

STEAM TURBINE DATA SHEET

REFINERY Whiting
 UNIT No. 2 Alkylation
 SERVICE Refrigeration Compressor Drive
 NO. REQ'D. _____

JOB NO. 700367
 ITEM NO. KT-1
 QUOTE NO. C-3606K
 REQ. NO. _____

OPERATING CONDITIONS FOR TURBINE

HP: Rated 6,100 Normal 5,535
 SPEED (rpm): Rated 3,100
 Normal 3,020 Max Cont 3,255
 DUTY: Cont X Intermit _____ Standby _____
 LOCATION: Indoor _____ Outdoor X
 Roof, Yes X No _____
Open sided shelter

STEAM CONDITIONS:

	Min.	Max	Normal	Min
Initial Press. (psig)	91	105	98	91
Initial Temp (F tt)	360	400	380	380
Exh Press. (psig or in. Hg abs)	15	12	12	12

ELECTRIC EQUIPMENT HAZARD CLASS

Class 1 - Group D

Maximum continuous HP 6,700 @ 3,100 RPM

OPERATING CONDITIONS FOR AUXILIARIES

ELECTRICAL: Voltage 115 Cycles 60
 Phase 1 Power Factor _____ Total KW _____
 COOLING WATER: Press. (psig) _____ Temp (F) _____
 Allow. Rise (F) _____ Fouling Factor _____

STEAM CONDITIONS:

	Max	Normal	Min
Initial Press. (psig)	105	98	91
Initial Temp (F tt)	400	380	360
Exh Press. (psig or in. Hg abs)	ATMOSPHERIC		

TURBINE SPECIFICATIONS

MANUFACTURER DeLaval Steam Turbine Co.
 SIZE AND TYPE KJ
 NO. STAGES 6
 ROTATION FROM GOVERNOR END: CW _____ CCW X
 SPEED (rpm): Trip 3,500
 Max Allow. _____ 1st Crit 4,180
 POTENTIAL MAX HP (Normal Speed and Steam) _____
 STEAM RATES (Normal Steam Conditions):
 Rated 32.0 Normal _____ lb/bhp/hr
 Max Steam Thru Nozzle 257,000 lb/hr
 STEAM INLET PARTS: Max Allow. Press. (psig) 150 Temp (F) 500
 EXHAUST END: Max Allow. Press. (psig) 50
 Min. Allow. Condensing Press. (psig) _____
 HYDROSTATIC TEST PRESS. (psig):
 Steam Inlet Parts 225 Exh End 75
 ROTOR TYPE: Solid _____ Built Up X
 SHAFT DIA. At Wheels 7 1/2" At Coupling _____
 BEARINGS: Radial Type Sleeve Size 5" x 4 1/2"
 Thrust Type Kingsbury Size 8" Dia.
 Oil Press. (psig) 10-15 gpm 12.5
 GOVERNOR: Make and Type DeLaval NEMA "C"
 NEMA Class C Air Head, Yes No
 Speed Range 105-315 Signal Range 15-30 psi
 Max rpm at 15 psig: Min rpm at 3 psig
 Hand Speed Changer, Yes No Range 105-30
 Governor Oil Press. (psig) 85 gpm 23
 GOVERNOR VALVES: No. 4 Size 8" Dia.
 Type Lift, Cam X Bar _____

INLET CONNECTION: Size 20" Rating 1500
 Facing RF Orient. UP

Allowable Loads	Force (lbs)	Moment (ft-lbs)
Parallel to Shaft		
Vertical		
Horiz 90° to Shaft		

EXHAUST CONNECTION: Size 30" Rating 1250
 Facing FF Orient. UP

Allowable Loads	Force (lbs)	Moment (ft-lbs)
Parallel to Shaft		
Vertical		
Horiz 90° to Shaft		

SHAFT PACKING: Labyrinth X Carbon Rings _____
 No. Rings/Seal _____ Size _____
 Furnish Gland Condenser, Yes X No _____

INTERSTAGE DIAPHRAGM PACKING TYPE Labyrinth
 VALVE STEM PACKING: Type Steel bushing

*Lockoff Connection, Yes _____ No _____
 FURNISH BASE PLATE: Yes _____ No _____

Turbine Only _____ Turbine and Gas _____

LUBE OIL CONN: Inlet Size and Type _____
 Outlet Size and Type _____

GASING DRAINS: No. _____ Size and Type _____
 COOLING WATER: gpm Req'd. _____

SHIPPING WEIGHT (lbs) 121,500

* Exhaust flange bolted through bolted with 2500 lb ft

Thrust bearing area 32 sq in
Allow. press. 340 psi

