

Terry Turbines

Background: Units were originally designed for use in a dredging operation. The turbines were driving multistage, high pressure centrifugal pumps intended to scour channels in the sea bottom. The entire barge was scrapped in the mid 1990's. The units are in good condition and are still mounted atop their condensers.

Turbine Characteristics:

Type: Terry FJ-10	Serial Numbers: 37510-A, 37510-B, 37510-C
Power: 9500 BHP	Designed Speed: 4100 RPM
Stages: 9 Rateau Stages & 1 Curtis Velocity Compounded	
Rotation: Clockwise Facing Coupling	Critical Speeds: 2450 RPM (1st) 9000 RPM (2nd)
Inlet Steam Conditions: 594 psig - 700°F	Exhaust: 26" Hg
Inlet Steam Size: 6"	Exhaust Size: 60" x 30" Rectangular, Downward
First Stage Maximum Temperature: 560°F	First Stage Maximum Pressure: 245 psig
Emergency Trip Speed: 4510 RPM	Water Rate: 7.81 #/HP/Hour
Casing Material: Cast Steel	
Shaft Seals: Outer Glands and Interstage Glands-Labyrinth	
Bearings: Governor and Coupling Journals-5" Waukesha	
Thrust Bearing: 8" Kingsbury Type JHJ	
Governor: Woodward Type PGPL with Remote Servo	
Lubrication: Forced Feed of 150 SSU at 100°F	
Lube Oil Pumps: Motor Driven Main Oil Pump & Steam Driven Auxiliary	

Condenser Characteristics:

Type: Graham	Surface Area: 6500 Square Feet
Total Heat Rejection: 90,800,000 BTU/Hour	Absolute Pressure at Inlet: 4.09" Hg
Required Circulation Water: 6400 GPM	Velocity of Water in Tubes: 6.0 Feet/Second
Inlet Water Temperature: 85°F	Outlet Water Temperature: 113.4°F
Design Heat Transfer Rate: 571 BTU/Hour/Square Foot/°F	
Circulating Pump Pressure Drop: 11.5'	
Tube Material: Aluminum Bronze	Tubesheet Material: Muntz B-171
Number of Passes: 2	Outer Diameter of Tubes: 3/4"
Tube Thickness: 18 BWG	Tube Length: 16'-6"
Number of Tubes: 2060	

Each unit includes condensate pumps, air ejectors and lube oil system

Approximate Weight of Each Unit with Condenser: 75,000 #
Approximate Dimensions: 21 Feet Long By 6 Feet Wide By 15 Feet High
Manufactured in 1972