

# Product Case History



## LOCATION:

PORT COLBORNE, ON

## DATE OF APPLICATION:

JANUARY - MARCH 1988

## MARKET:

BRIDGES & HIGHWAYS

## SUBSTRATE:

STEEL

## SURFACE PREP:

CLEAN & DRY

## EXPOSURE:

FREQ. WET W/FRESH WATER;  
CONDENSATE, SPLASH OR SPRAY

## SURFACE PREP:

SSPC - SP 10

## St. Lawrence Seaway, Western Region Bridge 19

### PRODUCT(S) USED:

Exterior Coating 1: Carbozinc 11

Exterior Coating 2: Carbomastic 242

### AREA COATED:

In 1988, the St. Lawrence Seaway Authority, Western Region needed to repaint a badly corroded Bridge 19 over the Welland Canal in Port Colborne.

The repainting of this bridge was difficult due to the fact that it was a hinged counter-weighted bridge that lifted several times an hour to allow shipping to pass. The traffic during the summer shipping season made the sandblasting and painting of the bridge impossible during the summer months. The only time that the bridge could be repainted was during the winter shutdown of the canal, which lasted from January until March.

To enclose and heat the bridge would have been extremely expensive and would have produced moisture and sweating problems. A coating system was required that could be applied during the winter months.



# St. Lawrence Seaway, Western Region Bridge 19

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## COATING SELECTION EXPLANATION:

The system chosen by the Seaway Authority consisted of a 3 mil coat of Carbozinc 11 inorganic zinc, topcoated with one coat of Carboline Carbomastic 242 aluminum filled epoxy urethane at a film build of 5 mils. Both of these products will cure at temperatures as low as -18°C (0°F).

After ten years exposure, a major coatings consultant assessed the condition of the bridge. The assessment was that other than minor staining due to corrosion of back to back members, there was no significant breakdown of the coating system.