

Phosboucraa desalination plant for the phosphate industry — optimization of process unit and RO performance

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ABSTRACT

The phosphate industry is a big consumer of water. In Morocco, water consumption by the phosphate industry located in the southern region represents approximately 14% of the national industrial consumption. To solve the problem of water shortage in that region, the Cherifian Office of Phosphates have been using desalinated water. After a brief presentation of the genesis of desalination at the Phosboucraa site, the paper reports on the new RO desalination plant. The performance of the plant and the results of the optimisation operations are described. The advantages of desalination by reverse osmosis compared with multi-stage-flash or thermal compression are presented.

Keywords: Desalination plant; Phosphate washing; Reverse osmosis; Optimization; Performances

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