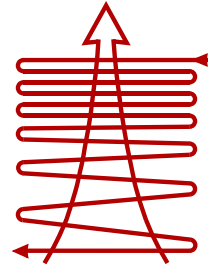


Clayton



STEAM SYSTEMS
INNOVATIVE SOLUTIONS

Steam Generators



Project & Design



Customer service



Water treatment

The Clayton Steam Generator

The efficiency and simplicity of the system is evident. The concept comprises only six basic elements: the monotube coil, the water cooled combustion chamber, the burner and blower, the steam/water separator, the electrical control panel and the pump. These six components form the basis of the most efficient and economical steam production unit available in today's market, ranging from 150 to 40.000 Kg steam per hour and pressures from 5 to 100 bar.



THE ELECTRICAL CONTROL PANEL

An integrated control panel provides local control of all the generator's operating and alarm functions. Interfacing options are available for connection to external monitoring systems as well as unattended operation.



THE CLAYTON COIL.

The generator's heating surface consists of a single, continuous coil tube, designed so that the water within it and the combustion gases around it circulate at high velocity. Full control both on the gas and steam/water side combined with the counter-flow principle ensures the highest possible heat transfer.

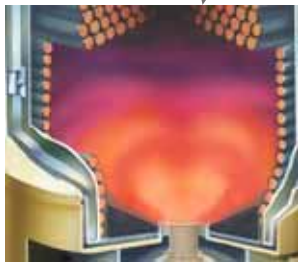


THE CLAYTON STEAM/WATER SEPARATOR.

The Clayton centrifugal steam/water separator generates exceptional performance and delivers the driest saturated steam in the industry: less than 0.5 % humidity at any load. Separated water is returned via the hotwell to the steam generator.

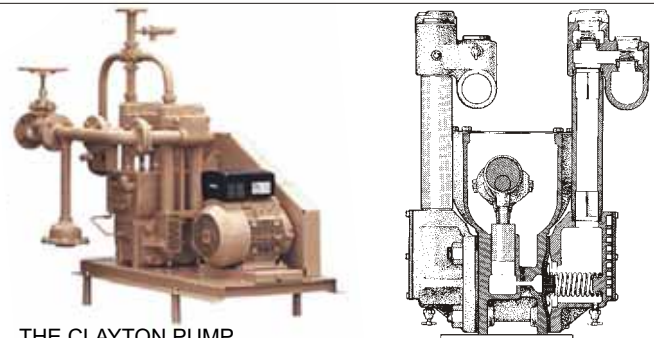
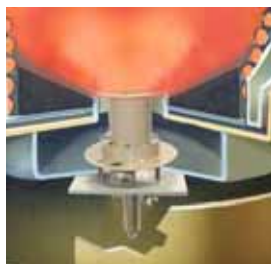
THE CLAYTON COMBUSTION CHAMBER.

The combustion chamber is water and steam cooled to minimize radiation losses. This feature also provides for a safe and comfortable working environment. The temperature of the tube metal is monitored in a continuous way, a safety feature unique to Clayton steam



THE CLAYTON BURNER AND BLOWER.

The burner and blower ensure total combustion and maximum heat transfer. The Vortex flame rotates in the combustion chamber and the blower system maintains constant control over the air circulation. This principle results in low NOx emission values.



THE CLAYTON PUMP.

A unique, fully closed, diaphragm pump has been developed by Clayton to handle high temperatures and pressures. Water does not come into contact with any of the moving parts and the pump has no stuffing boxes or mechanical seals, thus eliminating any leakage. Every pump is adjusted to suit the type of boiler it operates with giving optimum water circulation, whilst avoiding overheating and deposits of boiler scale.

Project and Design

Over the years Clayton developed experience and a wide reputation in the design and erection of complete steam installations.

- Today, the Clayton Project & Design Department can offer their customers the following options:
- Set-up of customized Process Identification Diagrams of complete steam installations (P&ID's).
- Set-up of installation layout.
- Set-up of isometric drawings.
- Set-up of detailed installation material lists.
- Set-up of QA program (full traceability of materials and welders, strength and flexible calculations of piping, Authorized Inspection Agency (A.I.A.) -intervention programs...).
- Organization and follow-up by own VCA-certified people of installation works done by subcontractor(s) and/or in combination with prefabricated piping in own production shop.



Based upon the customer's choice, Clayton can offer assistance on one of the above options.



Clayton Steam Systems has perfected a range of steam supply packages which have eliminated the traditional boiler house concept.

Because of the small size and weight of the Clayton design it is easily possible to provide the steam generator with the necessary tanks, pumps, water conditioning, blow down, and other accessories on a skid base as a packaged unit

The complete boiler system is pre-piped, wired, inspected and tested before delivery - ready for hook-up on site. A separate boiler house or permanent operator attendance is not required.

In addition to standard equipment, Clayton can offer fully customized packages as well.



Packaged designs exist for multiple boiler systems with outputs of up to 40,000 kg/h and containerized units for offshore and onshore applications. Mobile trailer mounted systems can also be supplied as well as standard and custom-built plants for use in remote locations.

Customer service

Service for Clayton Steam Systems is available worldwide in more than 100 countries.

Clayton's own engineers are also located at our Belgian headquarters and throughout Europe to provide commissioning, preventative maintenance, repairs and advice to customers.

The expertise of the Clayton after sales service is second to none since all engineers are dedicated trained specialists for all Clayton products.



Preventative Maintenance Contracts are arranged for many customers and these are based on regular visits by engineers to carry out scheduled maintenance tasks to ensure optimum performance and efficiency.

Commissioning services are also available for equipment on-site and Clayton engineers carry out all necessary safety and operational checks and full commissioning services.

On-site operator training is available and customized training courses can be arranged if required.

Water treatment

To protect the investment of our clients, Clayton has developed a very successful water treatment program.

Specifically designed for Clayton steam generators, it ensures trouble free and cost effective operation of your steam installation

The benefits.

- A highly specialized program tailored to the customers specific needs.
- Our chemical engineers will monitor the installation and work closely with you to ensure perfect conditions at all times.
- The chemical engineers are of course experts on Clayton generators
- Water treatment management. No competitor will be able to match our expertise.
- Clayton Water treatment chemicals are of the highest quality and economical in use.



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