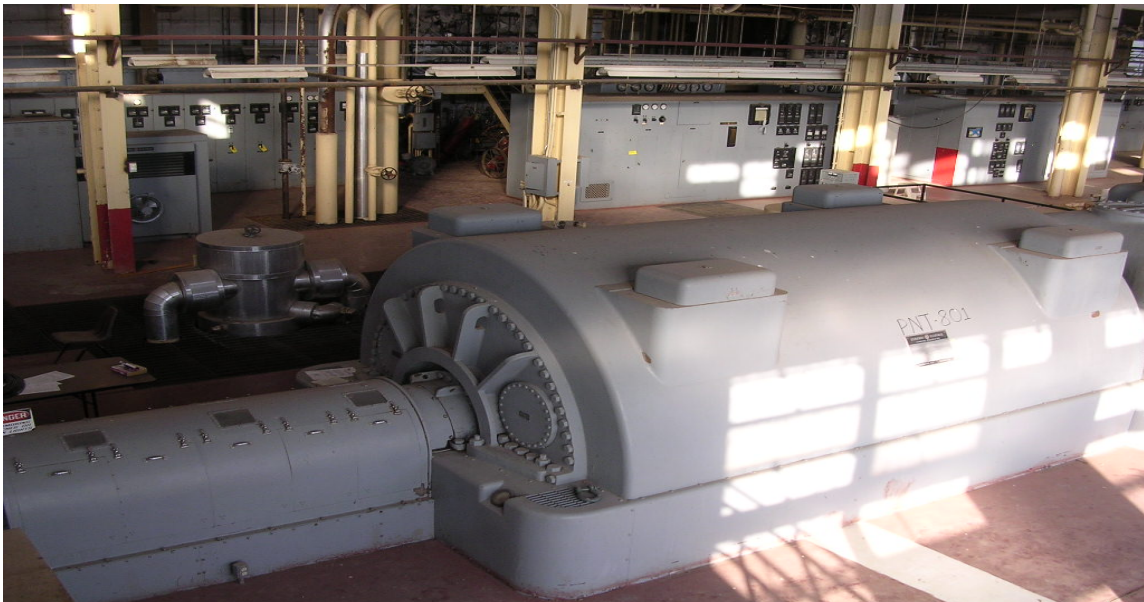
48 Deg. C.

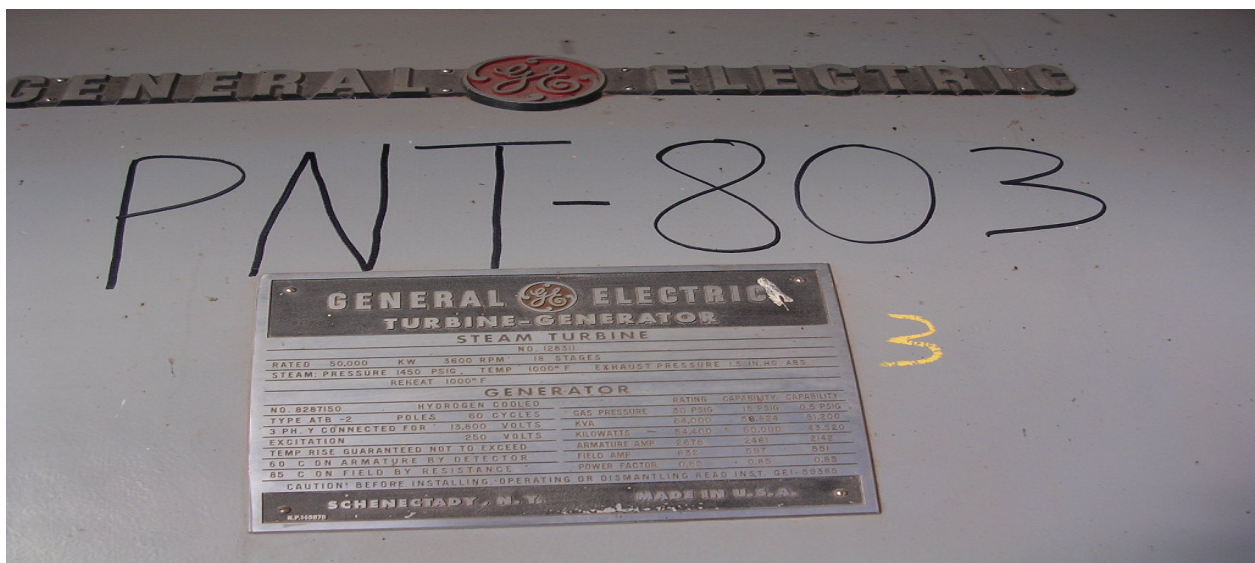
Inlet Water Temperature:

95 Deg. F.

Generator Serial Number:8383548







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