ETUDE DU CARACTERE INCRISTANT DES EAUX ET SON INHIBITION PAR DES ESSAIS CHIMIQUES ET D'ELECTRODEPOSITION

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Soutenue en: 2010

Abstract : Groundwater Hamma and Fourchi that feed the cities of Constantine and Ain M'lila are fromlimestone.These waters have a very high hardness (57°F to 87°F Hamma and Fourchi).These waters give rise to encrusting deposits (compacts and composents) of calciumcarbonate in their movement. This, the consequences of these deposits are of three types :Hydraulic, thermal and mechanical.According to Khalil et al. (1992) to fight against scale, it requires the use of chemical orphysical.these methods, based on the use of inhibitors of calcification, such as certaincarboxylate or phosphonate, are effective but not feasible in the case of water distribution.This leads to the search for safe methods of inhibition of scale-forming power of water whichremain applicable in the case of drinking water. Our study focuses firstly on the qualityassessment of hard water of Hamma and Fourchi and secondly on the inhibition of scaleformingpower of this water by using a chemical process with lime and sodium carbonate andpotassium dihydrogen phosphate.The electrochemical method of scaling based on theaccelerated reduction of dissolved oxygen is also of great interest for the development andinhibition of power inlaying these waters.

Keywords : drinking water, scaling calcium carbonate, inhibition, Ca(OH)2, Na2CO3, KH2PO4.