GENERAC®
INDUSTRIAL POWER

BATTLESHIP TEXAS
La Porte, Texas

CASE STUDY

CHALLENGE:
Add a new generator system that can meet tight space requirements while having all showing pieces be historically accurate.

SOLUTION:
Generac 250 kW diesel generator

RESULT:
A brand-new Generac generator that is strong enough to keep the ship afloat, but small enough to fit the tight space requirements.

"If the ship didn't have the generator, the ship would have sunk, as it only takes two hours for the ship to go down."

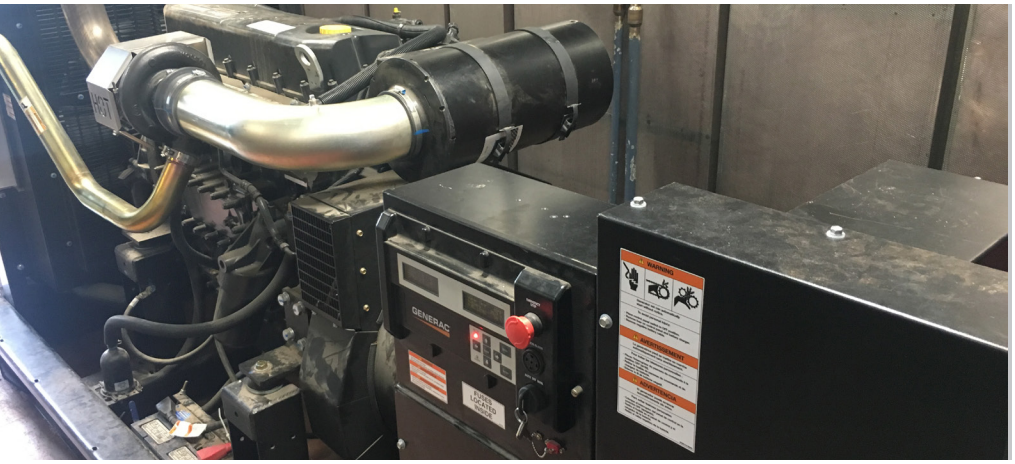
Keeping History Alive

The USS Texas (B – 35) is currently docked near the San Jacinto Monument in the Houston Ship channel as a floating museum. Over a century ago, the New York-class battleship had a different purpose. Soon after her commissioning in 1914, the USS Texas saw action for the first time in World War I making numerous sorties in the North Sea. When the United States formally entered World War II in 1941, the USS Texas escorted war convoys across the Atlantic and later shelled Axis-held beaches for the North African campaign and the Normandy Landings on D-Day. The USS Texas was then transferred to the Pacific theater during World War II to help provide support during the battles of Iwo Jima and Okinawa. She spent several days pounding the Japanese defenses in preparation for the landings. Kamikaze raids were sent to harass the bombardment group, but the USS Texas escaped damage during those attacks. Once forces landed, the USS Texas provided naval gunfire support. Her final mission of World War II was to bring American troops home, which was completed in February 1946.

In 1948, the vessel was retired and docked at the San Jacinto Battleground Historic Site in La Porte, Texas where it became the nation's first warship-turned museum. However, just because the ship is no longer engaging in war that does not mean it is out of danger. Being in the water continuously leads to rusting of the hull, which is constantly being patched to address leaks. Thousands of gallons of water leak into the ship per day. "Battleship Texas is the last of the dreadnought type battleships and is also the only surviving battleship that served in both world wars," said Andy Smith, Texas Parks & Wildlife. "As a one-of-a-kind artifact, Battleship Texas is priceless and is an important piece of history."

