

THE EVOLUTION OF DRILLING AND BLASTING TECHNIQUES FOR REHABILITATION OF LOCK WALLS ON THE WELLAND CANAL

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ABSTRACT

Innovative concepts in drilling and blast design have been used to remove deteriorated concrete and have enabled contractors to reduce costs and time on St. Lawrence Seaway rehabilitation projects. Time is of the essence on these contracts since the Seaway system is only available for this work during the winter freeze up. Unique electrical sequential initiation systems and specially modified drilling equipment have been used to accurately remove a narrow slice from the 83 foot high lock walls. These new methods successfully reduced demolition time, minimized overbreak and adhered to strict vibration limits.