



## Akzo Nobel steps ahead with new technology for caustic evaporation

Akzo Nobel

Case story



When Akzo Nobel invested in a new plant to concentrate caustic soda, it decided in favor of a solution with plate evaporators resulting in substantial savings in installation and maintenance costs.

The importance of good customer references in gaining the market's confidence in new technical solutions can hardly be overestimated. Which is why Akzo Nobel's choice of a plate evaporator from Alfa Laval is so important. Having the first plate evaporator for caustic soda installed at the prestigious chemical company adds valuable credibility and means a ticket into the market.

Akzo Nobel, one of the largest chemical companies in the world, operates in the fields of pharmaceuticals, coatings

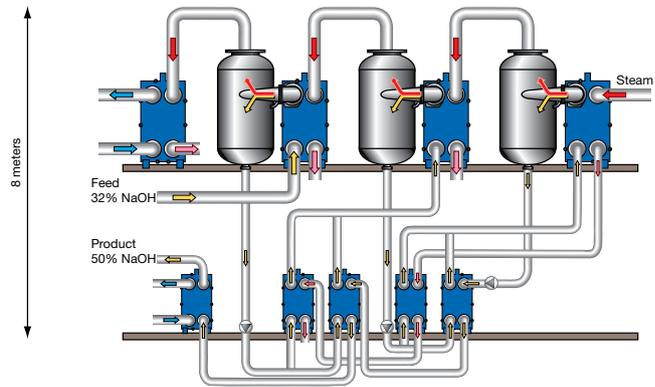
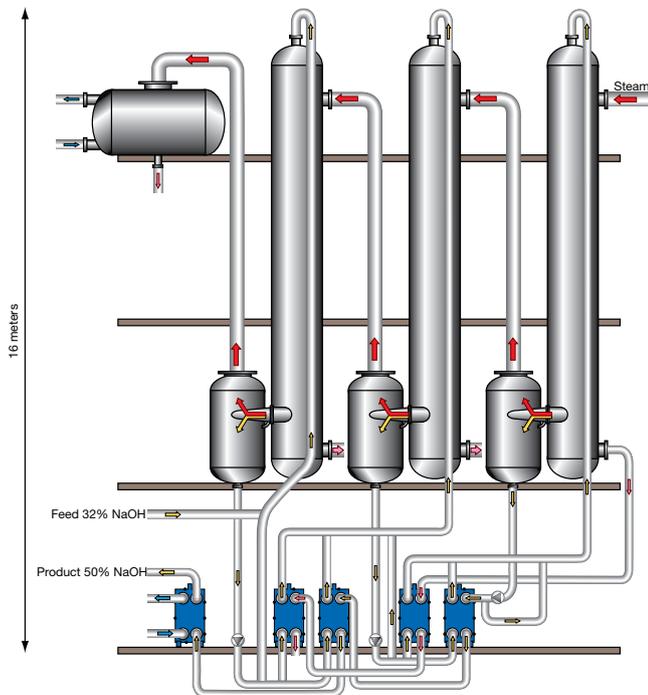
and chemicals. The company has 68,000 employees in 75 countries. Its consolidated sales in 1999 were 12 billion euros.

### **A pioneer plant**

Akzo Nobel's business unit Base Chemicals is an important producer of chlorine and alkali products and various derivatives. These products are used in glass and rayon manufacturing and in the chemicals, detergents, plastics and pulp and paper industries.

One of Akzo Nobel's main production sites for base chemicals is situated in Skoghall in central Sweden.

Like all other Akzo Nobel's units, the site in Skoghall is driven by the corporate goals of manufacturing good products



Alfa Laval's plate evaporator system is extremely compact. To the left a solution with shell-and-tubes heat exchangers and above a solution with plate heat exchangers for the same effect.

that provide competitive returns, encouraging entrepreneurial behavior among its employees, offering them good working conditions and integrating responsibility for the environment into operations.

### Evaporators from Alfa Laval

When the company in Skoghall invested in a new plant to concentrate caustic soda, it had all these goals in view. And it decided in favor of a solution with plate evaporators from Alfa Laval instead of a conventional design using the standard, far more proven shell-and-tube system that has been in use for more than 20 years. "There was a certain risk involved in the Alfa Laval design because there was so little experience concentrating caustics with plate evaporators," says Bonny Larsson, technical manager for Akzo Nobel. "The advantages that outweighed the risk were the new system's compactness and simplicity."

The plate evaporators are used for concentration of the caustic soda from the plant's membrane process from 32 percent to the 50 percent that the market requires.

### Compact equipment

The plate heat exchangers do the same job as shell-and-tube heat exchangers, but with much more compact equipment.

With a shell-and-tube system, the building must be 16 metres high. Alfa Laval's plate evaporator only needs eight metres, and consequently less piping and a smaller structure. The materials used in caustic applications are very expensive, so reducing materials use in the system reduces cost significantly.

### No mercury

The plate evaporator offers other advantages, says Larsson. "I anticipate ongoing savings with this system, such as easier maintenance. And with this relatively simple equipment, it is very easy to replace parts," he says.

Flexibility is another important factor. "We have the advantage of expanding the system by adding plates," Larsson says. "We have direct contact with Alfa Laval for technical support and that has been going very well."

The plate evaporator system meets Akzo Nobel's environmental demands, since mercury is not needed in the process.

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### How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.