

engineering Steam

Innovation
Excellence
Integrity
Safety



“Process experts”



The success of any process industry depends on the trustworthy energy provided by (efficient) steam and condensate recovery.

Volfram plays a pivotal role in successfully executing energy efficient solutions using innovative technology and experienced personnel to improve steam and condensate system.

Volfram is a steam engineering company. The core of our business is manufacturing of steam accessories and process automation along with project consultancy.

We are one of the leading manufacturers of steam products like steam traps, condensate recovery systems, pressure reducing stations, hot water systems and many more.

We try to provide end to end steam solutions for our clients which are sustainable, energy efficient and innovative.





WALCHEM

IWAKI America Inc.

Walchem is a leading manufacturer of online analytical instruments and electronic metering pumps. Our mission is to provide the integration of sensor, pump and electronic technologies for chemical control. We provide innovative solutions by integrating our instruments, sensors, fluid handling and extensive remote data communications technologies.

Pyxis[®]

Pyxis Lab USA

Pyxis Labs offers high quality inline sensors and handheld analytical devices to include the following testing capabilities: fluorescent tracers (PTSA) and polymers, industrial and drinking water turbidity, pH, ORP, conductivity, resistivity, TDS, temperature, dissolved oxygen, LPR corrosion, liquid level, colorimetrics, Pyxis Lab is also the leading manufacturer of fluorescent tracing chemicals for use in the water treatment industry. Pyxis Lab[®] offers technology and instrumentation, enabling you to apply water treatment products more accurately & effectively.

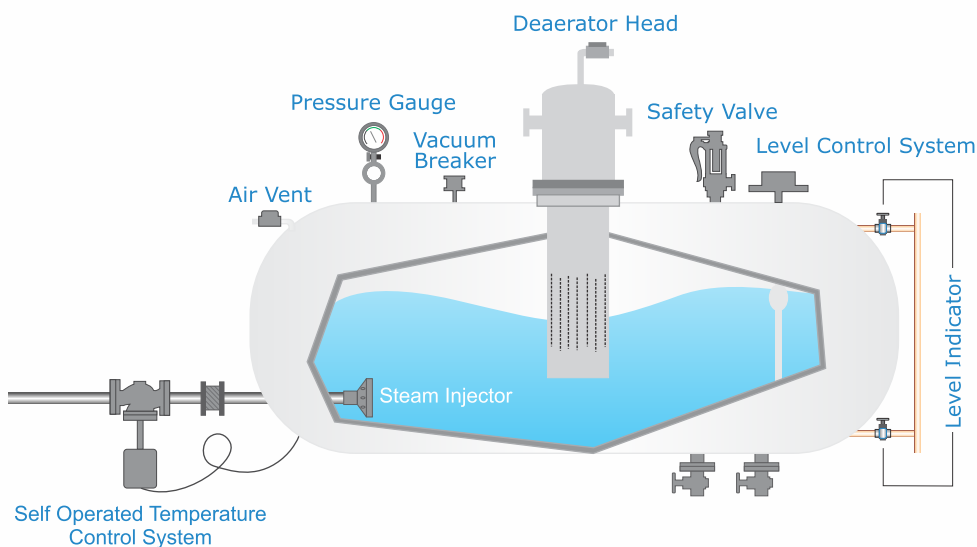


Pre-insulated SS Ducting Ø 550mm, 300 Meter long with Design Manufactured at Pune, installed at Saudi Arabia



Boiler House Accessories

Boiler Feed Water Management System



We provide complete solution for pressurized and atmospheric boiler feed water tank with accessories and automation.

Thermal Deaerator

Deaerators are mechanical devices that remove dissolved gases from boiler feed water. Deaeration protects the steam system from effects of corrosive gases. It accomplishes this by reducing the concentration of dissolved oxygen to a level where corrosion is minimized.



Boiler Automatic TDS Based Blow-down System

We offer the most advance boiler controller for maintaining TDS (Blow- Down) and other boiler parameters. The system is available with IBR certification and installation support provided at site.



