Valmet Power AB (previously Metso Power AB) is a supplier of ‘Evaporators’ for the pulp and paper industry. For improving their knowledge on evaporation and being able to produce competitive heat efficient evaporators, Valmet has had a long relation with Chalmers. After many years of joint research, Valmet and Chalmers decided to construct a large scale experimental research evaporator at Chalmers. It was designed for the industrial needs of Valmet and instrumented to address the main technical issues that could occur in chemical mills at a wide variety of operating conditions. The research evaporator plant has now been up and running successfully since 2004 and the plant holds a world leading position for evaporation experiments.

Valmet Power AB’s representative in the research evaporation project was the technical Director at the time, Lars Olausson. “When we started to cooperate with Chalmers we had around 7 percent of the market and our largest competitor had clearly above 50 per cent. Today we are ahead of them. Part of that achievement comes from what has been done at Chalmers and the research and knowledge we got access to. Chalmers research has added knowledge, product development and new technologies.” Lars Olausson says.

Time is the key

One of the main reasons for this fruitful collaboration is that when the research evaporation project was initiated, Lars Olausson agreed on spending one day a week at Chalmers as an adjunct Professor, engaging in academic research projects. “At the company, I was working on technologies needed by our customers and this gave me a lot of understanding for the practical issues at the factory. At Chalmers, on the other hand, I got a deeper and more fundamental understanding of the problems, such as the chemistry behind different phenomena”, he says.

As Lars Olausson became part of two worlds, he quickly became an important link between the company and the academic researchers. He brought complex and unsolved
problems from Valmet’s customers, into the academic environment and out came potential solutions and new research projects. Mathias Gourdon at Chalmers describes the value of having Lars at the department as: “He knows what is practicable and possible to implement in existing processes, what will work or not”.

**Bridging the gap**

Being part of two worlds, Lars Olausson assumed two different roles: Firstly he started to translate between researchers and users “... because even though the research here is much applied, there is a gap” he says. Secondly, he brought an entrepreneurial mind-set into the research group with the ability to identify the most relevant and feasible solution to different problems in the evaporation process. As a result, they could set up a team of researcher from industry and academia, which came up with an innovative solution to a well-known problem in the pulp and paper industry - incrustations in black liquor evaporation.

Valmet and the inventors applied for a patent and the technology is currently evaluated in the research evaporation plant at Chalmers.

Text: Niklas Fernqvist

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**Making Science Useful**

**Roles:** Seven types of roles are identified in relation to making science useful. The roles are developed from different activities for diffusion and utilisation, carried out by one or a group of researchers, or by an entire part of the organisation. The roles are; researcher, educator, advisor, debater, entrepreneur, infrastructure developer and networker. These roles are in general intuitive but develop differently, based on personal characteristics, area of research, the recipients of results within the area, and by different local traditions of how to work with utilisation.

**More information:** This framework is developed by Staffan Jacobsson, Eugenia Perez Vico, Chalmers University of Technology, Hans Hellsmark, SP Technical Research Institute of Sweden and Merle Jacob, Lund University. For more detailed information, please contact Eugenia Perez Vico (eugenia.perez@chalmers.se) or Hans Hellsmark (hans.hellsmark@sp.se).

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