



15000 KW EXTRACTION CONDENSING STEAM TURBINE GENERATOR SET

STEAM TURBINE:

Manufacturer: General Electric
Type: Extraction Condensing
Rating: 15000 kw
Inlet steam: 425 psig/740 °F
Maximum inlet steam flow: 250,000 lbs/hr
Extraction steam:
 Auto extraction 15 psig 0 –250,000 lbs/hr
 Uncontrolled ext. 40 psig 0-30,000 lbs/hr
Exhaust steam: 3" HgA
 Maximum Exhaust steam flow: 148,000 lbs/hr
Steam rate at zero extraction
 15000 kw 9.86 lbs/kwh
Number of stages: 13
Inlet steam size: 12" side
Extraction steam
Exhaust steam: down
Speed: 3600 rpm
Rotation: CCW from governor end

GENERATOR:

Manufacture/Type: General Electric /TEWAC
Rating: 24500 kva, 13800 v, 3 phase, 60 hz
Amps: 1025
Field: 250 v dc, 203 amps
PF: 0.8
Exciter: Basler static
Speed: 3600 RPM

CONDENSER:

Manufacturer: Ecolaire
Surface area: 10.920 sq. ft.
Steam condensed: 148,000 lbs/hr
Cooling water: 14,276 gpm @ 84 °F
Tubes: Admiralty

SCOPE OF SUPPLY

Steam Turbine complete
Generator with exciter
Inlet stop valve, extraction NRV
Lube oil system
Gland steam condenser
Condenser
Condensate extraction pumps with motor
Air ejector
Sole plates for turbine and generator

NSV Energy LLC
35 Hickory Springs Industrial Drive
Canton GA 30115



Basler 50 kw static exciter with PPT (built 2004)

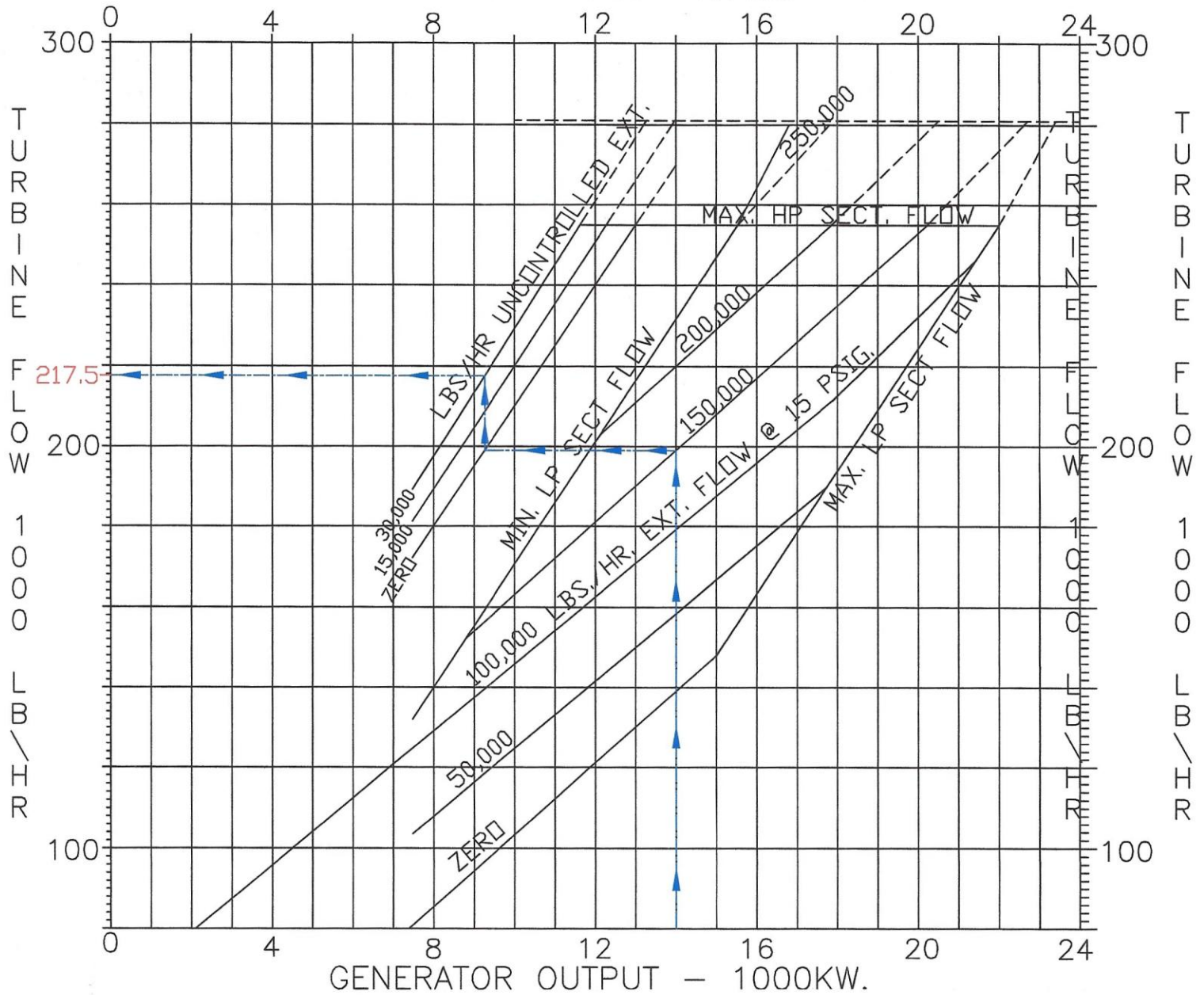
HISTORY:

