



IVOSYS ENGINEERING SOLUTIONS

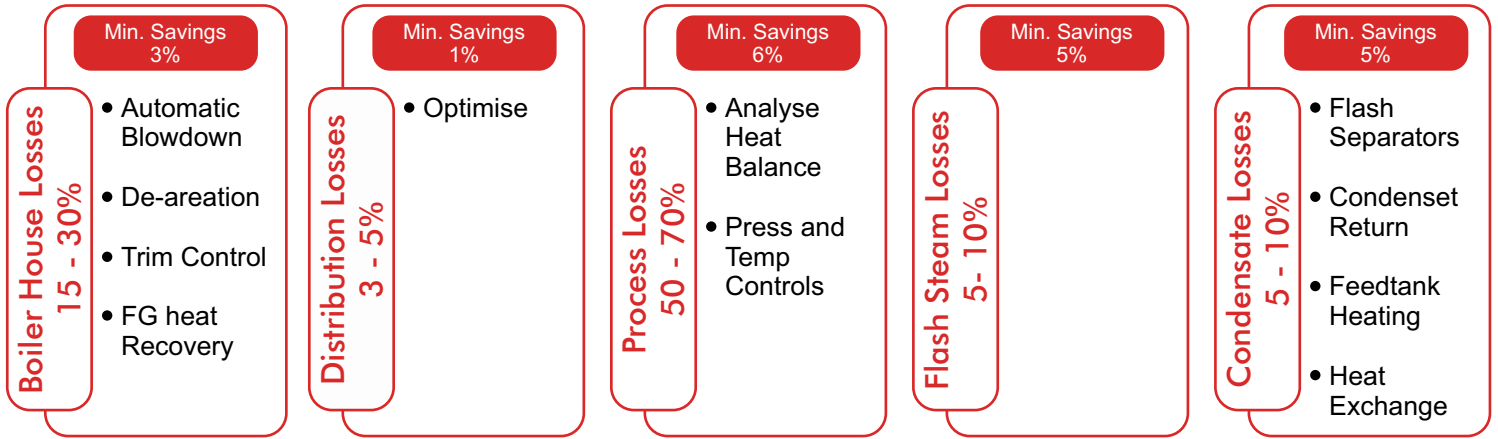
When Performance Matters

www.ivosys.in

About Us

IVOSYS act as an innovative solution provider specialized in tailor made solutions and products for total energy management for its customer with an expertise for last two decades.

We have a full-fledged Utility Cost Reduction team with a pool of experts from diverse disciplines. Our team is well equipped with technical and instrumental resource to undertake total plant audit to improve the present operational cost with innovative energy efficient solutions with attractive return on investments. We undertake complete implementation of energy conservation assignments on turnkey basis.



We conduct Detailed energy audits primarily for Steam & condensate, compressed Air &Thermic fluid systems

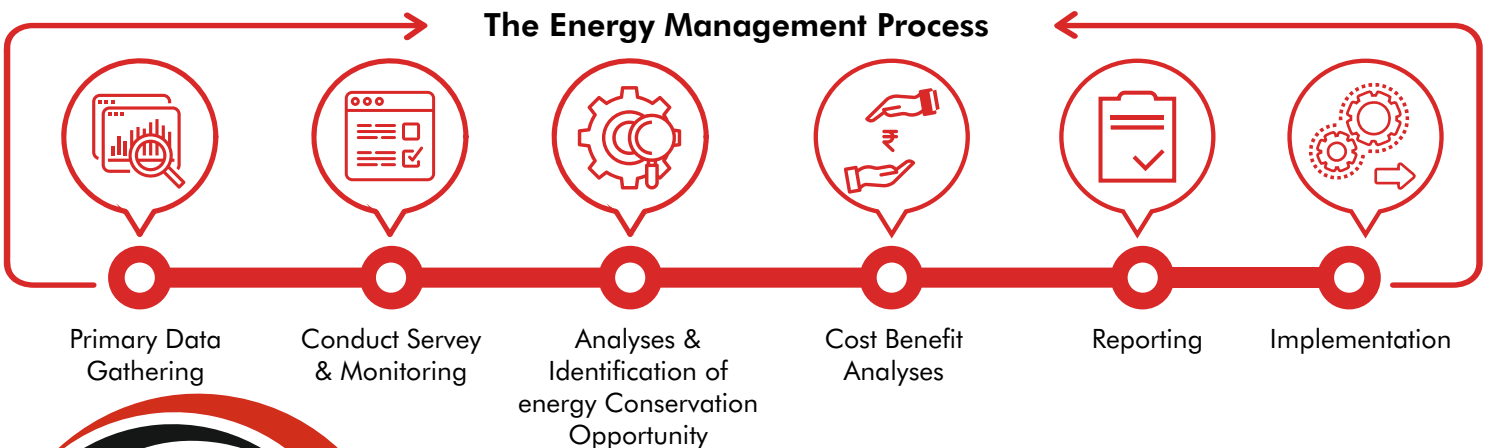
- Detailed analysis of energy consumption
- Identifying energy saving opportunities
- Recommending energy cost reduction measures
- Implementation of all the saving measures

