

From the canton of Nidwalden to the seven seas

This year's IHZ Innovation Award is going to a measuring system designed to make sure that ships comply with environmental regulations.

Christopher Gilb

Water treatment plants, breweries or the Gotthard Base Tunnel: Measuring instruments from Sigrist-Photometer AG, based in the tranquil municipality of Ennetbürgen in the canton of Nidwalden, are used in a wide variety of places. These instruments measure the turbidity in beer, the purity of water or even the concentration of smoke in a tunnel using the scattered light principle. Since being established in 1946, when founding couple Willy and Paula Sigrist were making the first measuring systems for the beet industry themselves at their kitchen table, the company has grown continuously – to 83 employees – and the internally developed measuring systems are sold in over 80 countries via a network of service and sales partners. The company also has a subsidiary in Germany.

In Switzerland, Sigrist-Photometer AG is the market leader for measuring instruments in a whole host of application areas. The products do not come cheap, however, as they are developed and produced entirely on site. 'Creating industrial jobs in the region has been part of the company's philosophy since it was founded,' says Markus Stolz, who came to Ennetbürgen a year ago after leaving Landis+Gyr in Zug, a company specialising in energy metering solutions. 'With our measuring systems, we are looking to achieve the typical qualities that Switzerland is renowned for: quality, precision and reliability.' Since the beginning of 2019, the company has had a completely new product in its portfolio – a product that apparently no other competitor in the measuring instrument sector currently offers. The Scrubber Guard. A system for monitoring scrubber wash water on cargo ships.

The shipping industry is aiming to become greener

This year sees new guidelines from the International Maritime Organization (IMO) for reducing the emissions of pollutants from ships.



CEO Markus Stolz (on the left) and Sales Manager Felix Joller with the Scrubber Guard.

Image: Boris Bürgisser (Ennetbürgen, 9 September 2020)

So that ships can continue to be operated with heavy fuel oil, they are now equipped with exhaust gas cleaning systems or 'scrubbers'. 'Think of it as a chimney in a large shower,' explains Felix Joller, who has worked at the company as the Business Field Manager for Industrial Processes for twelve years now. 'These scrubbers wash out harmful substances,' says Joller. 'But in order to monitor whether the system is functioning correctly, sensors are required.' The Scrubber Guard – the system monitoring the cleaning process – therefore measures traces of oil as well as the turbidity, pH value and temperature of wash water. 'This makes it possible to comply with IMO guidelines.'

Joller got the idea for the innovative system when visiting oil platforms. 'Since 1968 we have offered

instruments for measuring oil traces. These systems measure the oil in the water, thereby helping platform operators to comply with limit values regulated by statutory law,' explains Joller. However, these are not the only sensors used on platforms.

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Markus Stolz
CEO Sigrist-Photometer

And when visiting platforms, he noticed time and again that the process of installing individual sensors was very complex and time-consuming for operators. Joller started to think about a complete system that would contain all of the required sensors and could additionally be put into operation quickly and easily without any installation work. Joller considered that the perfect place of operation for such a system would be merchant ships and cruise liners. 'There can be an awful lot of swaying on ships, so the entire system has to function as a single unit,' says Joller. Once the system is activated, water flows through the Scrubber Guard for monitoring purposes.

The solution was developed from start to finish together with the Lucerne University of Applied Sciences and Arts (HSLU) and a current member

of staff at the company who studied mechanical engineering at the university during the development period. The Scrubber Guard has been a great success so far, says CEO Stolz. 'Last year alone, our revenue grew by approximately 30 percent as a result of the new product; the Scrubber Guard is driving our growth, which in turn leads to new opportunities for professionalisation.' Since its launch, ten additional jobs have already been created in Ennetbürgen.

The fact that a company from the region developed such a special product also caught the attention of the jury for the Innovation Award organised by the Central Switzerland Chamber of Commerce and Industry (IHZ). The jury gave the Scrubber Guard – one of fourteen products submitted – this year's Innovation Award. The principal assessment criteria included the originality and degree of innovation, market success and

potential, the significance for Central Switzerland, entrepreneurial achievement as well as the benefit to society and the environment. 'The development of a complete system that takes into account the diverse requirements of the shipping industry across the world's oceans impressed the jury', said president of the jury and member of the Council of States for the canton of Nidwalden Hans Wicki. Markus Stolz of Sigrist-Photometer AG is delighted by this: 'This is amazing recognition for our work over the past few years.'

Recognition Award for confectioner Bachmann

So far, the company is maintaining a market share of around ten percent with the Scrubber Guard, he says. 'Our primary market for the system is China, where the majority of ships are built today.' Now, Sigrist-Photometer would like to continue its growth trajectory with the product. To what extent exactly? 'If you had asked me before the coronavirus pandemic started, I would have been able to say,' CEO Stolz tellingly answers. Due to the effects of the crisis on the shipping industry, he would like to hold back on making specific projections at the moment. All in all however, the corona crisis has so far not affected the company as significantly as it could have. The drop in sales in other business segments were limited and 'One hundred percent equity coverage is also part of the company's philosophy, which gives us the security we need in such times,' says Stolz.

In addition to the Innovation Award, the IHZ jury honoured Lucerne confectioner Bachmann with a Recognition Award. The company received the award for its virtual 3D cake configurator. With this technically complex solution, the company has developed a completely new product in the industry. Customers can design their cakes themselves and order them online at any time. In this way, the company is driving forward digitisation and securing the jobs of specialised staff, the jury said.