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Jon Ward, President and CEO of Ward TANK

#### PRODUCT INDEX

PV Elite  
CodeCalc

#### INDUSTRIES SERVED

- Fabricators
- Petrochemical

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## Ward TANK acquires a 2008 Fabricated Product of the Year Award using PV Elite

### About Ward TANK

Ward TANK and Heat Exchanger Corporation is a family owned company that manufactures pressure vessels and heat exchangers for the chemical, refining, water treatment and pharmaceutical industries. The company serves its customers from two US fabrication facilities: one in Charlotte, North Carolina and the other in Houston, Texas.

### Alloy reactor project

This featured project, undertaken by Ward Tank for a chemical plant in Houston Texas, consisted of two large reactors made of Alloy 400, a nickel alloy (67% Ni, 30% Cu) with high strength, ductility and corrosion resistance. These reactors, with a total value of \$4.4m, contained complex internal manifolds and ladders and measured in at 71 ft (21.64 m) in length and 15 ft (4.57 m) to 9 in (0.2286 m) in diameter. Ward TANK was responsible for the engineering design and shop fabrication of these units.

### Analysis and fabrication challenges

The type of material specified for these reactors, in combination with large diameters, created a particular challenge for Ward TANK. Precise calculations were imperative to determine the appropriate loading and weight distribution during the hydro testing and transportation of these units. The potential for collapsing the shell during hydro testing or damage during transportation was extremely high so the company relied heavily on precision analysis.

To undertake this task Ward TANK chose COADE PV Elite, pressure vessel and heat exchanger design and analysis program. The company used PV Elite to perform load analysis calculations per ASME codes plus seismic and wind load calculations.

### Using PV Elite for quick project turnaround

With the help of PV Elite Ward TANK was able to successfully complete the project from design conception to commissioning in just 14 months. These new units were manufactured to replace ones that had been fabricated in Japan approximately 20 years ago. As this project was designed and manufactured in Houston the client was able to control costs and be involved in the design process from start to finish.

"PV Elite helped us eliminate inaccuracy in calculation. We benefited from its ease of use and reliability without the need to second-guess any results. PV Elite made the design process flow seamless," says Jon Ward, President and CEO of Ward TANK.

### Steel fabricated product award

In 2008, Ward TANK acquired the 2008 Steel Fabricated Product of the Year Award from the Steel Tank Institute and Steel Plate Fabricators Association (STI/SPFA). This annual award recognizes the outstanding records in safety of facilities, quality of products and outstanding project achievements. "We've used other programs in the past and have found that COADE's programs and support have been the cream of the crop. We tackle numerous complex and difficult projects every year and can engineer with confidence using COADE's PV Elite, adds Mr. Ward."