PRESS INFORMATION

Title: Belzona Pumps New Life into Icelandic Fish Farm

Alternative Title: Pump Efficiency Restored at Iceland Fish Farm

Located in the Southwest corner of Iceland beside the Atlantic Ocean is one of Stofnfiskur's salmon broodstock farms. This farm located in a place called Vogar was originally established in 1986 produces Salmon Ova which are sold to domestic and International hatcheries for fish farming.

The facility houses 25,000m^3 tanks in 10 massive sheds used for the breeding of salmon and production of salmon ova. Each tank holds tens of thousands of litres of water delivered constantly by an army of centrifugal pumps.

One of the many tanks where salmon are bred at Stofnfiskur

Stofnfiskur started to work with Velar, the Distributor of Belzona products in Iceland, in 1999 after a presentation of Belzona products done by Velar. Previous experience had shown that after a period of two years, the pumps which were in constant daily use recycling the water in the tanks became corroded and lost efficiency. Following discussions with Ragnar Karlsson, of Velar, it was decided that to protect the pumps and extend their working lives, they would be coated internally with Belzona 1341 (Supermetalglide) before entering service as part of a preventative maintenance programme. 15 years later the original pumps that were coated in 1999 are still in service today.

Belzona 1341 is an epoxy coating system developed to improve pump efficiency, eliminate corrosion and decelerate erosion. Due to its ultra-smooth, self-leveling and hydrophobic properties as well as its low surface energy, it has been proven in independent tests to reduce turbulence and surface tension. At the same time, the coating will protect the component against future corrosion, meaning that its immediate effects on performance will be maintained over a long period, reducing power consumption and saving operating costs. These friction losses translate into efficiency increases and ultimately in a cost saving for the customer. On new pumps, efficiency increase as much as 7% has been tested and recorded.

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Ragnar Karlsson of Velar (left) and Jon Andresson of Stofnfiskur (right)

In the case of Stofnfiskur, this cost saving was significant. They currently have 154 pumps working in all their Fish farm stations consuming approximately 1MW of electricity per month. 80% of these pumps handle the water in the tanks and are between 0.55-30kW. The rest are borehole pumps used to extract clean and in some cases slightly salted water from beneath the surface.

The largest borehole pump is 24”with 169kW pump. Due to the high risk of disease in the produced ova, clean media is constantly drawn up by this and the other borehole pumps ensuring a constant fresh supply of media whether being clean fresh water or pure sea water. Here also, the use of the coating has helped the facility maintain its high cleanliness standards. Belzona 1341 carries several approvals for contact with potable water and in food production including WRAS, NSF and FDA approvals.

Coating of pump internals using Belzona 1341 is carried out by Velar in their workshop in nearby Reykjavik. Here, new and old pumps are refurbished using Belzona materials. Following strip down, the pump internal components which require repair or coating are grit blasted carefully to prepare the metal. The prepared metal is then cleaned and the Belzona materials applied. Once coated, pumps are reassembled and sent back to service. To get the best efficiency in the pumps the bronze impellers are coated as well, leaving only the AISI 316 stainless steel shafts uncoated, eliminating the chance for galvanic corrosion to affect the pumps internally.

Being able to supply their customers quickly and efficiently is a large part of the service offered by Velar. As part of a complete supply and apply package, Velar offer Belzona materials as well as pumps and parts that are constantly in stock to ensure customers can get what they need on short notice.

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Impellers pre-coated with Belzona 1341 unpacked at the Stofnfiskur facility

With the increasing cost of energy, new pumps coated with Belzona 1341 are expected to provide a return on investment in less than a year and will continue to provide valuable savings by maintaining a high efficiency levels for many years to come.

For more information visit: www.belzona.com
By-line: Marina Silva

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Notes to Editor;

About Belzona:

- Established in 1952, Belzona has pioneered innovative polymer technology that has revolutionised industrial repair and maintenance procedures.
- Belzona is a leading company in the design and manufacture of polymer repair composites and industrial protective coatings for the repair, protection and improvement of machinery, equipment, buildings and structures.
- At Harrogate, the full Belzona product range is manufactured to stringent quality and environmental control guidelines complying with the requirements of ISO 9001:2008 and ISO 14001:2004.
- Belzona has over 140 Distributors in more than 120 countries ensuring not only the availability of Belzona materials, but also specification support, project management, application and supervision services. Distributorships and their teams are supported by Belzona Corporate offices in Europe, North America and Asia.

About this article:

- High resolution images, if not supplied with the email, are available on request.
- The article can be altered, lengthened or shortened upon request.
- Can we contribute to the article you are writing? We can provide images, technical data, case studies or an interview with one of our technical service representatives. Please let us know if this would be of interest.
- Do you have an upcoming topic that we could contribute an editorial on? Please let us know the topic, preferable length and the material submission deadline.

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