

ONE COMPLETE 240 MW HFO STEAM TURBINE GENERATOR PLANT WITH A
SECOND FOR SPARES

TWO UNITS EACH CONSISTING OF MAJOR COMPONENTS:

EACH STEAM TURBINE PACKAGE CONSISTS OF -

GE D-11 33.5 LSB STEAM TURBINE
GE 324 GENERATOR
LUBE/HYDRAULIC TANK
GLAND CONDENSER
LP HOOD

PERFORMANCE:

STEAM TURBINE NET ELECTRICAL POWER OUTPUT, APPROXIMATELY 240 MW

STEAM TURBINE:

3600 RPM

OUTDOOR INSTALLATION

REHEAT DOUBLE FLOW 33.3" LAST STAGE BUCKET STEAM TURBINE DESIGNED FOR
NOMINAL INLET THROTTLE STEAM CONDITIONS OF

1877.9 PSIA

1050 DEG. F

1050 DEG. F REHEAT TEMPERATURE

EXHAUSTING TO 2.44 HGA INCLUDES -

FORGED STEEL ROTOR WITH INTEGRAL WHEEL GEOMETRY CAST ALLOY STEEL CASING

CONSTRUCTION FABRICATED STEEL EXHAUST CASING

SOLE PLATES

CENTERLINE SUPPORTED DIAPHRAGMS

CASE BABBITT-ON-STEEL JOURNAL BEARING DESIGN

FRONT STANDARD CONTAINING

PIVOTED SHOE THRUST BEARING THREE AXIAL POSITION PROBES FOR THRUST POSITION

MONITORING TILT PAD JOURNAL BEARING DESIGN WITH BENTLY-NEVADA X+Y

VIBRATION PROBES

SPEED PICK-UPS

COMBINED GE INLET STOP AND CONTROL VALVES

GE REHEAT VALVES

BYPASS INTERFACE VALVES (PNEUMATICALLY OPERATED)

ADMISSION VALVES

EXHAUST CASING BLOWOUT DIAPHRAGM, WITH ONE SPARE LAGGING

EXHAUST HOOD SPRAY CONTROL AND MANUAL BYPASS VALVE

LUBRICATION SYSTEM:

WELDED STEEL OIL RESERVOIR SHIPPED FULLY ASSEMBLED, WIRED AND SEALED AFTER
FACTORY FLUSHING

TWO (2) FULL CAPACITY AC MOTOR DRIVEN LUBE AND SEAL OIL PUMPS

ONE (1) DC MOTOR-DRIVEN EMERGENCY LUBE OIL PUMP

TWO (2) FULL CAPACITY SHELL AND TUBE OIL COOLERS

PUMP TEST SYSTEM

CONTROL INSTRUMENTATION CONSOLE WITH MANUAL PUMP TEST VALVES HYDRAULIC
POWER UNIT FOR USE WITH FIRE RESISTANT FLUID:

STAINLESS STEEL RESERVOIR WITH CLEANOUT AND DRAINS

TWO (2) AC MOTOR-DRIVEN, PRESSURE-COMPENSATED VARIABLE DISPLACEMENT TYPE

PUMPS WITH AUTOMATIC AIR BLEED VALVE FOR STARTING, AND RELIEF VALVE FOR OVERPRESSURE HIGH PRESSURE FILTERS AFTER PUMP DISCHARGE
STAINLESS STEEL INTERCONNECTING PIPING ON RESERVOIR
GAS CHARGED FLUID ACCUMULATORS
EMERGENCY TRIP SYSTEM
MANUAL HYDRAULIC HEADER BYPASS FOR COLD START
PRE-WIRED AT FACTORY FOR ALL EXTERNAL CONNECTIONS
AIR DRYER AND RESERVOIR VENT (DESICCANT TYPE)
HEATING AND COOLING SYSTEM WITH THERMOSTAT TO MAINTAIN FLUID TEMPERATURE, INCORPORATING A SINGLE, 100% CAPACITY, AIR/FLUID HEAT EXCHANGER FLUID CONDITIONING UNIT
INSTRUMENT PANEL WITH TEST VALVES AND GAUGES
OUTDOOR ENCLOSURE
HYDRAULIC PIPING
LUBE OIL CONDITIONING SYSTEM:
TURBO-TOC KLC-30 LUBE OIL CONDITIONER
STEAM SEAL AND EXHAUSTER SYSTEM:
AUTOMATIC STEAM SEAL REGULATORS

GE MARK V TRIPLE MODULAR REDUNDANT CONTROL SYSTEM:
CONTROL FUNCTIONS
TURBINE GENERATOR PROTECTIVES
ON AND OFF LINE TESTING
MONITORING OF DISCRETE CONTACT AND VARIABLE SIGNALS
AUTOMATION OF SETPOINTS AND RAMPS FOR SPEEDSET, LOAD TARGETS AND RAMP RATES

NEMA 2 CONVECTION COOLED ENCLOSURE CABINET
PC BASED OPERATOR CONTROLS
REDUNDANT 115V OR 230V AC PRIMARY POWER SUPPLIES
NEMA 4 JUNCTION BOXES
(ONLY ONE MARK V CONTROL SYSTEM AVAILABLE FOR THE TWO PACKAGES)

GENERATOR:

HYDROGEN COOLED
18,000 VOLTS, 60 HERTZ
LINE TERMINALS AND NEUTRAL TERMINALS MOUNTED AT COLLECTOR END OF GENERATOR, LEADS DOWN IN LOWER FRAME EXTENSION OF (TERMINAL BOX)
0.85 POWER FACTOR (LAGGING)
GENERATOR ROTATION RCL - CLOCKWISE (VIEWED FROM COLLECTOR END OF THE GENERATOR)
PROXIMITY PROBES AND PROXIMETERS
CONVENTIONAL COOLED STATOR

DIRECT COOLED ROTOR
GENERATOR TERMINAL ENCLOSURE
GENERATOR FRAME PRIME PAINTED
COMPACT COLLECTOR ENCLOSURE
GENERATOR COOLING SYSTEM
LUBRICATION SYSTEM INTEGRAL WITH STEAM TURBINE LUBRICATION SYSTEM
BEARINGS
GENERATOR TEMPERATURE MONITORING DEVICES
STATIC FEED BUS EXCITATION SYSTEM
GENERATOR COLLECTOR RING ASSEMBLY

GENERATOR CONTROL PANEL FOR MOUNTING IN THE CUSTOMER CONTROL ROOM

AC MOTOR TURNING GEAR:

ENGAGING LEVER FOR LOCAL MANUAL ENGAGEMENT

ENGAGE AND DISENGAGE LIMIT SWITCHES

SOLENOID VALVE IN AIR SUPPLY USED FOR REMOTE OR AUTOMATIC ENGAGEMENT

PRESSURE SWITCH INTERLOCK TO PREVENT OPERATION WITHOUT ADEQUATE LUBE OIL SUPPLY

HAND CRANK PROVISIONS FOR EMERGENCY MANUAL OPERATION

REMOTE JOB PUSHBUTTON EXTENSION CABLE, WITH REMOTE JOB CONTROL