

Project Brief / NASSCO TOTE

Client requirement

Technically advanced cargo vessels for short runs into Alaska.



Point Eight Solution

Total service – design, manufacturing, testing and training.

The National Steel and Shipbuilding Company (NASSCO), the only “Big Yard” shipbuilder on the West Coast, has large clients – how much bigger can you get than the United States Navy? However, not all NASSCO clients are as large. One smaller client is Totem Ocean Trailer Express (TOTE).

TOTE runs trailer ships (think of them as semis on the sea) delivering cargo between Tacoma, Washington, and Anchorage, Alaska.

NASSCO was commissioned to build two electrical-propulsion vessels for TOTE with the most up-to-date marine technologies that would be the least harmful to the environment.

From other projects, NASSCO knew that Point Eight Power would do what was required – and more. According to Bill Jones, NASSCO senior engineering specialist, Point Eight again and again has been brought onto projects because of its attention to detail, extra effort in understanding design requirements and making client service a top priority.

NASSCO asked Point Eight to custom-design the generator control and distribution system for the new TOTE vessels. One reason Point Eight was awarded the contract was because of its ability to perform full-functional tests of the entire electrical scope at its facility.

Sometimes, those little (or not so little) glitches pop up. And that’s when Point Eight Power shows why it is such a perfect project partner.

An unusual aspect of the vessel design was the large main center post that reduced valuable space. Collaborating with Bill Jones, the Point Eight design team successfully G-shaped the system around the support post.

Teaming with Cutler-Hammer, Point Eight used Cutler-Hammer power and molded case breakers for all medium- and low-voltage applications as well as their Advantage series MCCs.

The project, built to ANSI, NEMA and IEC standards, was delivered on time.

Assessment, design, manufacturing and service – the Point Eight Process. For TOTE, the service aspect of the project cannot be overlooked. With harsh environmental conditions facing the TOTE vessel, it was imperative that the crew was crystal clear regarding the operation and maintenance of the electrical system provided by Point Eight. As part of the system offering, Point Eight technicians trained the TOTE crew to ensure the vessel and cargo arrived in port on schedule. Complete functional testing and in-depth crew training was crucial to the success of this project. NASSCO has come to expect the best from Point Eight Power – and has not been disappointed.

Point Eight Power. Controlling the Power You Generate



Point Eight's system included full electrical equipment —16 vertical sections of 6.6 kv (6,600 volt) medium-voltage switchgear; 20 vertical sections of 480, short-run low-voltage switchgear tied with bus ties and hard-bused together in the continuous G-shaped custom-design arrangement; 5 vertical sections of 120V/480V combined low-voltage emergency switchboard; 30 vertical sections of MCCs; and 150 panel boards for a total of four vessel sets. All equipment was built to meet USCG and ABS regulations.