CASE STUDY

PPV Engineering supports customer success in the food & beverage industry

Key facts:

Company: PPV Engineering

Website: www.ppv-engineering.nl

Industry: Food, Beverage & Retail

Country: The Netherlands

Octave products used: Forte 3DWorx *(CADWorx Plant Professional),* Facets P&IDWorx *(CADWorx P&ID Professional),* Aspect Pipe Stress *(CAESAR II),* Aspect Pressure Vessel *(PV Elite)*

Key benefits:

- Improved efficiency due to shortened modification time for designs
- Faster project execution due to ease-of-use of the software
- Automated P&ID and equipment creation from the 3D models

PPV Engineering is a consulting and design office specializing in design and analysis of pressure vessels, piping and steel structures for the oil & gas, food and chemical industries. The company also provides services for mechanical engineering and project – EPC – and construction management.

Identifying goals

For this project, PPV Engineering was contracted by a company in the food industry to fit new product storage tanks into an existing butter-making facility, located in the Netherlands.

Originally, the customer was struggling with how to deal with its leftover product from the facility, as disposing this as waste would have been costly and inefficient. If stored in a hygienic manner, the leftover product from the butter factory could be mixed with other foodstuffs to create a new product, enabling significant cost savings. The goal of the project was to be able to reuse surplus product and find a hygienic way for storing both the leftover and new product created from it.

Overcoming challenges

Key challenges included the limited space of the existing facility and the difficulty of determining whether the new tanks would fit.

As the existing space was limited, PPV Engineering first investigated the possibility to place the new storage tanks partly



outside the facility, through the roof. After careful investigation, it was revealed that the food hygiene standards would not permit the surplus product to be stored outside the factory building.

After this became clear, PPV Engineering researched alternative methods to overcome the limited space, and eventually it was decided to raise the roof of the facility by five meters to create additional space.

Realizing results

First, PPV Engineering and its customer jointly defined and agreed on the scope of the project. Next, the companies executed research to determine the design of the process, the changes that would need to be made to the building structure and to determine the capacities of the various storage tanks that would need to be installed to support the new food production process.

Once the business plan was in place and approved by both parties, PPV Engineering started basic engineering for the project.

During the process study, PPV Engineering and the customer agreed that five new tanks were to be fitted into the existing facility consisting of: a product tank with capacity of 30 tons to hold the new product, two raw product tanks each 20 tons, a mixed product tank of 25 tons and an additives tank of three tons.

Having used the software for several years on a variety of other small projects, Forte 3DWorx was used for the basic engineering. The first step was to survey the existing facility to determine space available for the new tanks. The customer did not have existing detailed drawings of the plant available. PPV Engineering was informed by their customer that the maximum space available for the new tank installation was approximately 75 m^2 in total.

Next, a preliminary design for the installation was created. After approving the installation plan, the customer entered into a bid process to identify an equipment and piping contractor. These offers were used to create an estimate for the budget to be allocated to the project.

Forte 3DWorx was chosen for the project for several reasons:

- User friendliness and ease of use enabling faster project execution
- The efficiency and automation provided by the complimentary Forte 3DWorx
- Integration with Aspect Pipe Stress for analysis
- Affordable pricing and flexible license module



Moving forward

PPV Engineering anticipates to be executing similar projects for the other factory sites in the Netherlands in the future.

“Forte 3DWorx is an open program and enables easy customization where needed. Especially when it comes to modifications, the software enables tremendous time savings. This is the case particularly when implementing the Facets P&IDWorx and using it together with the plant design,” said Willem Bazuin, owner of PPV Engineering.



About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we’ve partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what’s possible from day one onward.

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