CASE STUDY

Petrolinvest develops plant designs in three months using Octave Forte 3DWorx® and Aspect Pipe Stress



Key facts:

Company: Petrolinvest

Website:
petrolinvest.com

Industry: Petrochemical

Countries: Bosnia and Herzegovina

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

Key benefits:

- Increased design speed accuracy, leading to higher overall project quality
- Significantly reduced timeframe of three months
- Effective error checking allowed for quick identification and resolution of issues

Petrolinvest d.d. (Petrolinvest), the engineering company based in the city of Sarajevo, has successfully completed a recent project a recent project using Forte 3DWorx and Aspect Pipe Stress. "Forte 3DWorx and Aspect Pipe Stress helped us produce accurate isometric drawings and bills of material that perfectly matched the original plant model eliminating many possible mistakes and slow design times," said Mr. Kemal Kurtovic, Senior Piping Engineer at Petrolinvest.

Petrolinvest, a joint venture between Energoinvest Sarajevo and Technip Paris, is an engineering company with lengthy experience in the design and construction of complex industrial process plants in the Balkans, Mediterranean and Middle East. Petrolinvest is located in the city of Sarajevo in Bosnia and Herzegovina, part of the former Socialist Federal Republic of Yugoslavia.

Identifying goals

One of Petrolinvest's recent clients was the Novi Sad Oil Refinery located in the city of Novi Sad, Serbia. The Novi Sad Oil Refinery experienced enormous destruction during the 1999 NATO bombing of Novi Sad and, in the years since, has seen extensive reconstruction. The US$25 million Novi Sad project awarded to Petrolinvest involved the design of a light gasoline isomerisation plant being added to the Novi Refinery. The finished plant would enable production of high-octane components that are necessary for the production of unleaded gasoline, reducing benzene and aromatics emissions to the environment. Overcoming Challenges Petrolinvest used AutoCAD® for its previous projects that involved maintaining a large library of 2D standard piping components and typical arrangements. "We had to develop isometrics first and only then could we produce complete bills of material. It took a lot of time to finish and we could never be sure whether the project was accurate," said Mr. Kurtovic. "We looked at several different 3D plant design solutions and selected Forte 3DWorx because it was easy to use and it was less expensive than other alternatives."

"We achieved faster designs and faster isometric generation with very few mistakes. With Forte 3DWorx we were able to develop plant designs in three months."

Kemal Kurtovic
Senior Piping Engineer, Petrolinvest

Realizing results



Once Petrolinvest started using Forte 3DWorx and Aspect Pipe Stress, it saw a considerable improvement in design times, accuracy and overall project quality.

With Forte 3DWorx, Petrolinvest finished their designs within a three-month period. The company prepared a complete composite model that was made up of 13 separate 3D models. Then, using Equipment in Forte 3DWorx, Petrolinvest prepared AutoCAD equipment drawings that were included in each XREF model. Aspect Pipe Stress allowed Petrolinvest to perform accurate flexibility analysis of the project's process lines. The use of comprehensive and automatic error checker in Aspect Pipe Stress, allowed for the review of all inputs and the identification of those areas that needed immediate attention.

"We are very happy to be the first users of Octave's valuable products in this part of Europe. Because of the successful results of this project and proven product quality, we plan to acquire a complete set of tools offered by Octave," said Mr. Kurtovic.

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.

©2026 Octave Intelligence plc and/or affiliates. All rights reserved.