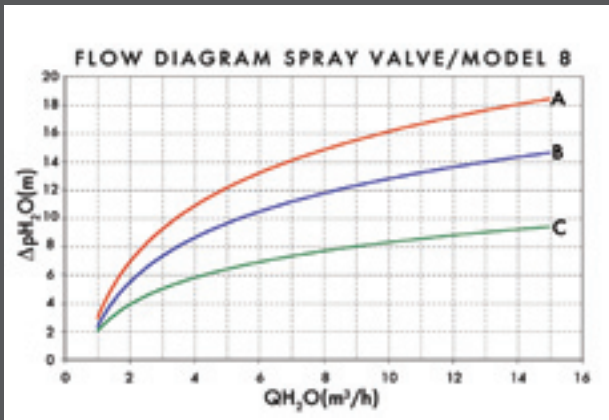
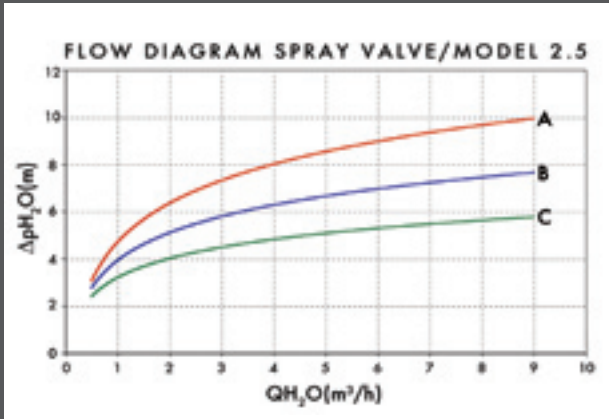
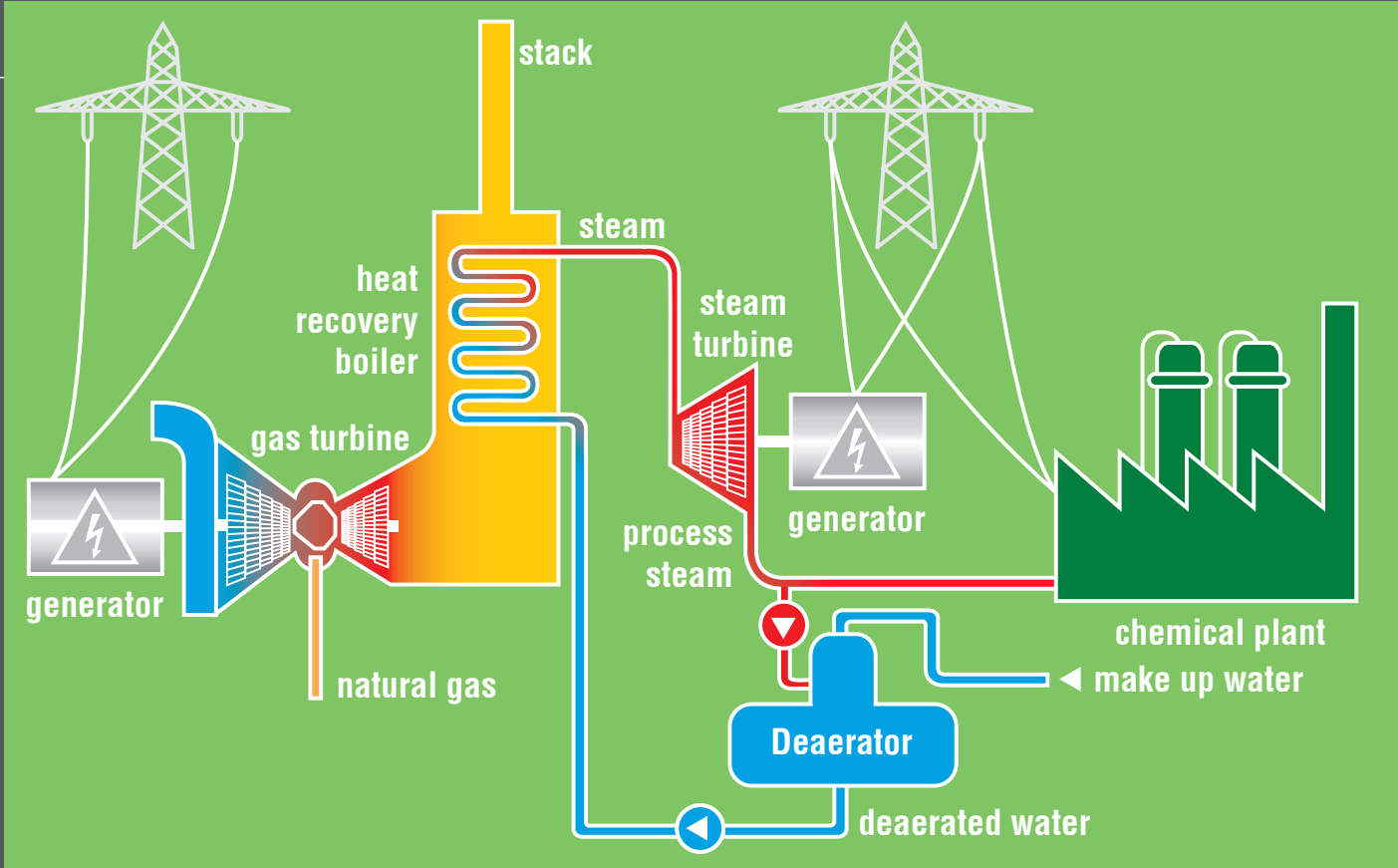
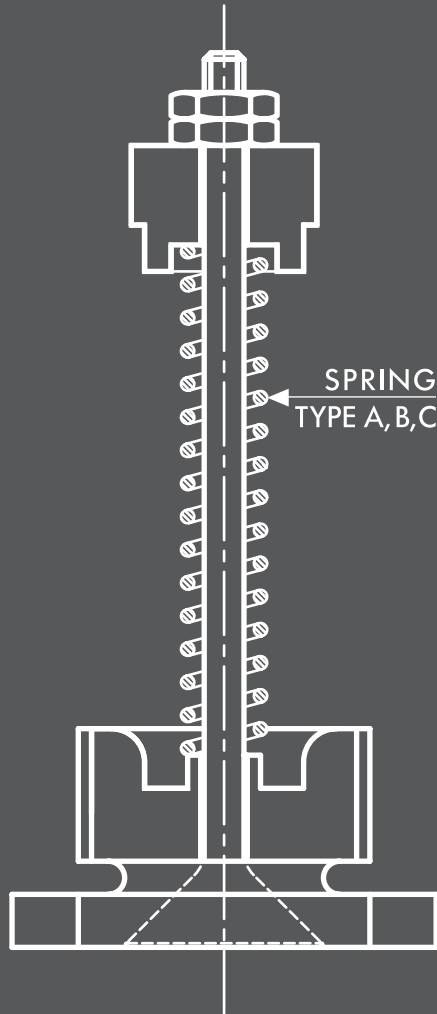


