

Cost Justification Analysis

The Bottom Line

Estimated annual cost saving for an A.B.S. certified steam plant taking part in a Total Reliability Management program:

Part I Condition Monitoring - Deferred Maintenance

Total number of machines in program	75	
Deferred maintenance (15% per year)	11	
Assume 20% mandatory inspection required without Condition Monitoring		
Average cost to disassemble/inspect/reassemble	\$4,000	
		Annual Savings \$44,000

Part II Failure Prevention - Catastrophic

Standard failures per year (without TRM program)	5	
Average cost per failure	\$8,000	
Failures prevented with TRM program	4	
		Annual Savings \$32,000

Assumes Preventive Maintenance program already in place

Part III Schedule Reliability - Uptime

Daily operational costs (enter real costs)	\$50,000	
Additional days gained per year by successful TRM implementation (Annual basis)	1	
		Annual Savings \$50,000

Part IV Estimated Total Annual Savings

Total Annual Savings \$126,000

Typical Costs Associated with Inspections/Rebuild:

Mn. Coffin Feed Pump: New bearings, rings - same rotor	\$20,000
Mn. Circulator: New impeller, rings, bearings	\$12,000
Mn. Condensate Pump: New impeller, rings, bearings	\$7,500
F.O. Service Pump: New bearings only	\$3,500
Turbogenerator: Inspect, lift cover, no major work	\$12,000
Mn. Turbine (HP or LP): Inspect, lift cover, no major work	\$40,000
Typical S.W. Cooling Service Pump: Open, inspect, new impeller, rings, bearings	\$10,000

Note: New construction surveys have proven to be extremely valuable due to detection of problems that can be identified and corrected prior to resulting wear/damage. This work can and should be billed to the initial guarantee budgets. Ultimately this costs the customer no maintenance dollars and actually creates an immediate return from this Predictive Maintenance effort.

