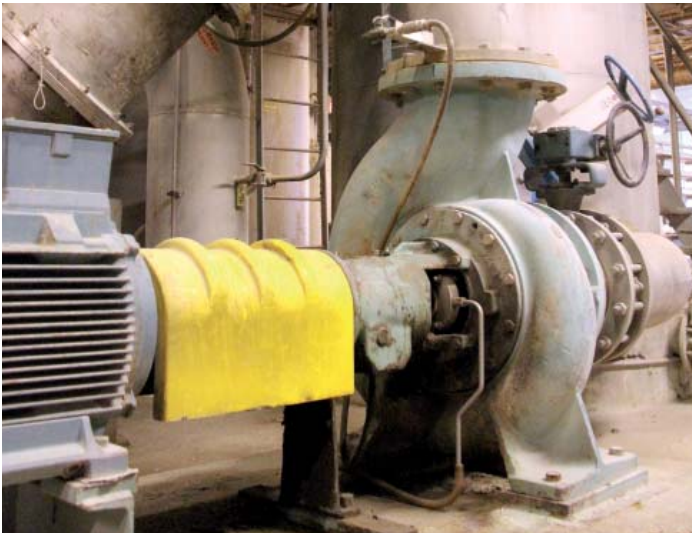


Case dilution water pump, Fiskeby Board AB
80 % energy savings with ABB's new industrial drive





The dilution water pump on the filter unit.



The ACS880-01 wall-mounted industrial drives are easy to use and configure for optimal water pump flow.

ACS880 drives save energy up to 80 %

Customer benefits	
Energy efficient solution	Using the ACS880-01 to replace the valve control resulted in 80 percent energy savings.
Easy to commission and use	Very easy to install and run, with almost plug and play simplicity. Compatible with all existing systems: the motor, process and automation protocol.
Reliable application control	Reliability and availability have been excellent. After proven success of first device, several more ACS880 drives installed on other pumps.

“The driving force behind this installation was energy savings, meaning cash and environment to be saved,” explains Magnus Johanson, energy engineer at Fiskeby Board AB, which installed the first of several ABB industrial drives of ACS880 series at its mill in Norrköping, Sweden. “It wasn’t the failure of the old drive that led us to make this change but more a feeling that we could save money and perform better with new technology.”

Fiskeby Board AB in Sweden is a big user of energy, and at the same time very conscious about energy conservation. ABB’s new industrial drive, the wall-mounted ACS880-01, was installed on a dilution water pump resulting in an immediate 80 percent reduction in the energy needed for that operation. More of these drives have since been installed at Fiskeby.

The results have been excellent, with the new drive saving 80 percent or more of the energy that was previously used by the pump motor. “Each year,” says Magnus, “this amounts to around 120 MWh, or roughly 50-60,000 Swedish crowns (Euro 6-7,000). It’s not peanuts and gives a payback time of less than two years.”

The ACS880 drive is installed on a dilution water pump on the filter unit in the Fiskeby board mill, which is Scandinavia’s only white-lined chipboard producer. Using 100 percent recycled fiber Fiskeby makes what is considered to be Europe’s strongest recycled paperboard. The mill is also the only one in Scandinavia that can recycle composite liquid packaging board (LPB) such as in milk and juice cartons.

Only running at the speed required

Previous to the installation of the new ABB drive, flow control was achieved by running the pump full speed against a valve that was nearly closed 80 percent of the time. “Obviously this wasn’t very efficient and led to wasted energy,” states Magnus. “It was like we were driving a car and pushing both the accelerator and the brake at the same time. It was really an outdated control system and is very typical of the applications where we can find large potential energy savings.”

With the new ACS880 drive, the pump now runs at variable speed depending on the level of the tank it is feeding. This means it is running slower for much of the time, hence the energy savings.

The ACS880 series drives are built on ABB’s new all-compatible drives architecture which is designed to provide



Magnus Johanson, Energy Efficiency Expert at Fiskeby Board AB.



Packaging board production amounts to 170.000 tons per year.



Packaging board on pallets ready to be shipped to customers.

customers across numerous industries and applications with unprecedented levels of compatibility, flexibility and ease of use. They are available as single drives, multidrives and drive modules. Fiskeby is very pleased with the results on all aspects.

"On top of energy savings, we have found the new drive was very easy to install and run, with almost plug and play simplicity," continues Magnus. "We plugged it in and energy consumption dropped by 80 percent. Reliability and availability, critical parameters for the paper mill, have also been excellent. We are very positive about this ABB technology and after the success of the first device we have installed the ACS880 on several other pumps, which are producing energy savings as well. It tasted good, so we ordered more of the same!"

Energy hunting pays off

Magnus' activities as energy engineer include working across the several departments in the mill, and coordinating with suppliers and consultants, to try to find more points for energy improvements and payback. The work has paid off well, says Magnus. "Over the past 10 years we have reduced the mills' specific energy consumption per ton produced by 25 percent. This is an old mill and there are lots of such

opportunities. My main task is to identify them and look for new equipment and applications to take advantage of the opportunities."

Very comfortable with ABB

"ABB is our main supplier of this type of equipment and when we had an offer to try the new drive we took it. When we choose equipment we try to stick to technologies we know we can rely on and that are interchangeable, with the same spare parts. And we want devices that our technicians are familiar with. This paper mill has something like 1,000 drives and for simplicity we want to stick with highly reliable equipment with little variety."

"We consider ABB to be a very reliable long-term supplier, which is extremely important for us," concludes Magnus. "We expect these controls to have a rather long life cycle, and also expect new technology and applications to be forthcoming from them. So we are confident with ABB as a supplier and the new drive is a good example of the benefits we get."



Fiskeby Board AB

Fiskeby has been making paper and board for 375 years, since the company was founded in 1637. Today it is one of Europe's leading manufacturers of recycled packaging board, with its flagship brand, Multiboard, recognized as Europe's strongest white lined chipboard grade. Production amounts to 170,000 tons per year of packaging board.

Fiskeby Board AB has US ownership since 1990, first being a part of Riverwood International which then merged 2003 with Graphic Packaging International. 2007 the company became a stand-alone mill, 100 percent owned by a US-based family trust.

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ACS880 single drives

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