

Modular Water Heating Systems

(Hot Water Generators)

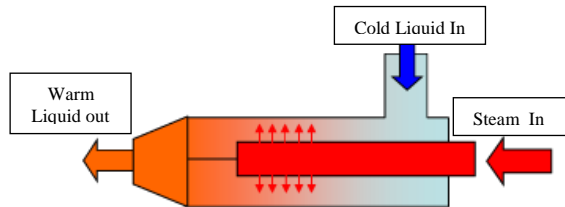


“Providing Value For Money In Steam Engineering”

In industries low temperature hot water finds a wide range of usage. Hot water is used in general in all industries for AHUs, humidifications and for processes like bleaching, dying & washing in textile industries, gradual low temperature process heating, sterilization etc. in pharmaceuticals, washing and cooking, pasteurisation, CIP in food industries and a variety of other applications spread over a wide range of industries.

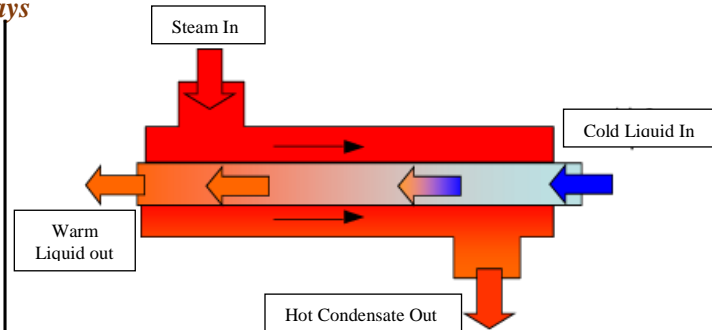
In an industry already using steam, hot water generation using steam proves to be the most economical option on the longer run from both the capital as well as running cost.

When using steam, heating can be done by two ways



Direct heating

The direct steam heating method refers to processes where steam is in direct contact with the product being heated.



Indirect heating

The indirect steam heating method refers to processes where steam is not in direct contact with the product being heated.

Direct Heating

Traditionally a sparge pipe is used whenever steam is required to be directly purged into a water for heating. This gives rise to two kinds of challenges.

- High noise due to vibration as steam comes out from a number of small holes and at a high velocity.
- As steam comes out at high velocities, a sizable percentage of this steam actually escapes and gets wasted without condensing and mixing with the process fluid.

MODULAR WATER HEATING SYSTEMS (MWHs) FOR DIRECT HEATING.

Features.....

- Compact skid mounted system including tank, thermoject-steam injectors, all required inlet/outlet circulating nozzles and automated with complete steam control instrumentation.
- Steam is injected using thermoject-steam injectors thereby ensuring zero steam losses, 100% energy utilisation and high energy efficiency due to utilisation of total heat of steam.
- Temperature based PID controlled steam control valve ensures instantaneous and continuous hot water generation and supply with accurate required temperatures.
- Easy to install as system is supplied completely preassembled and skid mounted.



Indirect Heating

As the name indicates, in this type of heating, the steam does not come in direct contact with the water to be heated. This type of heating prevents contamination of the water due to steam mixing as in case of direct heating and is used widely in industries where process does not permit such contamination. It is widely used in industry because it provides rapid, even heating. This method uses a heat exchanger, either PHE or shell & tube type, to heat the water.

MODULAR WATER HEATING SYSTEMS (MWHs) FOR INDIRECT HEATING.

Features.....



- Package consists of heat exchanger, interconnecting piping, control instrumentation, pumping traps & required valves and buffer tank.
- Total system is skid mounted and compact thereby requiring significantly lesser space than traditional tank based hot water systems.
- Buffer tank provided enables the system to be used online in recirculating type hot water circuits.
- Efficiently designed heat exchangers and temperature based control instrumentation including control valves enable the availability of hot water instantaneously, continuously and at accurate temperatures as required.
- Temperature based PID control enables variable temperature settings and stability of settings at variable loads.
- For non critical applications, economic versions with on/off control valves & thermodynamic steam trap at condensate outlet can also be provided.

- MWHs can be provided with both plate heat exchangers or shell & tube type heat exchangers based on customer preference.
- Package includes pumping trap provided at the condensate outlet of the heat exchanger thereby ensuring zero damage to the heat exchanger under stalling conditions and long working life of the heat exchangers.
- MWHs is a High energy efficient solution for hot water generation. 100% energy utilisation takes place as system is provided complete with steam operated condensate return pump.
- A consolidated experience of more than 30 years in the field of heat transfer technology provides you the MWHs- the modular hot water heating systems.



OTHER HEAT TRANSFER SYSTEMS MANUFACTURED BY US.

**Cooling Tank with
Twin Chilling Coils.**



Waste Water heat Recovery For Heating Feed Water.



Heat Recovery From Exhaust Gas.



**Heat Recovery
From Engines.**



Air Heating System With Steam.



SOME OF OUR OTHER PRODUCTS.....

- STRAINERS
- STEAM TRAP MODULES
- MOISTURE SEPERATOR AND STRAINER COMBINATION
- MAX-FLASH - FLASH VESSELS
- DEAERATOR HEADS
- THERMAL RECOVERY PACKAGE UNIT SYSTEMS (TRPS) SKID MOUNTED
- SIGHT GLASSES
- MOISTURE SEPARATORS
- PUMPING TRAP
- CONDENSATE RETURN PUMPS
- FEED WATER TANKS
- AIR VENT ASSEMBLY
- CLEAN AIR PACKAGES

WE ALSO DO STEAM AUDITS, PIPING AND SYSTEM DESIGN.

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