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Influence of the Leaching Phase on the Mechanical Behavior of Salt Caverns

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ABSTRACT

Big caverns can be leached out from salt formations. During the leaching process, cold water is injected in the cavern through tubing; warmer brine is withdrawn through an annular space. Thermal balance is relatively intricate, because salt dissolution is an endothermic process, whereas brine and water exchange heat through the steel tubing inside the well. As a whole, the rock mass is cooler around the cavern after leaching than before, resulting in a small reduction of cavern creep.

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