



4500 KW NEW CONDENSING STEAM TURBINE GENERATOR SET

TURBINE:

New Elliott 4500 kw multi stage condensing steam turbine, Type 2D5R5, 5254 rpm, inlet steam 575 psig, 745 deg f, exhaust 3.5" hga, CCW rotation looking from governor end, 6" class 600 inlet size, 36" class 150" up exhaust. Steam rate 11.44 lbs/hr, Steam flow 51,500 lbs/hr Turbine Maximum capability 4783 kw

GEAR REDUCER:

Elliott Single reduction gear reducer input rpm 5254 rpm output rpm: 1800

GENERATOR:

TD Power systems 5295 KVA, 4500 kw, 0.85 pf, 4160 v, TEWAC, brushless exciter

CONDENSER:

Graham surface condenser, 7571 sq. ft, 63,000 lbs/hr steam condensed,

GENERATOR CIRCUIT BREAKER

Indoor Free standing NEMA-1 cabinet, built ANSI, IEEE standards. Cable entry and exit at top.

Consists of following:

Generator Circuit breaker consists of

- GE type VB1
- 1200 amps, 4160 v, 3 phase, 250 mva, 125 v dc trip and close
- 3 x 1200:5 cts bus side
- 2 x 4200:120 v fused pts on bus side
- 2 x 4200:120 v fused pts on generator side
- Lockout relay
- Breaker control switch
- red/green light
- Two section each 36" wide cabinets

SCOPE OF SUPPLY:

Steam turbine, gear reducer, trip and throttle valve, mounted on common skid

Condenser, air ejector

Local turbine gauge board.

Lube oil system with lube oil tank, ac and dc lube oil pump, lube oil filter, lube oil cooler

Valtek governor actuator

Steam turbine Blankets

Lube oil piping supply and return from lube oil tank to turbine and generator

Gland steam condenser and piping

Drain piping near turbine

Generator terminal box

Generator Surge protection with surge arrester and capacitor

Engineering drawings and manuals, foundation design data

Neutral Ground resistor

Coupling with guard

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Turbine generator control panel
Generator circuit breaker
Battery charger
Battery and rack

