TURBINE DATA SHEET

U - 23018

Serial Number - 37014

Turbine Frame - SHB7

Gear Frame - E-5 (12-1/2 x 9-3/4)

Number of Turbine Stages - 1 Curtis - 7 Rateau

Driven Machine - Marathon Generator

Turbine Rating - 1230 K. W. at 5526/1800 R. P. M.

Turbine Rotation - Counterclockwise, As Viewed From Governor End of Turbine

Inlet Steam Conditions - 250 psig. at 406° F. T. T.

Exhaust Condition - 20" Hg. Abs.

Extraction Pressure - 20 psig.

Casing Material - Cast Steel - Steam End - Exhaust End
Fabricated Steel - Diafram Cover

Shaft Packing - Labyrinth Packing Rings: 9 - Steam End
1 - Each Diafram
5 - Exhaust End

Speed Governor - Woodward Electronic 2301

Governor Oil Pressure - 150 psig.

Bearing Oil Pressure - 20 psig.

Auxiliary Oil Pump - Motor Driven - Capacity 37 G. P. M. at 50 psig. - Pump To Cut In at 15 psig. - Cut Out at 18 psig.

Emergency Overspeed Trip Setting - 6079 R. P. M.

Low Oil Pressure Alarm and Trip Switch Set To Alarm At - 12 psig. - Trip at 9 psig. - Falling Bearing Oil Pressure

Low Governor Oil Pressure Alarm Switch Set At - 100 psig. - Falling Oil Pressure

Low Governor Oil Pressure Trip Switch Set At - 90 psig. - Falling Oil Pressure

Low Oil Pressure Alarm and Trip Switch Set To Alarm At - 12 psig. - Trip at 9 psig.

Trip Throttle Valve To Trip On Loss of Governor Oil Pressure - Reset with Governor Oil Pressure

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Solenoid Dump Valve To Trip Turbine Out When - De-Energized

Sentinel Warning Valve Set To Open At - 5 psig.

Control Oil Pressure Trip Switch Set At - 5 psig.

Booster Oil Pump Permissive Start Switch Set At - 11 psig. - Rising Oil Pressure

Number of Steam Inlet Valves - One (1) Double Seated

Exhaust Relief Valve To Start Opening at 5 psig., to be fully open to pass 34,559 #/hr. at 10 psig.

Temperature of Oil Leaving Cooler - 120° F.

High Oil Temperature(Out of Cooler) Alarm Switch Set At - 125° F; Trip 130° F.

Quantity of Fresh Cooling Water Required For:

Oil Cooler - 48 G. P. M. at 85° F.

Journal Bearing Information:

	Shaft Bearing Journal Size:	Bearing Bore:
Steam End -	$3.000^{+.000}_{-.001}$	$3.004^{+.001}_{-.000}$
Exhaust End -	$4.000^{+.000}_{-.001}$	$4.005^{+.001}_{-.000}$

Main Journal Bearing Running Clearances:

Turbine - Steam End - .004" to .006"
Exhaust End - .005" to .007"
Pinion - .004" to .006"
Gear - .005" to .007"

RECOMMENDED BEARING TEMPERATURE LIMITS

	Metal Temp. °F.	Oil Temp. °F.
Maximum Normal Operating	220	180
Alarm	230	185
Shutdown	240	195

CALCULATED CRITICAL SPEED - 2945 R. P. M.

TURBINE DATA SHEET

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TURBINE SPEED RELATIONSHIP

5802 R. P. M. (Maximum)
5250 R. P. M. (Minimum)

HAND NOZZLE CONTROL VALVE DATA:

Number of Hand Operated Nozzle Control Valves: Two (2) Automatic

Valves Open	H. P. Load
Governor (Hand Valves Closed)	See Graphs
# 1	Following Data Sheets
# 1 - # 2	

ELECTRICAL REQUIREMENTS: See Wiring Diagram, Figure 28

TURBINE WEIGHTS: SEE Outline Drawing, Figure 2

WARNING! EYEBOLT IN CASE COVER TO BE USED FOR LIFTING CASE COVER ONLY