

Title (en)
ELECTROLYTIC CELL ARRANGEMENT FOR PRODUCTION OF ALUMINIUM

Title (de)
ANORDNUNG VON ELEKTROLYSEZELLEN FÜR DIE HERSTELLUNG VON ALUMINIUM

Title (fr)
ARRANGEMENT DE CUVES D'ELECTROLYSE POUR LA PRODUCTION D'ALUMINIUM

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Abstract (en)
[origin: FR2789407A1] The invention concerns an electrolytic cell arrangement (1), disposed transversely, for producing aluminium by fused-salt electrolysis in accordance with the Hall-Heroult process, comprising at least a first row of electrolytic cells, forming a first electric circuit, and at least a second electric circuit located at a specific mean distance from the first row. The invention is characterised in that at least one conductor (7), said to be axial, passes beneath each upstream cell, in the central zone, and at least a conductor (8), said to be lateral, passes beneath each upstream cell, in the inner lateral zone, and at least one conductor (11A, 11B), said to be bypassing, bypasses each upstream cell, and said or each lateral conductor is connected to a first set of said cathode bar ends located on the upstream side so as to transmit to said risers (6A, 6B, 6D, 6E) a first part (I1) of the current (Im), ranging between 20 and 20 % of said current (Im), and said or each axial conductor is connected to a second set of cathode bar ends located on the upstream side so as to transmit to said risers (6A, 6B, 6D, 6E) a second part (I2) of said current (Im), ranging between 10 and 20 % of said current Im, and said or each bypassing conductor is connected to a third set of cathode bar ends located on the upstream side so as to transmit a third part (I3) of the current (Im), corresponding to the remainder of the current Im, and said risers are connected to said cathode bar ends located on the downstream side of the corresponding upstream cell, to the conductors passing beneath said cell, and to said or each bypassing conductor of said cell, such that a fraction (Mc) of said current (Io) less than 15 % is transmitted to the risers located in the central zone of the row.

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