

Production of The Sodium Sulphate from Acigöl by Solution Mining Method, Denizli, TURKEY

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Sodium sulphate is used widespread in industry. Common usage areas are paper, glass, detergent, textile, and chemical industries. In this study production of the Na₂SO₄ from the lakes by solution mining method has been examined. Evaporites and their usage areas, evaporite deposits in nature and types of it and production types of the sodium sulphate and detailed report about the information about the solution mining method and information of the Acigöl Lake and production examples in it.

Acigöl is a lake in Turkey's inner Aegean Region, in a closed basin at the junction between Denizli Province, Afyonkarahisar Province and Burdur Province. The lake attracts attention due to its sodium sulfate reserves. Turkey's largest commercial sodium sulfate production operations are based here. Mirabilite and tenardite are common sodium sulphate minerals that are produced from this lakes.

Sodium sulphate from salty or bitter alkali lakes can be produced in natural and artificial methods. This decision is differs by the facilities production area and capacity. Solution mining method of sodium sulphate is examined in detail. Also, room and pillar method is examined briefly.

By comparing these methods, solution mining step forwards with its advantages. But in salt lakes, where the lake area is wide and weather temperature conditions are optimum for the operation method or where by changing of the seasons last product can be collected by freezers from the lakes surface. Therefore any facility for the production is needed and so in this case solution mining method isn't advantageous.