Main Clients

- ABB LUMMUS GLOBAL
- CHIYODA CORPORATION
- CMI – SERAING BELGIUM
- CTCI
- FISIA ITALIMPIANTI
- FLUOR BV
- FORMOSA CHEMICAL CORPORATION
- FORMOSA PLASTICS CORPORATION
- FOSTER WHEELER ITALIANA
- FOSTER WHEELER FRANCE
- GETABEC BOILER
- IES
- INITEC ENERGIA
- ISDEMIR
- JEL
- JGC CORPORATION
- KELLOG BROWN & ROOT (KBR)
- KOCH-GLITSCH A.S.
- MITSUI ENGINEERING
- NE-NOOTER ERIKSEN
- SAIPEM
- SIEMENS
- SKODA PRAHA
- SNC LAVALIN
- SNAMPROGETTI
- SNAMPROGETTI SUD
- SUPERMETANOL
- TECNIMONT
- TECHNIP ITALY
- TECHNIP FRANCE
- TECHNIP MALAYSIA
- WASHINGTON GROUP INTERNATIONAL



Design covered by official patent



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Rev.02 Year 2008

Deaerators

remote / integrated types

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The company

Deaeration is the mechanical removal of dissolved gasses such as oxygen and carbon dioxide from a fluid. Feedwater to the boiler should contain less than 0.005 cc of O2 per liter (7 ppb) which is the usual guarantee of Deaerator suppliers.

Termochimica's Spray & Tray Deaerators incorporate a strong basis design covered by official patent that assure the above mentioned performance over varying loads of incoming water.

The process of Termochimica Deaerators involves two main stages in which the steam and water move in opposite directions (see figures "Internal Diagrams"): horizontal or vertical tower disposition is selected on the grounds of inlet water capacity together with steam flowrate.

