CASE STUDY

VEGYGÉP-TERV cuts design time by 85% with Octave Aspect Tank and Aspect Pressure Vessel

Key facts:

Company: VEGYGÉP-TERV KFT

Website: vegygepterv.hu

Industry: Chemical and Petrochemical

Country: Hungary

Octave products used: Aspect Tank *(TANK)*, Aspect Pressure Vessel *(PV Elite)*

Key benefits:

- Automated calculations reduced design work by 85%, cutting 40–50 hours down to just 6
- Built-in validation and EN 14015 support ensured accuracy and compliance with European standards without extra manual checks
- Digital models could be reused and adapted for similar projects, avoiding duplicated effort and speeding up future work

VEGYGÉP-TERV KFT. is an engineering firm based in Hungary that designs and manages tanks, pressure vessels and piping systems. Its portfolio includes major industrial projects such as Hungary's largest bioethanol plant and several advanced wastewater treatment facilities. Known for its precision and strong adherence to European standards, VEGYGÉP-TERV ensures that every design is robust, compliant and supported by long-term documentation.

Identifying Goals

As part of a recent wastewater equipment project, VEGYGÉP-TERV aimed to deliver tanks and pressure vessels that complied with EN 14015 — the European standard for designing and manufacturing vertical, cylindrical, above-ground, welded steel tanks with flat bottoms — while simplifying long-term documentation and audit requirements.

The company sought a reliable way to create accurate designs that it could reuse and adapt to future projects. The team also wanted their clients to access properly maintained documentation, even if staff changed or historical records were misplaced.

Overcoming Challenges

Before adopting new software, VEGYGÉPTERV relied on pen, paper and Excel for every calculation. Designing a single tank could take days— sometimes 40 to 50 hours of meticulous manual work. Every figure had to be double-checked, and even a small error could mean delays, extra rework or more back-and-forth with regulators.

Mészáros Zoltán, the company's Executive Director, explained, "We often had to revisit old projects just to recreate lost documentation for audits. If a client's staff changed or records went missing, we had to start from scratch."

These inefficiencies drained valuable engineering time and made responding quickly to new projects harder. The team needed an improved workflow. They wanted more than just speed—they needed designs they could trust, reuse and easily hand over to clients without worrying about lost knowledge.

That's why VEGYGÉPTERV turned to Aspect Tank and Aspect Pressure Vessel. The solutions not only digitized its processes but also changed its approach, with Aspect Tank providing specialized analysis for oil storage tanks and Aspect Pressure Vessel supporting the design and stress evaluation of pressure vessels.

"With Aspect Tank, what used to take me 40 hours on paper now takes just 6 hours—and we can reuse the designs easily for future projects. It's faster, more accurate and keeps us fully compliant with European standards."

Mészáros Zoltán,
Executive Director,
VEGYGÉP-TERV

Realizing Results

The results were substantial and measurable. What once took days of manual calculations was now finished in hours. A tank design that used to require 40–50 hours of careful spreadsheet work could now be completed in about six, giving engineers more time to handle additional projects.

- Fewer errors during design: Automated calculations removed the risk of small mistakes that could delay approvals. The team no longer had to double-check every step manually, making the review and approval process much smoother.
- Digital models could be reused: Every completed design was saved in a digital format, making it easy to adjust for similar projects without starting from scratch, saving both time and effort.
- Audits became simpler and faster: All documentation stayed organized and accessible, so if a client or regulator requested records, even years later, everything was ready in just a few clicks.
- Compliance was built in: The software already supported EN 14015 standards, so every design automatically met European requirements without extra manual checks.

Zoltán expressed his satisfaction with using Octave's solutions, "With the combination of Aspect Tank and Aspect Pressure Vessel, we can cover all types of tanks and pressure vessels. Together, they handle everything we need," adding, "We don't have to worry about misplaced records or repeating the same work. Everything is digital, reusable and always ready for audits."



This shift means VEGYGÉP-TERV can respond faster to client needs, with consistent, compliant designs ready for long-term use, saving time and operational costs.

Moving Forward

VEGYGÉP-TERV will continue using Aspect Tank and Aspect Pressure Vessel on future wastewater and industrial projects. The team plans to explore more Pressure Vessel features for handling complex designs and is looking into improving Computer-Aided Design (CAD) integration to make workflows smoother. They are also considering updated training materials focused on European standards, so the software is used consistently across all projects.

Aspect Tank and Aspect Pressure Vessel have become VEGYGÉPTERV's primary design tools, helping it maintain quality, compliance and efficiency as it takes on more.

Looking ahead, the team is excited to evaluate future upgrades and new features, ensuring these tools continue to align perfectly with evolving project requirements and regulatory standards.

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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