

Pump training from the experts

Sulzer Academy encourages knowledge transfer for operators and maintenance specialists

Pump training can encompass many aspects from design and operation to maintenance and rerates, it all depends on the trainees and what they want to get out of the course. Sulzer has developed a flexible and dynamic range of courses that are tailored to suit the customer.

Learning more about important pieces of equipment, such as high energy pumps, is vital to improving the reliability and efficiency of these assets. As an original equipment manufacturer (OEM) and independent service provider, Sulzer dedicates a number of resources to training for customers that can be delivered across the globe.

For those operators that have extensive training requirements, courses can be arranged solely for their employees and focus on the equipment that they work with every day. Typically, these would cover pump fundamentals, best operating practices, maintenance and overhaul, potential upgrades and rerates.

Seminar formats

Every training course can be tailored to suit each customer to focus on the products they are using or pump fundamentals and best practice, passing on knowledge that has been accumulated over many decades. This can include "hands-clean" training, where trainees can dismantle and reassemble precision-made, one-third scale models of different pump types, or true "hands-on" training with actual pumps in the Sulzer workshop.

Training seminars combine the expertise of the trainer with the knowledge and experiences of those attending. By sharing all of this knowledge, everyone involved will be able to take away new information that will help them in the future.

Open training sessions are also arranged, which take more of a seminar format and will include participants from different employers but with similar backgrounds and operational environments. The objective is to learn more about best practice and how to get the most out of the pumps that are in use in their operations, which helps to save money in the long run.

Courses were traditionally held either in dedicated training rooms within Sulzer facilities, or at a customer site anywhere in the world. With restrictions on travel and training in 2020, however, the training courses have been adapted to suit an on-line virtual environment. The online training varies from short live Webinars on Pump Essentials which are often delivered free to established customers, to dedicated online training which may be written around the specific operating instructions for a client's pump system. Each part of the online training is limited to 2hrs and is punctuated with interactive sections and open discussions to keep the trainees engaged.

Flexible structure

It is important the course retains a dynamic, flexible nature, and this is only possible by having a huge library of information and knowledge that can be accessed as required. While the course content is tailored to each customer, it can change, even during the course itself, to address issues that are raised by the trainees.

Companies can take advantage of the global network of Sulzer service centers by sending their trainees to a local Sulzer facility for training rather than using their own. This allows the classroom training to be reinforced with hands-on exercises using the Academy's training pumps. Attendees therefore gain an insight into pump manufacturing and repair processes in the manufacturer's workshop to underpin the classroom training on pump theory and operation.

Over the past two years, the training material delivered has undergone a major overhaul, and the static black and white slides full of text have been replaced with 3D graphics showing pump components in fine detail, animations showing the pump fluid flow, and even augmented reality tours of large pump skids.

The next online event will be on Tuesday January 12, 2021, at 8 a.m. (GMT) and will be a free training webinar entitled "Pump Essentials". Lasting about 90 minutes, the session will be held in English language and cover basics about pump types, hydraulic principles, system considerations and ways of avoiding cavitation damage.

Attendees will learn about the latest technology concerning pumps, auxiliaries, operation and maintenance directly from the manufacturer. They will get an insight into many of the design and operational principles that go into the specification and construction of centrifugal pumps. In addition, they will discover the fascinating field of pump hydraulics and gain experience on how to create a pump performance curve. For more information, follow [this link](#) or contact Nick.Ahrens@sulzer.com.

Training is usually delivered in English, but course material can be translated to local languages as necessary.

Additional content about Nick Ahrens:

Expertise and experience

Nick Ahrens, one of the Technical Trainers at Sulzer, has over 25 years' experience in pump design and has also been a university lecturer. He has the skills and the knowledge to help those on the courses to gain a better understanding of pump operation and how to optimize it.

Of course, it is important to reinforce the learning experience and rather than a formal question and answer session, Nick, who has hosted pub quizzes in the past, created his "Who wants to be an engineer" gameshow quiz. The trainees are split into two teams and they answer questions on the material that has been delivered during the day.

This has several advantages over a more formal exam; the trainees find out the right answers immediately, they can discuss them, and it encourages participation.

Continuous learning

Nick started as an apprentice draftsman for a pump manufacturer, working there for 13 years. After completing his university degree in engineering, he then worked as a design engineer as well as an offshore technical support engineer.

From there, Nick moved to a compressor manufacturer, where he was the turbo/blower engineering manager and worked with their training academy. Since then, he has been working at the Singaporean Institute of Technology as a lecturer on engineering principles, including LEAN engineering, and effective communication tools for engineers.

During his career, Nick has become a fellow of IMechE and won an engineering excellence award for developments in turbo blower design and standardization of a product range. He has travelled extensively across Europe and Asia, and regularly meets with colleagues from the wider Sulzer community to discuss the latest developments in pump design and maintenance.

"It is very important to realize that for any training course, you get out what you put in," says Nick. "Even if the course content in the plan is the same, the actual course itself will always be unique, thanks to the interaction of the audience. The more engagement and relating of personal experience, the better the course will be."

Captions:

Image 1: Getting to grips with one of the pump models

Image 2: Nick Ahrens with trainees visiting the pump manufacturing area

About Sulzer:

Sulzer is a global leader in fluid engineering. We specialize in pumping, agitation, mixing, separation and application technologies for fluids of all types. Our customers benefit from our commitment to innovation, performance and quality and from our responsive network of 180 world-class production facilities and service centers across the globe. Sulzer has been headquartered in Winterthur, Switzerland, since 1834. In 2019, our 16'500 employees delivered revenues of CHF 3.7 billion. Our shares are traded on the SIX Swiss Exchange (SIX: SUN).

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