Control Valves

- Design as per ANSI class 150/300
- Available in CS, CF8M and CF8
- Pressure, temperature rating as per ASME B16.34
- Gland Packing Carbon filled for temperature up to 220°C
- Leakage as per ANSI-FC I-70-2 CL.IV
- Suitable: Air, Water, Steam, Oil and Pprocess Media

V SMART the Boiler Monitoring System

Help to improve performance of boiler by monitoring various parameters contributing to higher efficiency of boiler. The system provides complete information about the performance, condition and operating efficiency of boiler, both in real time and in history. The system not only helps in saving fuel but also enables a proactive response to failure before they cause unpredicted shutdowns. The parameter monitored are as follows:

- Boiler Efficiency
- Steam Flow
- Excess Oxygen in stack
- Stack Temperature
- Feed Water Temperature
- Furnace Pressure
- Fuel Flow**
- Boiler Blow Down
- Steam Pressure



Steam Injector

Steam Injector ensures complete mixing of steam with other media

- Completely mechanical
- SS316 construction
- Highly robust and maintenance free

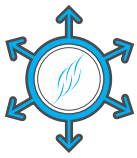


Flow Meters

We offer various types of highly accurate flow meters for steam, water, compressed air and process media.

- Vortex Steam flow meters
- Magnetic water flow meter
- Orifice type flow meters



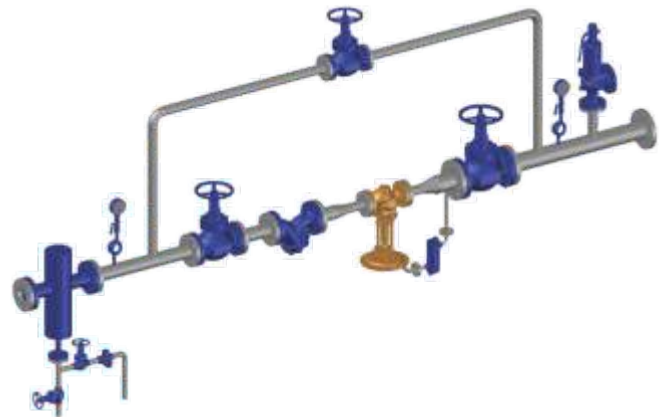


Steam Distribution

Pressure Reducing Station

Accurate and consistent downstream pressure is a result velocity based design. Direct acting Pressure Reducing Valve assures faster response and steady downstream pressure.

- Available with pneumatically operated pressure Control Valve
- Option with Pneumatic Pressure Controller is also available which doesn't need any electronics.



Strainer

We offer wide range of strainer for various applications like Steam, Water, Condensate etc.

The types of strainers are:

- Y type Strainers
- In line Conical Strainers
- Basket Strainers



Moisture Separator

It is very important to supply dry steam to the equipment. Moisture separator installed at inlet of the pressure reducing station ensures maximum Moisture removal from the steam.

- It improves dryness fraction of steam
- Long working life of equipments as reduced water hammering
- Reduced erosion & corrosion in the steam system
- Reduced pipe & heating surface scaling



Ball Float Trap

We offer Float controlled steam traps which operate based on buoyancy principle which are suitable for the process equipment applications.

Features

- Only one moving part
- Long working life
- Exact, impact free and silent condensate discharge
- Independent of pressure and temperature variation
- Low maintenance
- Simple mechanism





Pressure Gauge

VOLFRAM offers high quality Bourdon tube Pressure Gauges with complete stainless steel body and internals for accurate measurement of pressures, suitable for various media application.

- All stainless steel (SS316) construction
- Cost-effective and reliable
- Highly Robust and accurate
- Design as per EN 837-1



Non Return Valve

We offer complete range of non return valves to suit various applications in the process plant .

- The disc check valve can be mounted in vertical or horizontal lines between the flanges
- Can be used in variety of applications like hot and cold water lines steam lines, oil lines, process lines etc.
- Also available with IBR certification



SS Safety Valve

- Complete SS Construction
- Suitable for various media
- Highly Robust
- Suitable for the chemical industries where there is corrosive atmosphere
- Easy to install
- Compact Design
- High Discharge Capacity

Available Sizes 15NB, 20NB, 25NB



Piston Actuated on-off Valve

- Build in Complete SS 304
- Economical and Easy to Install
- Reliable System
- Maintain the process temperatures within a band of $\pm 3-5^{\circ}\text{C}$.

Available Sizes: 15NB, 20NB, 25NB and 50 NB



Isolation Valves

We offer various types of Isolation Valves for media like steam, hot oil, water, compressed air, etc.

