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Rehabilitation of a 3000 mm water supply line under operating conditions in Buenos Aires

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ABSTRACT

The portable water in Buenos Aires, Argentina is transported from the drinking water plants to the pumping stations in the city via an approximately 80 km long supply network, 30 - 35 meters deep, with diameters of 4.5 to 3.0 meters, the so-called Rio Subterráneo. The pipes were formed by mining as in-situ concrete pipes without steel reinforcement. Some of these pipes show cracks due to changed conditions. The situation in the area of the Villa Adelina pumping station was particularly critical, so that there was a danger of collapsing. The Buenos Aires Water Supply Company Aqua y Saneamientos Argentinos S.A. (AySA) decided, due to the complexity of the project, to ask companies worldwide with experience in the rehabilitation of such pipelines under very difficult conditions to submit a rehabilitation concept. The German company Ludwig Pfeiffer from Kassel was awarded the contract to rehabilitate the pipeline. The following execution describes the implementation of the project with the particular difficulties of having to carry out all work under water and under operating pressure.