



## SUMMARY

### Customer

Mine operator

### Challenge

Fast-track construction of longwall mine

### Solution

Supply Chain Solutions  
Engineering expertise

### Results

- Completed project within 18-month time frame
- Streamlined operations by consolidating material at local distribution facility
- Confirmed mine stability through careful technical and product specifications



The ability of Anixter to source the right products and work with manufacturers and contractors that could deliver the right specifications and materials as needed helped the company to overcome its obstacles and meet its project time lines.

### Customer Challenge

A coal mine owner needed to build out new operations. It needed the proper wire and cable to support the operations. The new operation included a longwall mining machine, which is like a cheese grater that runs back and forth on the coal-bearing wall. The longwall machine was 1,300 feet long. The goal was to increase output from less than 3,000 tons a day to up to 5,000 tons an hour.

The owner needed to deploy the longwall machine within 18 months in a remote location. The mine needed power delivered at 25 kilovolts. This presented challenges in finding the right cable, connectors and installers for the job. An engineer with the mine operator worked with Anixter previously and knew that Anixter's product knowledge and technical expertise would be integral to the project's success.

### Anixter Solution

Taking all the factors into consideration regarding the application and specialized environment, Anixter recommended two types of cable: mine power feeder for the main power and high-density cable down each tunnel for more flexibility. Because of the high voltage used for the main power, special couplers needed to be used that could maintain stability at 25 kilovolts. There were a total of 13 different lengths of preconnectorized cable that were stored at Anixter's local facility. The cables were then shipped to the job site when needed. The circuits arrived on the job site labeled according to their position and use in the mine. As one tunnel was built out, Anixter worked to procure and store the materials for the next tunnel build out.

Anixter also helped manage inventory and prepare the mining cable throughout the duration of the project. Anixter cut and labeled each assembly according to its position, which made it easy to install without waste. A total of 45 cuts were made, each with a different length and tag.

In addition to its supply chain capabilities and product knowledge, Anixter eased some of the company's financial burden by holding purchase orders until product was delivered or arranging financial terms to delay ownership. This helped to save significant costs while streamlining the purchasing functions.

## CASE STUDY

# MINE OPERATOR IMPROVES PERFORMANCE EFFICIENCY WITH ANIXTER



### Project Results

The mine met its 18-month deadline and started to produce coal immediately. Anixter successfully managed lead times and worked to ease the entire build-out process and helped to minimize cable waste. By providing precise product purchasing based on the contractor's needs, Anixter's inventory management and deployment capabilities confirmed that the right product arrived at the job site at the right time as needed.

With the installation of the cable, the longwall machine is able to flow and move without any restrictions or impedance from the infrastructure. The material was delivered as specified, which helped to facilitate the operations and confirm the machines operated as planned. The infrastructure performed as planned and helped the mine to achieve the goal of 5,000 tons of coal production per hour.

### Engineering and Specification Expertise

Anixter's technical leadership extends to all areas of wire and cable from manufacturing and production to distribution and implementation. Anixter keeps customers informed about the latest products, applications, trends, codes, standards and emerging technologies. Our engineering expertise can help you specify the right wire and cable for your unique application, with several offerings that include:

- Cable selection
- Ampacity calculations
- Conduit fill calculations
- Maximum short-circuit current values
- Cable chemical resistance characteristics
- Voltage drop calculations
- Cable testing questions
- Pulling tension and sidewall pressure calculations
- NEC interpretation
- Custom training sessions.

OVER  
**8,300**  
employees

OVER  
**100,000**  
customers

MORE THAN  
**450,000**  
products

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