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**TURBINE CASING PROPERTIES**

Tensile Strength, psi, Min	70,000
Yield Strength, psi, Min	36,000
Elongation in 2 Inches, %, Min	22
Reduction of Area, %, Min	35

**STUD MECHANICAL PROPERTIES**

	Size, Inches		
	<u>2-1/2 and Less</u>	<u>Over 2-1/2 to 4</u>	<u>Over 4 to 7</u>
Tensile Strength, psi, Min	125,000	115,000	110,000
Yield Strength, psi, Min (0.2% Offset)	105,000	95,000	85,000
Elongation in 2 Inches, %, Min	16	16	16
Reduction of Area, %, Min	50	50	45

**SIGNAL SYSTEM OPERATING CONDITIONS**

1. Hydrogen Purity - High or Low
2. Hydrogen Pressure - High or Low
3. Hydrogen Supply Pressure - Low
4. Water Detection - High
5. Hydrogen Temperature High / Generator Condition Monitor
6. Defoaming Tank Level - High
7. Seal Oil System Trouble
8. Loss of Alarm DC Power
9. Air Side Seal Oil Backup Pump Running
10. +24 VDC Power - Off (Alarm Panel)
11. Main Seal Oil Pump - Off
12. Seal Oil Drain Tank Level – Error
13. Seal Oil Drain Tank Level – High
14. Seal Oil Drain Tank Level – Low
15. Seal Oil Drain Tank Level – Very Low
16. Seal Oil Pressure – Low
17. Seal Oil Turbine Backup Supply Pressure – Low
18. TE or EE Seal Oil Pressure – Low
19. Seal Oil Filter Differential – High
20. PLC Failure
21. Recirc Sol Valve Backup Mode – On
22. Both Recirc Sol Valves – Closed
23. 125 VDC Power Supply Failure

**COOLING TOWER DESIGN SUMMARY**

**(SPX MARLEY TOWER E-30A)**

Number of Towers	1
Number of Cells	16/Tower
Type	Induced/Cross Flow
Performance at Design Point	
Hot Water Flow, gpm	185,000
Approach Temperature, °F	112.77
Range, °F	32
Cold Water Temperature, °F	80.77
Fan Brake Horsepower, bhp	166
Pumping Head Above Sill, ft	90
Fans and Fan Motors	
Number of Fans	16
Number of Blades	9
Blade Diameter, ft	28
Blade Material	Fiberglass Reinforced Vinyl Ester
Tip Speed, ft/s	196
Fan Speed, r/min	134
Rated hp/Voltage	200/460V

**COOLING TOWER DESIGN SUMMARY**

**(SPX MARLEY TOWER E-30B)**

Number of Towers	1	
Number of Cells	18/Tower	
Type	Induced/Cross Flow	
Performance at Design Point		
Hot Water Flow, gpm	185,000	
Approach Temperature, °F	110.9	
Range, °F	32	
Cold Water Temperature, °F	78.9	
Fan Brake Horsepower, bhp	166	
Pumping Head Above Sill, ft	90	
Fans and Fan Motors		
Number of Fans	18	
Number of Blades	9	
Blade Diameter, ft	28	
Blade Material	Fiberglass Reinforced Vinyl Ester	
Tip Speed, ft/s	196	
Fan Speed, r/min	134	
Rated hp/Voltage	200/460V	

COOLING TOWER PUMPS

Number of Pumps	2
Type	Vertical, Wet Pit
Design Flow, gpm	164,000
Design Head, ft	87
Design NPSH, ft	29
Pump Speed, r/min	253
Motor Type	Induction
Horsepower, hp	7,000
Voltage	4,160