Areas we explore for savings:

- Steam Generation
- Steam Distribution
- Steam Utilization
- Condensate Management
- Turnkey Piping Projects
- Field Instrumentation & Automation.
- Hands on exp. of commissioning & trouble shooting of all team accessories



Methodology:



Energy Audit Scope

1 Steam Generation

- Efficiency trial for working Boiler/Performance Evaluation Test as per BS 845
- Detailed Study of fuel consumption
- Boiler water study (Feed water, Raw water and Blowdown water)
- Evaluation of possible heat recovery



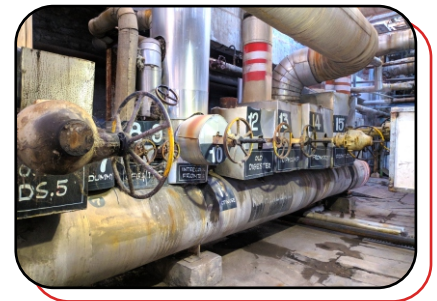
2 Steam Distribution

- Study of Steam Piping & Distribution Network
- Steam pipe line sizing and pressure drop calculation
- Steam pipe line insulation survey and estimation of condensate load
- Study of steam line accessories such as PRS, Drain Traps, air vents, moisture separators etc.
- Identification and quantification of steam leakages



3 Trap Study

- Performance evaluation of existing trapping system
- Identification and tagging of each trap
- Evaluation for correctness for type, size, application and operation
- Quantification of steam loss
- Preparing Electronic Database



4 Steam Utilization

- Detail process study with respect to steam consumption
- Steam load estimation and Energy balance across all major unit operations



5 Condensate and Flash Steam Recovery

- Study of present Condensate Recovery system
- Quantification of maximum possible recovery of condensate and flash steam
- Identification for the potential for the flash steam generation and Utilization



6 Other Areas

- Examination of present metering and controls for energy use and suggest better methods for energy accounting
- Exploring the possibility of recovering the waste heat from the process



7 Preparation / Optimization

- Preparation / Optimization of Bill Of Material along with Payback Period

Our Services

Design, Engineering and Consultancy:

We offer Utility Piping Design Consultancy packages for green field projects, Hook up of existing plant with new plant / line, Validation & re-engineering of existing plant piping to meet the expansion needs.

Industry Sectors We Serve:



Petrochemical



Pharma



Food & Beverages



Textile



Solvent extraction



Tyres



Chemicals



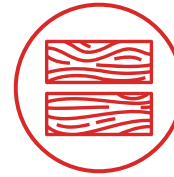
Breweries



Distilleries



Paper



Plywood



Corrugation



Hotels



Hospitals

Customer Training:



Energy is aggressively becoming a synonym for the industries now a days.
"Save energy to save your-self" is the need of an hour.

Support for supply of all the Steam Accessories & Piping

- Steam Traps
- Thermo dynamic Steam Traps / Modules
- Ball Float Steam Traps
- Condensate Recovery Pumping Systems
- Flash recovery vessels
- Pressure & Temperature Control Stations
- Pressure Reducing Valves
- Control valves
- Steam Flow Meters
- Heat Exchanger
- Storage Tanks
- Feed Water Tanks

Industry specific customized solutions:

