

Aluminium Salt Slag Treatment **STE[®] Process**

Title: The Engitec System for Treatment of Salt Slag from Secondary Aluminium Smelters

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Abstract: The secondary aluminium industry is under increased pressure from state and federal solid waste agencies to greatly reduce or eliminate the land disposal of its salt slag. This material is generated from rotary furnace processing of dross and scrap aluminium. Engitec Impianti has designed and constructed salt slag recovery system in Carisio, Italy and Cacapava, Brazil. The Carisio facility, a second generation design, is capable of recover salt from a brine solution stored in old evaporation ponds at a secondary smelting plant. This plant utilizes a single evaporation/crystallization unit with mechanical vapour recompression. The Cacapava plant is designed to produce 8,000 metric tons per year of salt and utilizes a flash evaporator. The flash evaporation technology is easy to operate, provides flexibility, and can be coupled with evaporation/crystallization for larger size systems. A third facility will be completed by late 1990 in Borgofranco, Italy for Alcan Italia. This system represents the latest in developing technology to address brine purification, elimination of noxious gases, and production of an oxide fraction low in chlorides which enables reuse for addition to cement.