

TANKHOUSE OPTIMIZATION BY METTOP GMBH

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Abstract

The secondary copper producer, Montanwerke Brixlegg AG (Austria), produces 73 000 tonnes of cathodic copper per year using ISA tankhouse technology. METTOP GmbH (Austria) evaluated the different anode qualities from the plant with relation to the current efficiency and specific energy consumption. Parameters including the chemical and physical anode quality, current and current density distribution at each cathode, voltage, and distance between each cathode and anode were examined. In addition, the temperature, chemical analysis, and conductivity of the electrolyte was determined for each investigated cell, as well as the anode weight, anode scrap, cathode sheet, and short circuits. Metallographic analysis was also performed on selected dendrites. The investigations resulted in specific improvements in the tankhouse process including the level of anode impurities, and future projects are planned for further tankhouse optimization.

(Abstract only)