



Thinking outside the Shipping Box

BY JANE DALY

While many companies typically export items that fit in a box, Thermo Design Engineering can export an entire processing plant. Individual plant components can be as big as a railway car, and together, take up an area the size of a football field.

Located in Edmonton, Thermo Design is a leading engineering company specializing in petroleum and petrochemical processing systems. Its plant technologies strip natural gas, removing impurities and water and condensing heavier gas to make it lighter and cleaner for use in items such as vehicles and barbecues. The company can take on one part of a project, or offer customized services from end-to-end, including project management, feasibility studies, process design engineering, equipment design, procurement, equipment fabrication, site construction, supervision, commissioning, and start-up and personnel training.

One of the most interesting things about Thermo Design, however, is its ability to offer “modular technology” which means all of the major equipment and associated systems of the plant can be configured and assembled onto prefabricated structural steel skids in a controlled environment in Canada. The skids, sized to

meet the local transportation restrictions and requirements of the importing country, are then shipped to the job site, where the plant can be reassembled in a matter of weeks.

“The concept of modular technology has been around since about 1975 in North America, but has not typically been practiced in foreign countries,” says Jim Montgomery, President and one of the company’s founders.

The modular concept offers many advantages, especially for remote locations. “Natural gas is often found in locations where there is no infrastructure, such as out in the desert,” Montgomery says. “Prefabricating the components here, where electricity, utilities and our staff’s expertise are readily available, can offer substantial cost savings compared to traditional on-site construction methods.”

Another advantage is that the plant can be constructed in a controlled environment. “The structures are protected from the elements and inspections are

done by people at every step, leading to better quality, timing and precision.”

And precision is important, especially when trying to land projects from organizations such as Petrobras, Brazil’s government-owned oil and gas corporation, for which Thermo Design Engineering recently completed a processing plant. “Petrobras is known for being very exacting,” says Montgomery. “When dealing with them, exporters need to ensure that they tighten up their practices and document everything.”

Timing is an important factor for engineering companies to consider. “In Canada, you get a project and the work starts right away,” he says. “But in other countries, it can be a couple of years before a project goes ahead. You need to factor that into the business cycle. The same strategy is also needed to deal with the highs and lows of the resource industry – if one market is slow, pitch business in that country while doing work in another.”

In fact, it was the rocky highs and lows experienced by Alberta’s oilfields during the 1980s that prompted the founders of Thermo Design to explore other markets. “We first went to China, followed by Russia in 1992. Since then we’ve expanded in all directions,” says Montgomery.

Since 1996, the company has been using EDC for a variety of bonding and short-term insurance products, as well as “moral support,” according to Montgomery. “It takes a lot of money to build a plant, and banks will not give you that much credit on your own,” he says. “With EDC, you can get the capital to start building.” ■

COMPANY PROFILE

Company: Thermo Design Engineering Ltd.

Business: Petroleum and petrochemical processing systems

Location: Edmonton, Alberta

Established: 1979

Employees: 250

Annual Sales: \$50 million

Exports: 90%

Export Markets: Mexico, Brazil, Middle East, Central Asia, Poland, Russia, China

Contact: www.thermodesign.com