Year manufactured:	1982
Last major overhaul:	2008
Year shutdown	2017





425 PSIG, 740° F 3 IN. HGA
AUT. EXT. @ 15 PSIG.
GENERATOR OUTPUT - 1000KW.



Section 2

Description of Surface Condenser and Design Data

GENERAL CONDENSER SPECIFICATIONS

TUBE DATA

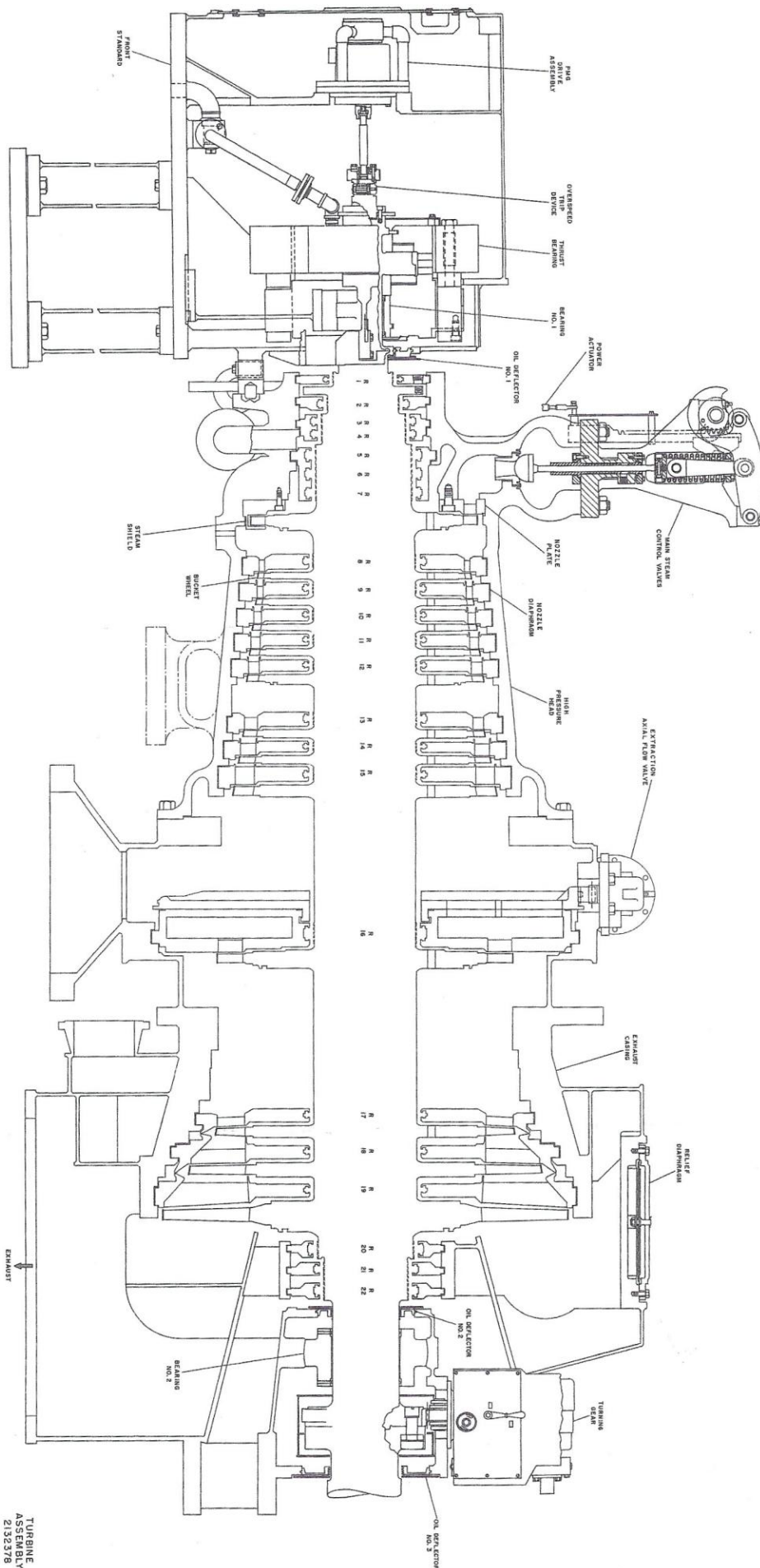
1. Tubes supplied by ECOLAIRE
2. Tubes installed by ECOLAIRE SHOP
3. Tubes (Main Section)-Size (O.D.) 3/4" BWG 18
Mat'l. ASTM B111/443 Quan. 3656
4. Tubes (Cooler Section)-Size (O.D.) N/A BWG N/A
Mat'l. N/A Quan. N/A
5. Tubes (Periphery)-Size (O.D.) N/A BWG N/A
Mat'l. N/A Quan. N/A
6. Total Number of Tubes- 3656
7. Effective Tube Length- 15' - 2 1/2"
8. Tube Lgth. for Ordering- 15' - 4"
9. Tolerance for Ordering- + 1/8 ; - 0
10. Tube Sheet Material- ASTM B171/365 MUNTZ
11. Number of Supp't. Plates- SIX (6)

PERFORMANCE DATA

1. Surface Area - 10,920 SQ. FT.
2. Steam Load - 148,000 LB/HR
3. Heat Load - 140.6 $\times 10^6$ BTU/HR
4. Absolute Pressure - 3.0 IN. HG.
5. Cleanliness Factor - 85 %
6. Inlet Circ. Water Temp. - 84 °F
7. Circulating Water - 14276 Gal/Min
8. Water Velocity thru tubes - 7.5 Ft/Sec
9. Condenser Friction, - 14.0 FT Of Water @ 84 °F

6psi





TURBINE
 ASSEMBLY
 2132378