First Years of Operation of the Rio Tinto AP 60 OZEOS Gas Treatment Centre: Solid Results and Promising Future

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Abstract

The gas treatment centre of Rio Tinto AP 60 potline, treating gases from 38 pots, has reached its full operation at the end of 2013. It features the most advanced scrubbing technology designed by Fives, OZEOS, built with state-of-the-art fresh alumina distribution system, scrubbing modules with integrated reactors and a capability to operate in Cascade feed mode when required (ex. high gas temperature). These basic elements are combined with low energy consumption fans and extended surface bags on one filtration unit (out of five) to achieve the best scrubbing efficiency and lowest emissions possible. This paper summarizes the first years of operation, presents benchmark emission results and demonstrates the specific features that will improve the performance of this technology in the future.

Keywords: Gas treatment centre (GTC); aluminum electrolysis pot emissions; HF scrubbing; Cascade feed.