1) Cold water enters at the top of deaerating tower in order to be sprayed through special designed stainless steel spray-valves into a steam atmosphere. Self -adjusting spring-loaded spray valves provide the breaking down of water into thin films or droplets. By this action, the distance a bubble of gas has to travel to be released, is greatly reduced and a large percentage of the gases are removed in this section.

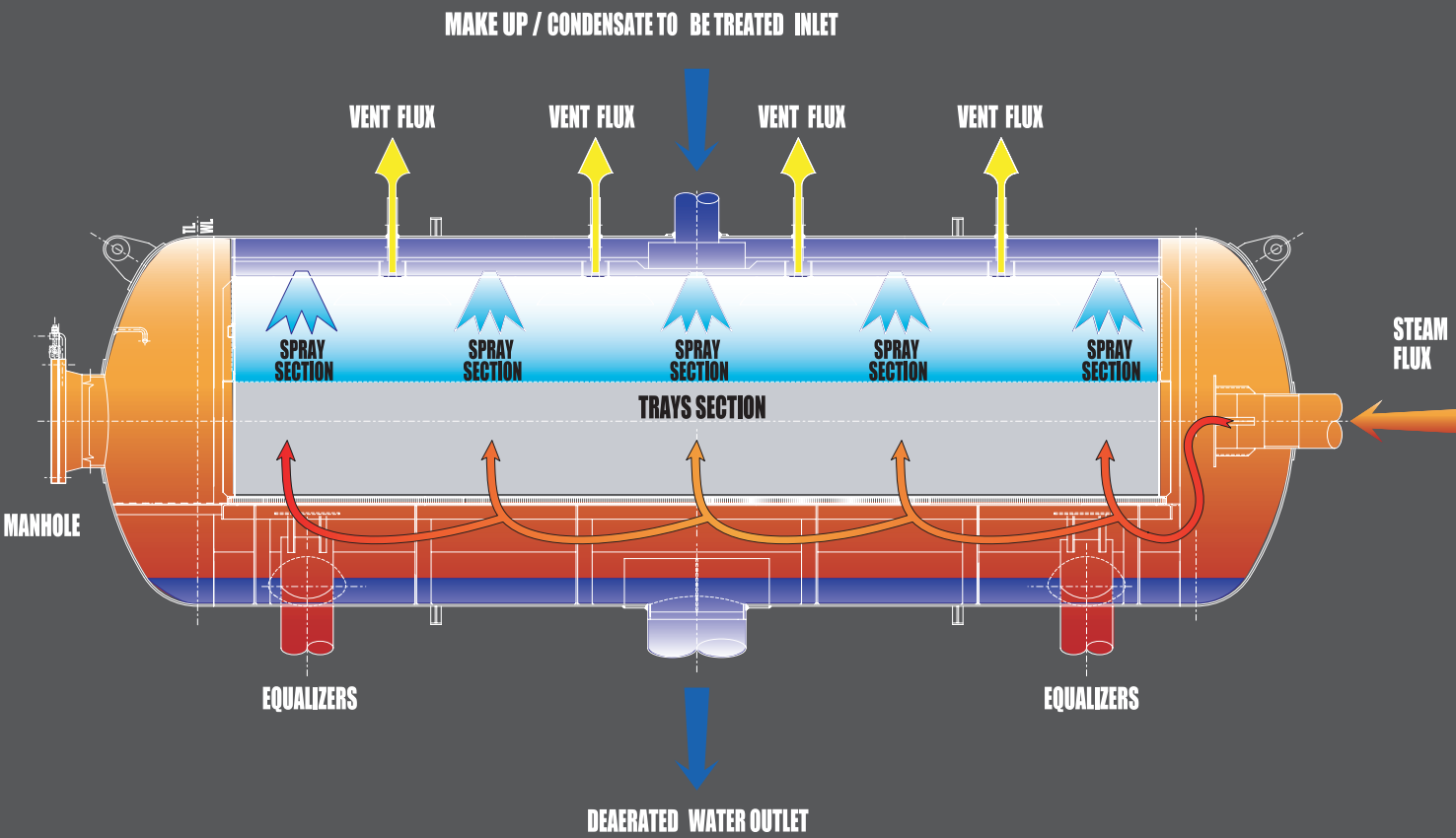
2) In the second stage the water rains through a series of special designed stainless steel perforated trays, countercurrent to the steam. Fresh gas-free steam enters from the bottom of deaerating tower and flows upwards scrubbing out the last traces of the residual oxygen and carbon dioxide. Efficient scrubbing is essential to achieve less than 7 ppb of oxygen effluent quality, as measurable following ASME PTC 12.3 test code according to HEI recommendations.

