

Title (en)

PROCESS AND APPARATUS FOR MANUFACTURING VERY PURE LITHIUM BY MOLTEN SALT ELECTROLYSIS

Publication

EP 0217438 B2 19920902 (DE)

Application

EP 86201529 A 19860905

Priority

DE 3532956 A 19850914

Abstract (en)

[origin: US4740279A] This invention relates to a process of producing lithium metal by the electrolysis of fused mixed salts comprising electrolyzing fused mixed salts consisting of lithium chloride and potassium chloride in a diaphragmless electrolytic cell, withdrawing molten lithium metal from the cell to a receiver and cooling the lithium metal which has been withdrawn. To decrease the content of impurities in a continuous process, molten mixture which rises in the interelectrode space in the cell and contains lithium metal is collected in an annular zone, which surrounds the top end of the cathode adjacent to the surface level of the molten mixture, said molten mixture is withdrawn from said annular zone through a siphon pipe and is supplied from the latter to a separating chamber, which communicates with the electrolytic cell and is sealed from the chlorine gas atmosphere in the electrolytic cell, electrolyte and lithium are separated in the separating chamber under a protective gas atmosphere, lithium metal is discharged from the separating chamber into a receiver under a protective gas atmosphere, and the electrolyte is recycled from the separating chamber to the electrolytic cell. An electrolytic cell for carrying out the process is also described.

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