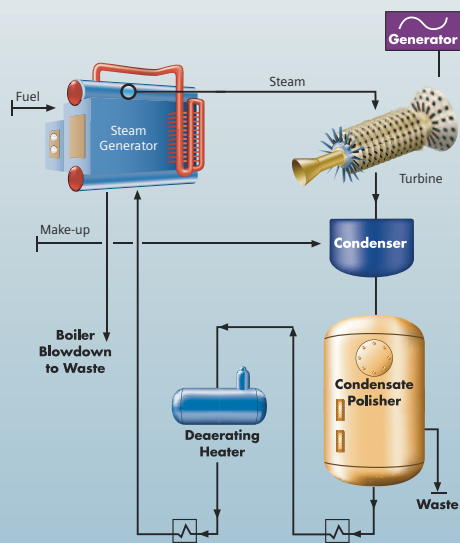


A photograph of an industrial facility, likely a power plant, featuring three large blue cylindrical tanks in the foreground. Each tank has the word "SIEMENS" printed on its side. The tanks are connected to a complex network of white pipes and valves. In the background, a large white cylindrical tank is visible, along with other industrial structures and a clear blue sky. The overall scene is brightly lit, suggesting a sunny day.

**SIEMENS**

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# Condensate Polishing Solutions for the Power Generation Industry



Condensate treatment is recommended for most power plants that use steam to make power. Condensate polishers will remove:

- Dissolved solids that result due to condenser cooling water/air intrusion
- Corrosion products that result due to air intrusion, in particular air-cooled condensers
- Certain suspended and/or dissolved impurities in return condensate from a steam host for combined cycle plants

#### The Condensate Cycle

Today's power producers are under pressure to reduce costs and increase efficiency. Condensate polishing can help improve your bottom line by reducing the losses or damages caused by corrosion and deposits. Condensate treatment can significantly reduce start-up times and the frequency of routine cleanings. Siemens offers a wide range of condensate polishing solutions including deep-bed condensate polishers, condensate filters, special resin grades, off-site regeneration and mobile services.

Our breadth of technology, systems and services, combined with years of experience in designing, installing and operating deep-bed condensate polishing translates into cost savings and greater operating efficiencies for our customers.

#### Reducing Costs, Improving Efficiencies

Condensate polishing improves water/stream chemistry, resulting in:

- Faster startups, improved online time and profits
- Extended power generation asset life
- Reduced heat loss due to fouling of heat transfer surfaces
- Improved efficiency of steam turbine and therefore power output
- Reduced chemical cleaning frequency
- Decreased steam generator blow down, reducing heat loss
- Ability to operate with small condenser leaks and air in-leakage



High Pressure, Deep Bed Cation/Mixed Bed Condensate Polishing System

### Maintaining High Purity with Deep-bed Condensate Polishing

Deep-bed externally regenerated condensate polisher systems use cation and/or mixed-bed to filter out corrosion products generated in the thermal cycle and to remove any trace dissolved minerals that may enter the steam cycle.

Siemens offers the Fullsep™ deep-bed condensate polishing system to control resin cross-contamination (traces of cation resin in the anion resin after separation or vice versa), which can occur when the resins are being separated for regeneration. These resin traces become both exposed to and fully converted to the chemical in which they are immersed during the dosing processes. In the pure-water environment of the condensate cycle, this contamination can be released into the condensate. With Fullsep™ technology, resin cross-contamination can be controlled to less than 0.1 percent cation/anion without chemically enhanced separation.

### Siemens Condensate Polishing Solutions

- Deep-bed condensate polishers
- Fullsep™ resin regeneration
- Condensate filtration
- Resin services
- Special resin grades
- Mobile resin tankers
- Rehabilitation services for existing condensate treatment system upgrades

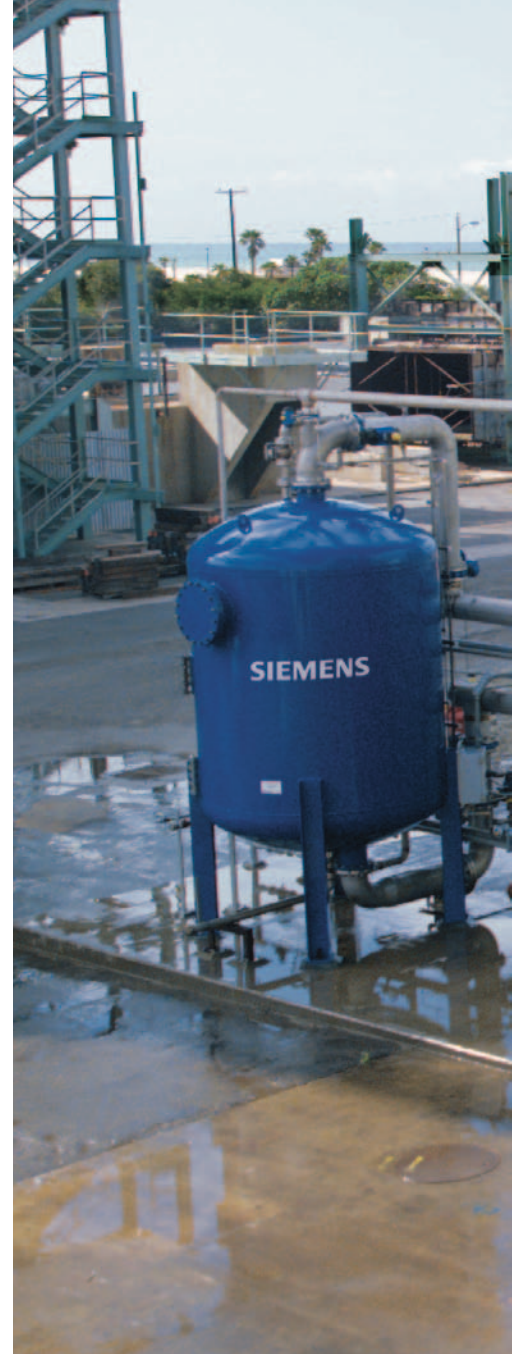
With over 50 years of experience in condensate polishing for the power industry, we can design the most efficient, cost effective system for your plant. Utilities and independent power producers worldwide are using Siemens condensate polishing systems and services to keep their water treatment systems up and running, and their power plants operating at peak efficiency.

Fullsep™ is a trademark of Siemens, its subsidiaries or affiliates in some countries.

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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