CASE STUDY

WALSH CONSTRUCTION COLD WEATHER CONCRETING

WITH POWERBLANKET

POWERBLANKET HEATED CONCRETE CURING BLANKETS OFFER A MANAGEABLE AND REALISTIC METHOD FOR CURING CONCRETE IN COLD AND ADVERSE WEATHER CONDITIONS.

> [Powerblanket] was the best cold-weather concrete heating and curing system we have worked with.
>
> VERN ADKINS | CARPENTER FOREMAN

WALSH CONSTRUCTION

Walsh Construction, known as experts in heavy civil construction, received a contract from the U.S. Army Corps of Engineers to repair a portion of the Illinois Waterway, which connects Lake Michigan to the Mississippi River. The project, located in the Lockport Lock and Dam area, focused on repairing two miles of concrete wall with a panel construction.

The timeframe of the project dictated that concrete pours needed to continue during the Illinois winter. Since water in concrete can freeze starting at 30°F/-1°C, and at about 27°F/-3°C the hydration process can stop entirely, cold temperatures posed a risk. Since ice occupies about 9 percent more space than water, the integrity concrete needed protection.

Walsh concluded that a system that could maintain temperature control, did not use an open flame, and would retain moisture in the concrete would save them fuel and labor costs.

COLD WEATHER CONCRETING

Walsh Construction, in evaluating its cold weather concreting options, determined that maintaining an open flame oil-heater to cure the concrete would cost several thousand dollars a month in on-site personnel. Further, that cost would not include the labor to build

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POWERBLANKET PROVIDES THE MOST INNOVATIVE HEATING SOLUTIONS ON THE MARKET, DELIVERING SAFE UNIFORM HEAT.

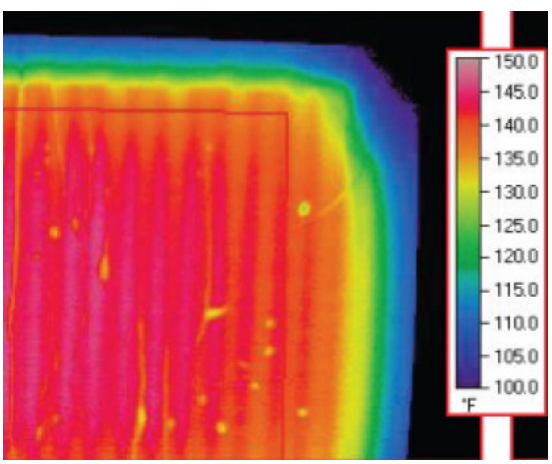
and move enclosures on the 40 foot (12.1m) long segments as well as the cost of the fuel for the open flame heater.

FINDING A SOLUTION

After talking to Blue Sky Contractors Supply in Merrillville, Indiana, Walsh found an alternative that saved time and money. The company purchased eight Powerblanket® 6x25 (1.8m x 7.6m) and eight 3 x 25 (0.9m x 7.6m) multi-duty heating blankets.

After calculating the savings in fuel, personnel to monitor the open flame, personnel and time to build and move enclosed shelters, and the heaters themselves, Walsh Construction realized it saved more than $5.43 for every $1.00 spent on the Powerblanket® blankets.

Even better, the workers on the site found the blankets much easier to work with. In fact, Vern Adkins, Carpenter Foreman with Walsh Construction, said this was the best heating/curing system he's worked with.



THERMAL IMAGING

The advanced technology used in Powerblanket products spreads heat so evenly the corners and edges of the concrete receive protection. The thermal image records how evenly the product spreads heat. In fact, 98 percent of the temperature data points measured within a range of 137°F to 147°F – only 10 degree difference (58.3°C to 63.8°C).

CASE STUDY

EXPERTS AGREE THAT THE BEST TEMPERATURE FOR POURING CONCRETE IS BETWEEN 50-60 °F.

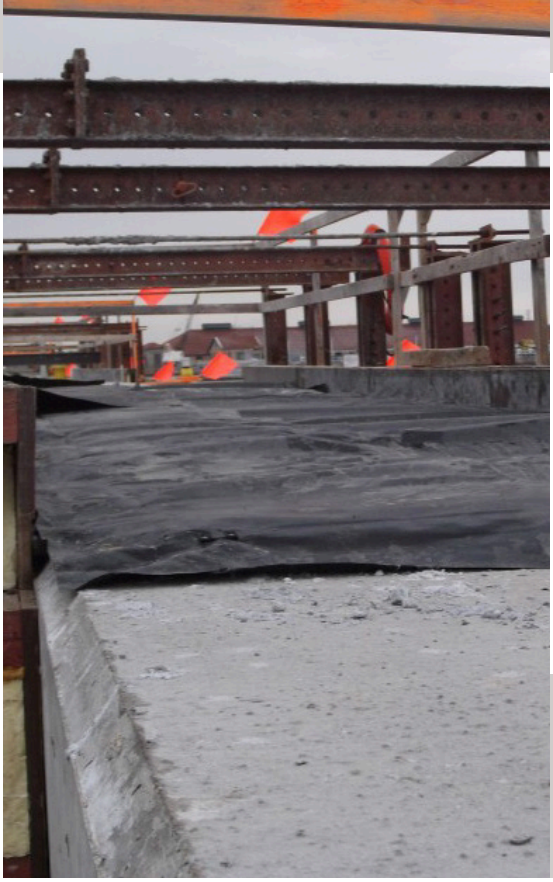
WE KNOW CONCRETE

Powerblanket heated concrete curing blankets offer a manageable and realistic method for curing concrete in cold and adverse weather conditions. Cold weather can seriously slow down concrete cure time and significantly hold up construction projects.

A new concrete pour must maintain a temperature above 50 °F for approximately 48 hours for the necessary chemical reactions to take place to achieve ideal concreting strength.

Powerblanket cures concrete 2.8 times faster than a typical insulated blanket and properly maintains moisture throughout the hydrating process. These concrete blankets are easily transported and installed and maintain ACI compliance for cold-weather concreting.

Welcome to the electric concrete blanket that is an ideal solution for maintaining optimum concrete cure time during cold winter conditions. Blankets come in various lengths and sizes, as well as custom options to meet the needs of any project.



Seven foot wide section of the Illinois Waterway built by Walsh Construction

TEST RESULTS

POWERBLANKET

2.8X FASTER

That's how much a recent test found that Powerblanket concrete blankets outperformed standard curing blankets. That means doing jobs quicker in the winter.

3,925 PSI STRENGTH

3,925 psi (276 kgf/cm2)—the strength of the concrete cured under the Powerblanket curing blanket during the three-day test, which took place in temperatures ranging from 22°F/-5°C to 38°F/3.6°C.

THE OTHER GUY

2,162 PSI STRENGTH

2,162 psi (152 kgf/cm2)—the strength of the concrete cured under a standard curing blanket in the same test.

NEED A COLD WEATHER CONCRETE SOLUTION?

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