PROJECT > Robinson Creek Tunnel

QUIKRETE® Shotcrete MS – Fiber Reinforced
Robinson Creek, KY

PROJECT DESCRIPTION:

On April 26, 2014 an arson fire engulfed a CSX Transportation railroad tunnel in Robinson Creek, KY cutting off service to two active coal mines in the area. The fire, which caused walls and ceiling in the 742-foot timber-lined tunnel to collapse, burned for several days before it was suffocated by plugging each portal with fill material. Once the fire was extinguished, CSX brought in LRL Construction to assess the damage and return railroad service as quickly as possible.

The tunnel restorations required the spray-application of QUIKRETE® Shotcrete MS – Fiber Reinforced to the walls and ceilings in multiple phases using Shotcrete pumps and motorized nozzles on robotic arms. The first shotcrete application provided initial structural support so debris could be removed, surfaces cooled and safe air conditions established. Moving in 30-foot increments, additional shotcrete was applied from a robotic tractor to further stabilize the tunnel before final linear construction was conducted from a rail-mounted shotcrete rig operating while new track was being placed. A total of 175 13-foot bolts, 375 8-foot bolts and 1,270 cubic yards of shotcrete were installed in the tunnel, which reopened to railroad traffic just 45 days after the fire. The Robinson Creek Tunnel restoration was awarded the 2014 Outstanding Underground Project by the American Shotcrete Association.

QUIKRETE® Shotcrete MS – Fiber Reinforced is a single component Micro Silica enhanced repair material that achieves more than 9,000 PSI at 28 days, and features very low rebound and permeability characteristics.

GENERAL CONTRACTOR:
LRL Construction Co., Inc.
SHOTCRETE CONTRACTOR:
LRL Construction Co., Inc.

QUIKRETE® PRODUCTS:
- 3,000 lb Shotcrete MS – Fiber Reinforced: 1,364 bulk bags
- 80 lb Shotcrete MS – Fiber Reinforced: 294 bags

PROJECT START DATE:
April 2014
PROJECT COMPLETION DATE:
June 2014

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