Gases O2 and CO2 mixed with a little steam flow-rate, are discharged to the external atmosphere through vent nozzles completed with calibrated orifices and vent condenser direct-contact type.

Since 1969 Termochimica supplied Deaerators to the main EPC Companies or Users involved in power stations, such as ABB Lummus, Agip Gas, Alstom Power, Enelpower, Formosa Chemicals, Fisia Italimpianti, Foster Wheeler, JGC Corporation, Koch Glitsch, Nuovo Pignone, Technip, Tecnimont, Snamprogetti, Siemens. The performances of deaeration granted by Termochimica are based on dedicated processes developed by experienced engineers and project managers which enable Termochimica to design and supply Deaerators guaranteed to meet full compliance with the requirements of our customers.



Horizontal Tower



Tray enclosure during fabrication



Tray enclosure completed

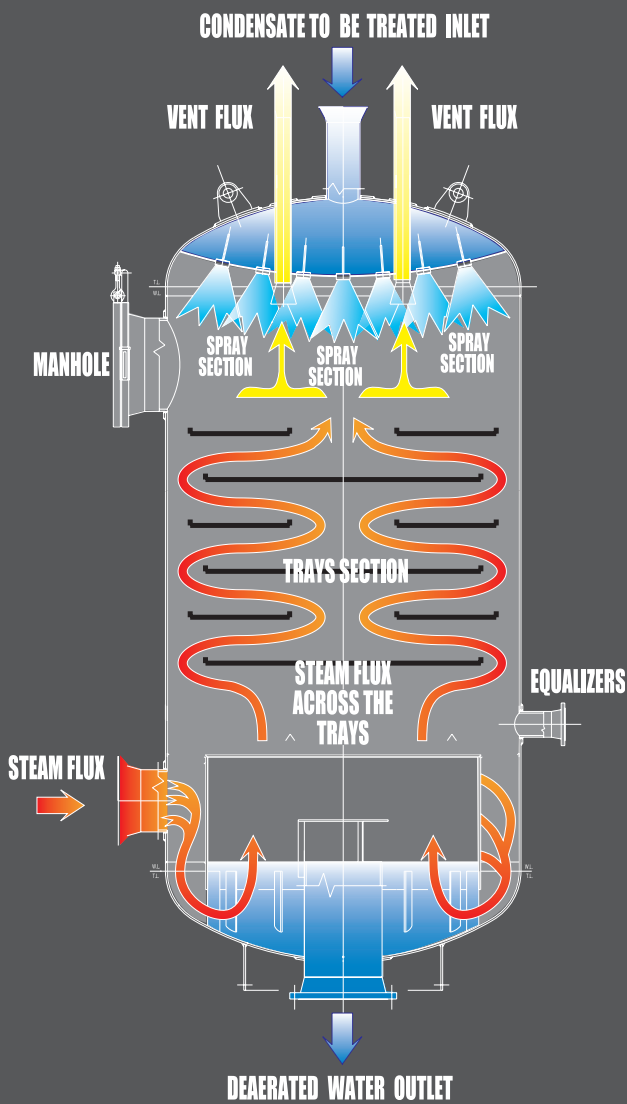


Fit-up Tower on Tank in workshop



Installation in site

Vertical Tower



QUALITY

Termochimica's quality system is registered by Istituto Italiano della Saldatura, according to ISO 9001 Certification.

ENGINEERING

A team of experienced engineers enables Termochimica to satisfy all requirements in terms of Codes, Directives and severe Specifications which are strictly examined by Termochimica before issuing the construction drawings, calculations, procedures, fabrication-programs and any other project documentation during the job.

CONSTRUCTION

Termochimica disposes an highly qualified list of manufacturers for the construction of pressure parts according to our design. Termochimica's manufacturers guarantee the contractual delivery date and make promise for prompt action in case of variations required by customers during the job. Useful expediting is made by Termochimica to supervise the main tests in workshop, including the insertion and fixing of our special internals in deaerating towers before shipment.

SERVICE

Termochimica's field service is available on site in order to assist with installation, commissioning and any additional service needs.

