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Development of high temperature tube digestion technology for bauxite

The Bayer process for leaching bauxite with caustic soda to produce aluminum oxide and the Hall-Héroult process for the extraction of aluminum using fused-salt electrolysis were decisive in providing the basis in 1888 for the production of aluminum on an industrial scale. Aluminum production is still based on these processes today. In the beginning, the introduction of these technologies was somewhat slow; there was a lack of suitable production equipment and a lack of markets for aluminum. Increased aircraft production resulting from the First World War created new demand and forced production to follow suit. This article describes the development of alumina production technology. The Tube Digestion Technology for processing monohydrate bauxites at high-temperatures, which Vereinigte Aluminium Werke A.G. (VAW) brought into industrial production as long ago as 1956, is now used in numerous modern alumina plants.

Speaker Biography

Horst D Peters studied Business Administration and Economics in Hamburg and Göttingen as well as Mining in Berkeley, USA, and Clausthal. He was awarded the degrees of Dipl.-Vw. and Dipl.-Kfm. and subsequently graduated as he began his professional career at Preussag AG Metall in Goslar and Hannover. From there he moved to Kaiser Aluminium & Chemical Corp. in Oakland, USA, where his fields of activity were bauxite mining in Jamaica and investment control at the alumina plants and aluminium smelters in the USA. In 1977 he started working for VAW Aluminium in Bonn. From 1992 to 2003 he was managing director of VAW Aluminium-Technologie GmbH. He then became Vice President Aluminium at EN+ Group Ltd. in London and Moscow as well as being a board member at Rusal from 2004 to 2008. He now heads the consulting firm ATC (Aluminium Technology Consultants).

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