



NEWS RELEASE

Lund, Sweden – April 22, 2020

Alfa Laval Group
Box 73
SE-221 00 Lund
Sweden
Visit: Rudeboksvägen 1

Tel: +46 46 36 65 00
www.alfalaval.com

Alfa Laval conducted ground-breaking material research at MAX IV synchrotron radiation facility in Sweden

Alfa Laval – a world leader in heat transfer, centrifugal separation and fluid handling – together with senior scientists at the Lund University have for the first time ever managed to study and image stainless steel in an extreme atomic scale. The valuable insights from the experiment will be used in Alfa Laval’s future product development.

During March, Alfa Laval conducted a four days state-of-the-art experiment at the MAX IV synchrotron radiation facility in Lund, Sweden. The experiment, done in cooperation with materials specialists and senior scientists at the Lund University, had the purpose of getting better understanding of the advanced synchrotron instrument and detailed insights of the nanometer thin oxide which protects products in stainless steel from corrosion. For the first time ever, the thin layer of oxide could be imaged during high temperatures, due to the extreme atomic scale surface resolution of the microscope.

“The experiment was very successful and gave us valuable insights about the oxide and how it reacts to high temperatures,” says Tom Erixon, President and CEO of Alfa Laval. “Stainless steel is used in many Alfa Laval products such as plate heat exchangers, separators and fluid handling equipment and the results from the experiment will be used in Alfa Laval’s product development where it can facilitate cutting edge material innovation.

The Swedish-based laboratory MAX IV is the most modern synchrotron radiation facility in the world, and it is using the most brilliant X-ray light ever generated. The laboratory enables researchers to study atoms and molecules that are only a few tenths of a nanometer in diameter, which provides completely new knowledge about the world and how it works.

Did you know that... human hair is in average 100 microns thick, and if cut in 30,000 slices longways, one slice has the same thickness as the oxide studied in the Alfa Laval experiment?

Alfa Laval conducted ground-breaking material research at Max IV synchrotron radiation facility in Sweden

This is Alfa Laval

Alfa Laval is active in the areas of Energy, Marine, and Food & Water, offering its expertise, products, and service to a wide range of industries in some 100 countries. The company is committed to optimizing processes, creating responsible growth, and driving progress – always going the extra mile to support customers in achieving their business goals and sustainability targets.

Alfa Laval's innovative technologies are dedicated to purifying, refining, and reusing materials, promoting more responsible use of natural resources. They contribute to improved energy efficiency and heat recovery, better water treatment, and reduced emissions. Thereby, Alfa Laval is not only accelerating success for its customers, but also for people and the planet. Making the world better, every day. It's all about Advancing better™.

Alfa Laval has 17,500 employees. Annual sales in 2019 were SEK 46.5 billion (approx. EUR 4.4 billion). The company is listed on Nasdaq OMX.

www.alfalaval.com

For more information please contact:

Peter Torstensson
Senior Vice President, Communications
Alfa Laval
Tel: + 46 46 36 72 31
Mobile: +46 709 33 72 31