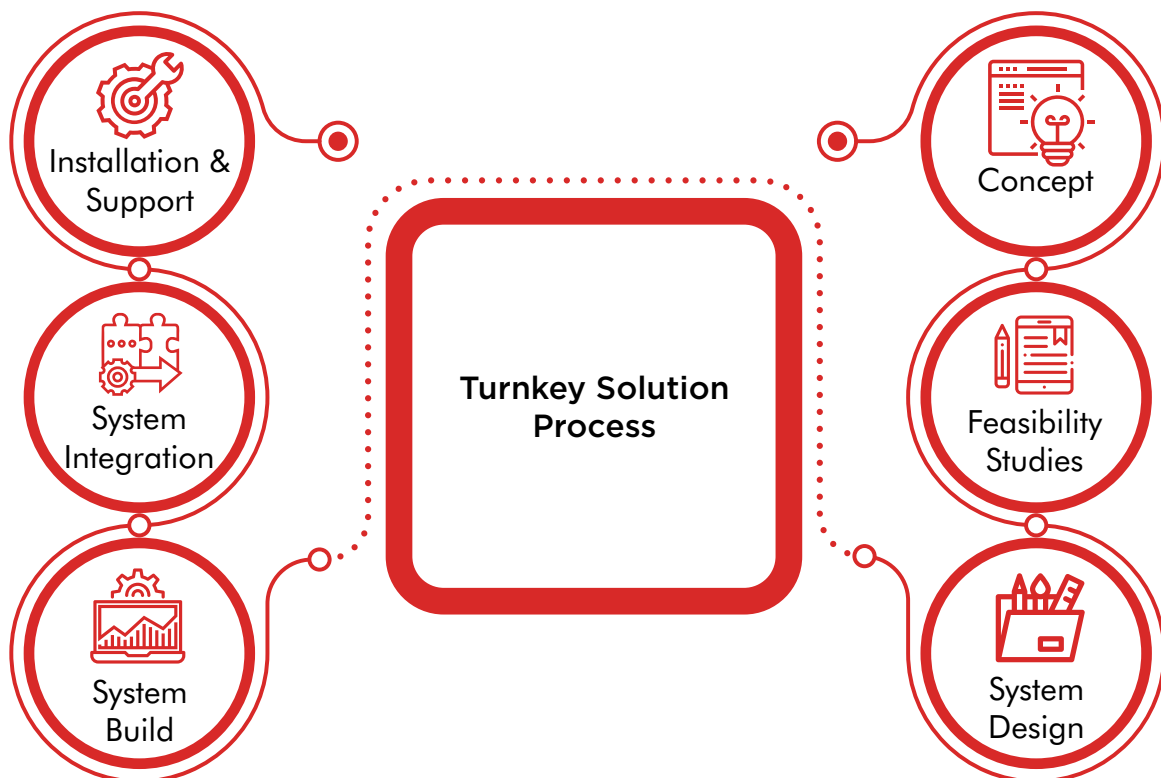
- Corrugation Industry
- Plywood Industry
- Chemical Industry

Engineering solutions:

Air Cool Condensers, Heat Pumps, Variable Thermo Compressors, Retro Fits

Turnkey Project:

- Concept Initialization
- Feasibility Study
- System Design
- System building
- System Integration
- Installation & Support



Case Study

1 GASCO, Abudhabi

Scope of Work:

- 1400 Steam Trap to be Audited Across their entire plant.
- Determine the losses
- Prepare a Data base for Traps
- Reason for losses

Outcome:

- Approx 25% Traps were found malfunctioning (Waterlogged, Cold, Leaking etc.)

Sr No	Unit Name	Unit No	Total traps audited Nos.	Estimated other leakages Kg / Hr	Estimated cost savings Million AED
1	SGP	-	767	634	0.34
2	New SRU	59	231	126	0.11
3	Old SRU	53	185	0	0.008
4	Train 3	50	136	0	0.21
5	Flare Area	07	57	830	0.30
	Total		1376	1590	0.99

Total Estimated Saving: 1,000,000 AED (272, 108 USD)

2 Pharma Plant

Summary of BOM with Payback Period

Sr No	Item Description	Investment Rs.	Savings Rs.
1	Savings from Replacing Malfunctioning Steam Traps	8,04,140	21,64,95
2	Savings from Recovery of Condensate from process	10,32,680	13,09,464
	Total Investment Rs.	18,36,820	
		Total Savings Rs.	34,74,414
		Payback Period (Months)	6 - 7

Executed Sites



References



IVOSYS ENGINEERING SOLUTIONS

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