L'treat

AN ISO 9001 COMPANY

OFFSHORE DESALINATION SYSTEMS

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A reliable, economical supply of fresh water for your offshore installations

Because the offshore marine environment is so severe, reliability depends on systems which can withstand the test of time. For twenty years C'TREAT equipment has been providing dependable fresh water for drinking, equipment wash-down, general utility, desalting crude, and other processes. C'TREAT has been rejecting unreliable components and integrating only field-proven components into standard designs. This sustained work over many years has resulted in highly reliable, economical Reverse Osmosis desalination plants for offshore marine installations.

Media Filters

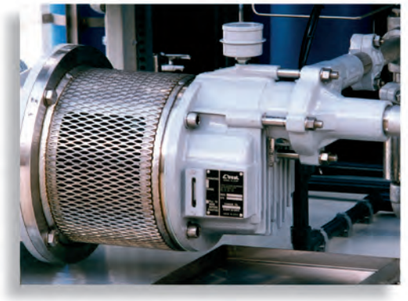
C'TREAT's approach to media filtration takes unique advantage of the conditions of the Reverse Osmosis process offshore. Special media, backwashed by super-filtered seawater, make these filters high performance; they remove all influent chlorine and most particles down to 25 micrometers. The filters are completely automated and run in both service and backwash modes while the desalination system is producing fresh water.

Graded Mechanical Filters

We long ago discovered that the secret to extending the useful life of Reverse Osmosis membranes is to filter the feedwater as finely as practically possible. Fine filtration, economically achieved, has been a primary goal in C'TREAT system development. Through extensive field-testing we learned how to filter seawater down to 0.5 micrometer economically, thereby delivering essentially particle-free water to the membranes downstream. These improvements have resulted in longer, trouble free membrane life with no chemicals required for operation.

Type 200-SW Permeators

From experience, we've learned that when membrane cartridges require servicing, the operator needs to have a simple way of detecting and then servicing the correct membrane cartridge. With this in mind we developed the Type 200-SW permeator, which houses a single spiral-wound membrane cartridge within a 316 stainless steel shell. The high pressure ports in the housing are away from the ends, allowing the operator easy access to the membrane cartridge within. Each end contains a C'TREAT vent-seal, which tells the operator if any cartridge has developed a seal leak.

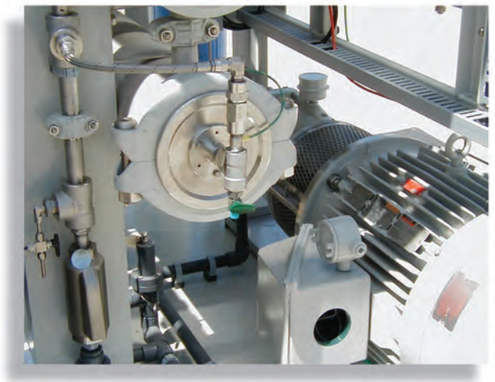


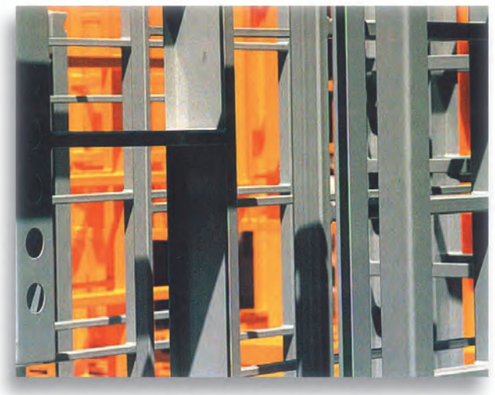
Series 20 Pump

We have been evolving this pump ever since C'TREAT began in 1980, and we're still working to make it even more dependable. The Series 20 seawater pump is the workhorse of over 250 systems, providing the approximately 1,000 psig required to push fresh water through the membranes. Because the pump is single-stage centrifugal, its moving parts can be carried in a briefcase; servicing is quick, and major repairs can be made in 30 minutes. We assemble and test the Series 20 Pump at our Woodlands, Texas, facility.

Flow Regulation

We have taken advantage of the natural hydraulic characteristics of the Series 20 Pump/Reverse Osmosis membrane combination and simplified the controls to the point where there are no valves to adjust. From the moment of start-up the system regulates its own product flow to the exact design rate, thereby extending the life of the membranes and providing a constant, reliable fresh water stream without operator intervention.





Steel-Cage Frame Construction

Potentially the most destructive forces on a watermaker occur as it is shipped and moved into place, and when it is damaged by other on-board equipment, such as a crane or forklift. C'TREAT's steel cage construction protects the components from this sort of unpredictable damage. Shippers have dropped heavy skids on top of our units in the past, but the rugged, steel cages enclosing the components have allowed the equipment to suffer only minor damage and go on to operate successfully with little or no repairs needed.

WORLDWIDE

INSTALLATIONS

REPRESENTATION

BRAZIL • CHINA • FRANCE • INDIA • INDONESIA • KOREA
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REFERENCES

AIOC • AMERADA HESS • BP AMOCO • ANR PIPELINE • ARAMCO • ARCO • BRITISH GAS • BROWN & ROOT • CARIGALI
CHEVRONTEXACO • CLIFFS DRILLING • CNG • CNOOC • CONOCO • DAEWOO • DEVON • ENRON • ENSEARCH • ESSO • EXXON MOBIL
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NOBLE • ONGC • ORYX • PENNZOIL • PEMEX • PERFORADORA • PETROBRAS • PHILLIPS • POGO INTL. • POOL • READING & BATES
RIGMAR • ROWAN • SHELL • SONAT • STAR INTERNATIONAL • SUMITOMO • VASTAR • UNOCAL • WESTERN OCEANIC

C'TREAT shop personnel carry out strict ISO 9001 quality control in all phases of manufacturing at its Woodlands, Texas facility just outside Houston.

Visit us online at **www.ctreat.com**

ISO 9001 Certified by OTS Quality Registrars, Inc.
Accredited by the Dutch Council for Certification

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