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solutions for nuclear plants

CASE STUDY

An Ordinary RFP Leads to an Unexpected
Proposal & Staggering Savings

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After years of corrosion from sea salt, a Florida-based nuclear generating station issued an RFP to have its degraded carbon steel pipe and cable tray support structure sandblasted and recoated. The structure ran approximately 400 feet, with several changes in elevation and direction, and incorporated many different sizes of pipe, conduit and stainless steel electrical cable trays. It was extremely corroded having suffered from delamination.

Our engineers clearly understood the problem, and they had an innovative solution in mind. Rather than sandblast, repair and recoat the existing structure, PSC submitted a proposal to replace it with laser-welded 316L stainless steel. Every detail in our proposal emphasized corrosion prevention (even the fasteners were a high-strength stainless steel), while maintaining the strength of the original structure.

Our value-added solution initially saved the client \$2 million in repair costs, and during the next 20 years, the client is projected to save another \$1.5 million in future coating costs. Given that 316L stainless steel is one of the most corrosion-resistant materials available, a new finish or coating will never be needed, and rusting will be minimal.



FOR THIS PROJECT, PSC PROVIDED:

Engineering Expertise: Rather than sandblast and repair the catwalk and cable tray support structure, PSC's engineers proposed replacing it with corrosion-resistant 316L stainless steel. PSC also developed a 3D "as-built" model that included all changes that the plant wanted to make to the existing structure.

Custom Fabrication: PSC laser scanned the existing structure; created fabrication drawings for all beams, columns and braces; and fabricated all 316L members at its facility.

Skilled Craft: PSC's crews provided a turnkey solution, which included sandblasting, weld repairs, core drilling, the replacement of all pipe with 316L stainless steel pipes and the installation of new grating.

Heavy Lift Solution: PSC provided the design, installation and utilization of a cart-mounted articulating boom crane on the adjacent security catwalk for rigging operations associated with the support structure replacement.