- Gate Valve
- Globe Valve
- Ball Valve
- Piston Valve



Venturi Trap

- It has no moving parts
- No Wear and Tear
- Zero Failure
- Suitable for variable loads
- MOC:SS
- Best suited to remove condensate from steam lines

Available Sizes : 15NB, 20NB



Thermostatic Clean Steam Trap

- Thermostatic traps are best suited for clean steam application
- Material of Construction is SS316

Available Sizes: 15NB, 20NB & 25NB, with TC Connection



Temperature control system

We offer wide range of temperature control solutions for process requirements Self Operated Temperature Control System - Completely mechanical and robust system, maintains temp in the band of $\pm 2^{\circ}\text{C}$



Thermodynamic Steam Trap

Thermodynamic traps can operate across their entire working range without any adjustment or change of internals.

Available Sizes: 15NB, 20NB and 25NB



Condensate Recovery



Mechanical Condensate Pump with flow totalizer

Steam Operated Condensate Recovery Pump

We offer widest range of condensate recovery systems with Flash Separator and Steam Operated Condensate Recovery pump.

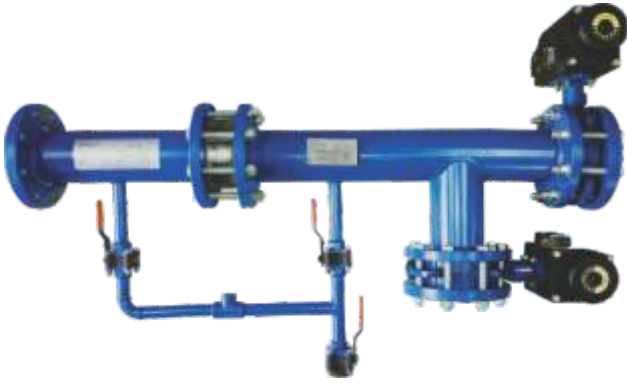
- Uses inexpensive steam, air or gas to pump the condensate
- Negligible steam consumption
- Zero Maintenance as there is no cavitations, no leaking seals, no impeller parts ensures increased reliability
- Superior build quality and rugged construction
- Pre-wired, pre-piped packaged, Skid Mounted for easy installation
- Widest capacity range available in steam operated pumps
- Comes with inbuilt Condensate flow totalizer

Condensate Flow Totalizer



- Enclosure is Weather Proof IP-65 rated
- Compatible to use with all kind of Steam / Air operated pumps (various makes)**

Condensate Contamination Monitoring & Control System



- System ensures that the condensate recovered to the boiler is pure & does not contain any contamination.
- The system monitors as well as takes necessary action to prevent contaminated condensate to get into the boiler feed tank.
- System monitors the quality of condensate returned to the boiler in terms of its TDS and/or pH.
- The monitoring is inline and continuous.

Automatic Pumping Trap



- Steam systems are designed to discharged condensate using differential positive pressure through steam traps, various factors can interfere with this phenomenon.
- The use of an inlet temperature control valve can lead to a vacuum, Reduced operating pressure in the trap can cause stall. Leads to delay in process or difficult to maintain constant temperature.
- V-APT a combination of trap with Pump design to overcome stall effect and help to operate systems with precision.

Flash Steam Separator



- Customized design
- Supplied with rotating plug modulating ball float trap
- Designed as per ANSI standards
- Available with IBR certification
- Unique customized design with two separate inlets to flash vessel
- Best suitable for the application where the condensate is at two different pressures
- Help in reducing back pressure on steam traps due to connection of different pressure condensate in same header
- Flash Steam Separator with Inbuilt Float Trap also available for higher condensate flow rate

Accessories

- Rotating plug Modulating Ball Float trap
- Pressure Gauge
- SS Safety Valve
- Strainer
- Sight Glass



Customized Solutions

Steam and Water Mixing Battery with Hose Station

- Single source supply for wash down of floor, equipment's etc. with hot or cold water.
- This unit allows steam to mix with cold water to provide instantaneous hot water source for hosing down.
- Overshoot temperature protection is provided for safety of the operators.
- Designed to provide hot water economically by blending steam and cold water quickly.

