

WESCO and Anixter Technical Team Helps Contractor Save \$2 Million on a Project



CHALLENGES

A construction company in Calgary was about to procure cable for two power distribution projects—50 MVA and 66 MVA—at an oil and gas plant. That's when WESCO and Anixter's Technology & Support Services (TSS) team learned about the project from the contractor and saw room for improvement. The customer's current power distribution design for the oil and gas plant was created by the EPC and required 27 single-conductor cables, 25 kV, 750 kcmil and 1000 kcmil, with 2x27 splices. The TSS team knew they could reduce the number of cables and splices while also decreasing the installation time and cost.

SOLUTIONS

- Created value-engineered power cabling design
- Performed all cable pulling calculations
- Conducted a site visit and inspected the installation equipment setup prior to shipping the cable to ensure it would be ready to install as soon as it arrived
- Worked on-site with the customer to provide termination and installation training, answer all questions and oversee installation

The WESCO and Anixter TSS team utilized ETAP®—electrical engineering software that calculates underground ampacity and performs temperature analysis, among other things—to propose a new power cabling design. The new design brought 27 single-conductor cables down to seven multiconductor cables of 25 kV, 750 kcmil and 1000 kcmil, with no splices. While the previous design required the cables to be buried underground in two separate trenches, each 12.5 and 10 feet wide, 3 feet deep and 5,000 feet long, WESCO and Anixter's value-engineered design required only one trench with dimensions of 4 feet wide by 3 feet deep.

SUMMARY

CUSTOMER

Construction company for an oil and gas plant

CHALLENGE

The power cabling distribution design was not cost-efficient.

SOLUTIONS

- WESCO and Anixter's TSS engineers used ETAP® software to redesign the power cabling system
- Created value-engineered power cabling design
- Performed all cable pulling calculations
- Conducted a site visit and inspected the installation equipment setup prior to shipping the cable to ensure it would be ready to install as soon as it arrived
- Worked on-site with the customer to provide termination and installation training, answer all questions and oversee installation

RESULTS

- Saved the customer \$2 million
- Saved 23 percent on cable costs
- Reduced installation time by two-thirds
- More reliable power distribution system

CASE STUDY

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Expensive miscalculations like this often occur simply because a more cost-efficient design is unknown. To reduce cable costs, a design will sometimes employ a larger trench and single-conductor cable. However, the cost of trenching on a project like this can often outweigh cable costs. As part of WESCO and Anixter's technical expertise, the TSS team uses the latest software and keeps up to date with standards and local codes to ensure the most cost-efficient design. They calculated their power cabling design would save the customer \$2 million on the installation, trenching, cable and splicing.

RESULTS

The customer was very pleased with the results of the project and the time and cost savings provided by the WESCO and Anixter TSS team.

- Reduced installation time and costs by over 65 percent
- Saved 23 percent on cable
- More reliable system mitigates cost of future maintenance
- Customer returned to WESCO and Anixter with another project for a 69 kV system

Visit anixter.com/technology to learn how the TSS team can help improve your project.

This project was completed under the name of Anixter.

About Anixter: anixter.com/aboutus
Legal Statement: anixter.com/legalstatement

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