

Title (en)
Cathode for molten-salt electrolysis cell.

Title (de)
Kathode für eine Schmelzflusselektrolysezelle.

Title (fr)
Cathode pour cellule d'électrolyse ignée.

Publication
EP 0041045 A1 19811202 (DE)

Application
EP 81810185 A 19810515

Priority
CH 403880 A 19800523

Abstract (en)
[origin: ES8203989A1] A solid cathode in a fused salt electrolytic cell for the production of aluminum is made up of individually exchangeable elements (10). These cathode elements are made up of two parts which are rigidly joined together and which are resistant to thermal shock. The upper part (12) which projects from the molten electrolyte (30) into the precipitated aluminum (26), or the coating on this part (12), is made of a material which, at working temperature, is a good electrical conductor, is chemically resistant and is wet by aluminum. The lower part (14,16), which is exclusively in the liquid aluminum (26), or the coating on this part (14,16) is on the other hand made of an insulating material which can withstand molten aluminum.

Abstract (de)
Eine Festkörperkathode in einer Schmelzflusselektrolysezelle zur Herstellung von Aluminium besteht aus einzeln auswechselbaren Elementen (10). Zwei gegen Wärmeschocks widerstandsfähige, starr miteinander verbundene Teile bilden diese Kathodenelemente. Der obere, vom schmelzflüssigen Elektrolyten (30) in das abgeschiedene Aluminium (26) hineinragende Teil (12) bzw. dessen Beschichtung besteht aus einem bei Arbeitstemperatur elektrische gut leitenden, chemisch beständigen und von Aluminium benetzbaren Material. Der untere, ausschliesslich im flüssigen Aluminium (26) angeordnete Teil (14, 16) bzw. dessen Beschichtung dagegen besteht aus gegen Aluminium beständigem Isolatormaterial.

IPC 1-7
C25C 3/08

IPC 8 full level
C25C 3/08 (2006.01)

CPC (source: EP US)
C25C 3/08 (2013.01 - EP US)

Citation (search report)
• FR 2337210 A1 19770729 - ALUMINUM CO OF AMERICA [US]
• DE 2838965 A1 19800117 - ALUSUISSE
• GB 2024864 A 19800116 - ALUSUISSE
• US 4093524 A 19780606 - PAYNE JOHN R
• DE 2656579 A1 19770714 - ALUMINUM CO OF AMERICA

Cited by
FR2508496A2; AU571246B2

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AT CH DE FR GB IT LI NL SE

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EP 0041045 A1 19811202; EP 0041045 B1 19830622; AT E3884 T1 19830715; AU 543106 B2 19850404; AU 7029981 A 19811126; BR 8103210 A 19820216; CA 1163601 A 19840313; DE 3160478 D1 19830728; ES 502372 A0 19820401; ES 8203989 A1 19820401; IS 1170 B6 19841228; IS 2641 A7 19811124; JP S5719391 A 19820201; NO 155104 B 19861103; NO 155104 C 19870211; NO 811711 L 19811124; NZ 197038 A 19840427; US 4376690 A 19830315; YU 132181 A 19830630; ZA 813338 B 19820526

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