

Peace of mind for AnQore during T300 project



At the largest Chemelot site in Geleen, the Netherlands, AnQore's 150 staff produce acrylonitrile and sodium cyanide from propylene and ammonia. These semi-manufactured products serve as raw materials for ABS, acrylic fibres, industrial solvents, the detergents sector and the paint and coating industry. AnQore collects certain waste streams that originate from production, in a storage tank called 'Tank 300'. After 16 years of intensive use, they need to empty it and clean it ready for inspection.

On the same Chemelot site, the company Sitech provides site services to the process industry that is based there. Sitech also gives AnQore support on maintenance, manufacturing and certain projects. Rob Huysmans, Discipline Engineer for Mechanical Engineering at Sitech, who is the supervisor for the activities involved in this 'T300 project' explained how exceptional this event is.



AnQore and Indaver's Teamwork

"The T300 tank sits right at the back of the production site. All of the aqueous watery waste streams that are discharged into it, settle out", says Huysmans. "My job here on site is to supervise, check, monitor and evaluate engineering projects. I have to control the quality so that we can guarantee it to our customers. After years of use, we are going to inspect the bottom of the T300 tank to check it is still intact. First, we need to separate the liquid layer from the solid layer. Although there is only 0.5 m of sediment - which is absolutely to be expected - emptying and cleaning it is still quite time-intensive. It isn't a highly-reactive material, but of course we still have to take the necessary safety measures, which is why the AnQore-Sitech team was put together a year ago, made up of a project leader Eric Frijns, production staff Paul Cremers and John Hendrickx and me. Indaver, our on-site partner for waste management, was responsible for coordinating the waste removal within this project. Their knowledge of the site, the waste streams, the treatment market and sustainable solutions was considered as important added value here. Certainly, when mercury was found in the waste stream they demonstrated considerable expertise. They coordinated the transport, were responsible for the supply and exchange of the containers and for mixing it up using the excavator. This gave AnQore considerable peace of mind.

Analysis & consultation for the best approach

"This isn't a task you can simply get on with, it's certainly not an everyday job", continues Huysmans. "It only happens once every 16 years. We suck up the liquid part and put it back into the process in batches. The settled matter is analysed because last time it was so hard that we had to warm it up first. The project team examines the circumstances, the analyses and the composition. We then determine the best approach in consultation with Femke Van der Veken, our Indaver project manager. The process sequence, potential improvements and ideas were all discussed at this stage. Out of which the solution was eventually born. Because the last bit of sediment could no longer be pumped out through the tap, sawdust was added to the tank. A small Bobcat excavator was then used to bind the last bit of sediment into a solid mass so that we could transport it. Using this method, around 800 tonnes was taken to the rotary kiln incinerators at the Indaver site in Antwerp, where it could be treated safely and with energy recovery" explains Huysmans.

Chemicals yes, but no incidents

Rob Reinartz, Plant Manager and Director of Operations at AnQore knows the site inside out. He has worked there since 1981. First, with DSM as chief of production and later as plant manager for the various business lines. He is also Action Centre Leader for the fire brigade and emergency service on-site, which is called out in the event of any disasters. In other words, he can be at Chemelot day and night. He also went through the split-off from DSM in 2015, when DSM began to focus more on life sciences and AnQore remained a chemical company. "AnQore makes Smart Chemicals. That means that with our acrylonitrile, hydrocyanic acid (hydrogen cyanide)-production we supply the raw materials to make acrylic fabric for sports clothing, plastics for lego bricks, car dashboards, carbon fibres for ultra-lightweight carbon bikes, plexiglas and much more. With these chemicals we make things that people know and use every day. However, there are risks associated with this type of production and we have to ensure we work safely here and handle certain substances carefully every day. Indaver is also very aware of this. Just as the waste management that they are responsible for, the T300 project went extremely well" Reinartz clarifies. "Everything went smoothly, with no incidents and almost no noise. Indaver gave us total peace of mind, not the alternative. They organised everything with the project team so that we could concentrate on the day-to-day production. That is to Indaver's credit and as a result of their efforts. Consequently, we have finished within the set time frame and we can confidently proceed with a new inspection to check that the bottom of the Tank 300 is leakproof."

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Indaver gave us total peace of mind



Rob Reinartz



Rob Huysmans