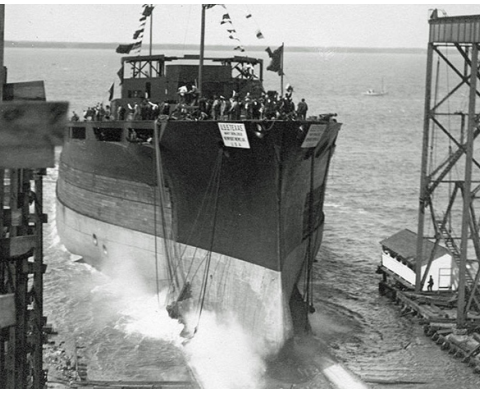
There are now two options remaining for the ship; take it out of the water for repairs or scrap it. With rallying cries heard by the Texas Legislature, the state has recently approved $35-million in funding to transport and fully repair this historic ship. Nonetheless, until the repairs can be made, the dreadnought remains museum docked and the water that seeps in needs to be pumped out around the clock in order to keep the ship from sinking.

Over the years, other repairs have been necessary to keep the Texas afloat. As the ship sits in brackish water, her hull continues to corrode away. The structural repair projects over the last decade have created more stability with the ship's interior structure; but it is not possible to address leaks in the hull until the ship is removed from the water. A project was initiated in the summer of 2017 to upgrade the primary electric utility that services the ship and improve the main electrical distribution on the vessel. The project also called for the installation of an emergency diesel generator with an automatic transfer switch that has the capacity to run critical



APPLICATION:
Municipal

MODELS:
250 kW Diesel Generator



pumps on board in the event of a power outage.

"The need for this equipment has been ongoing as power to the ship has to be uninterrupted," said Smith. "This was brought to the forefront during Hurricane Harvey when the region was devastated and the concerns for the ship required staffing around the clock during the storm. We needed a generator that would provide enough power to ensure all ship systems ran continuously no matter what happens to our shore power. Perhaps the most important system the generator needed to back up though was the ship's emergency pumping system that is currently pumping at least 350 gallons per minute 24/7. If that system is not continuously operating, the ship will start to sink causing a myriad of problems."

To complete the project, a partnership between Flintco, Schmidt Electric, EEA and Waukesha – Pearce Industries (WPI), a Generac Industrial Power dealer, was formed to help ensure an ideal power solution was implemented.

"Flintco already had a specification in mind and WPI and Generac are approved manufacturers," said Nick Newell, new unit sales, WPI. "When we reviewed the plans, some of the equipment they wanted didn't fit the application, so we worked with the design team to scale back the size of the system to make sure it fit the small space we had to work with."

A challenge to the project was where to put the generator. Since the ship serves as a museum, the Texas State Historical Society wanted the showing pieces, like the rain cap on the exhaust pipe, to be historically accurate. It was determined the generator had to be small enough to fit in an ammunition bunker on the deck of the ship.

In the end, Newell and WPI recommended a Generac 250 kW diesel generator. "This unit was small enough, but still powerful enough to do the job properly and fit in the tight space," said Newell. "In order to get it into position, we had to cut out part of the bunker wall, lift the unit up and roll into place and if the unit would have been larger, it wouldn't have worked."

The generator installation was completed early 2019 and was put to work right away. On Sunday, March 17, 2019 a storage tank caught fire at the Intercontinental Terminals Company (ITC), near the San Jacinto Battleground Historic Site. The fire burned for three days, sending a black plume of smoke into the air that prompted a Benzene scare, school closures, several shelters-in-place and the Houston Ship Channel to temporarily close after a containment wall was breached.

"Due to the ITC chemical tank fire, staff and the public were required to stay away from the site for about 50 days," said Smith. "Staff were not able to be onsite and power was lost to the ship, but the generator started up and ran without incident."

If it was not for a Generac generator, the historical site may have been lost forever. "The generator saved the ship," said Newell. "If the ship didn't have the generator, the ship would have sunk, as it only takes two hours for the ship to go down."

Thanks to the collaborative efforts, the innovative solution is making sure a piece of American history stays around a little longer. "It was an incredible honor to work on the project," said Newell. "It is a historically rich site and it feels great knowing we had a part in protecting its longevity."