High Pressure Water Wash Gun

The gun is designed for use on any hot or cold-water wash down and cleaning hose application. When the trigger is released water flow ceases which can save up to 50% of your hosed water cost.

- Designed Up to 90°C
- Brass Body/ Stainless Steel Body
- Rubberised Covered Suitable for hot / cold water wash down CIP & cleaning jobs with option of two spray actions-cone & jet spray



Steam Based Hot Water Generation System



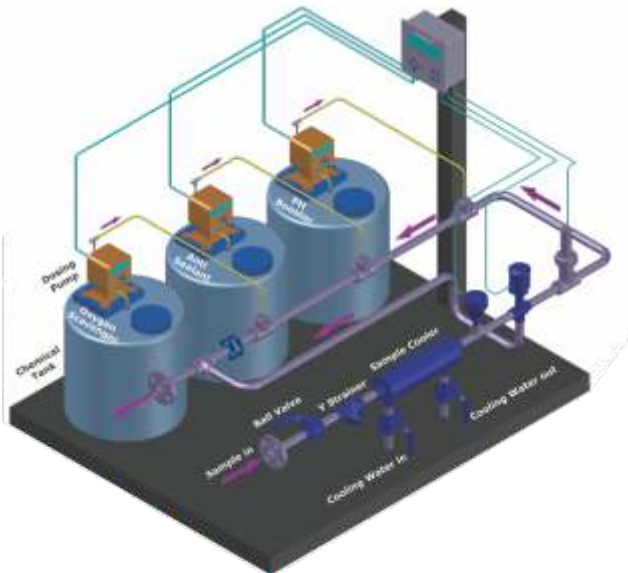
The instantaneous hot water generation system is a compact skid mounted system with a control valve that is designed to heat water instantaneously in Shell and Tube / PHE type heat exchanger using steam as a heating media.

Benefits

- Reduces fuel costs by avoiding temperature overshoots
- The system is extremely easy to operate and maintain with low running costs
- Inbuilt overheat protection
- Compact, Skid mounted assembled system
- Low Installation Time and Cost

Applications

- Pharma Industries
- Food and Beverages
- Hospitality Sector like Hotels, Hospitals, etc.
- Chemical Industries



Chemical Dosing System

Chemical Dosing System is compact skid-mounted dosing system, which doses the chemical in boiler feed water Tank/Cooling Tower for improving and maintaining water quality.

The System Suitable for Dosing Chemical like:

- pH booster
- Antiscalant
- Oxygen Scavenger

Heat - Cool System



To achieve the maximum productivity in process, achieve the high yield & quality of the product, it is very important to control the temperature of the process.

To avoid cross contaminations in the utilities for the application requiring Heating as well as Cooling, Volfram Offers customized Heat-Cool Systems for Pharmaceutical Industry.

Applications

- ANFD
- Reactors
- VTD
- RCVD etc

Utility Services



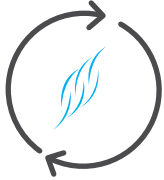
STEAM AUDIT



IMPLEMENTATION



TRAINING



SUSTAINABILITY



PROJECT CONSULTANCY



MONITOR AND CONTROL SYSTEMS

Steam Audit

Steam Audits will address the following key points:

- Auditing the whole steam and condensate system to establish the current specific fuel (SFC) and steam (SSC) consumption and identify the gaps.
- Bench marking the SFC and SSC with respect to the industries standards and recommend modern Steam and Condensate System design to reduce the gaps in the same.
- Eliminating issues like higher batch timing due to higher back pressure drops etc. commonly prevalent across most plants and which can impact the production and rejection rate.
- Suggesting proper utility monitoring systems so as to keep track of utility consumption patterns and take corrective action if required.
- Monitor the implementation work closely so as to ensure the technically correct installations.

Projects Consultancy

Steam Audits will address the following key points:

- Studying the project requirements and proposed utility consumption patterns.
- Selection of optimized capacity Boiler and other utility equipments as per process requirements.
- Designing and optimum steam and condensate system which is energy efficient, safe, easy to operate and reliable.
- We take care of following utilities for the designing: Steam, Thermic Fluid (Hot Oil), Chilled Water, Compressed Air, Condensate, Flash Steam, Water.



Volfram Systems India Pvt. Ltd.

An ISO 9001:2015 Certified Company

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