

## Title (en)

PROCESS FOR THE MANUFACTURE OF RARE-EARTH METALS AND OF ALLOYS CONTAINING RARE-EARTH METALS

## Publication

**EP 0265413 A3 19890329 (DE)**

## Application

**EP 87890193 A 19870818**

## Priority

AT 222686 A 19860819

## Abstract (en)

[origin: US4786319A] The invention relates to a process for the production of rare earth metals and alloys thereof. The process exploits the known advantages of metallothermal reduction techniques while decisively enhancing their reduction process. Rare earth halides and/or rare earth oxides are reduced in an electric arc furnace by means of one or several alkaline earth metals, preferably, calcium. Additives such as iron metals or other alloying elements, alkali- and/or alkaline earth metal salt, may be added to the electric arc furnace in a two-phase furnace operation. The reduction takes place in an atmosphere inert to rare earth metals, rare earth compounds, and alkaline earth metals. Agitation is produced in the metal in the furnace by electromagnetic forces caused by a suitably selected current-to-voltage ratio for the electric arc, in order to achieve reduction in the shortest possible time and as completely as possible.

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## IPC 8 full level

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## Citation (search report)

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## Cited by

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## Designated contracting state (EPC)

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**EP 0265413 A2 19880427**; **EP 0265413 A3 19890329**; **EP 0265413 B1 19920226**; AT 389899 B 19900212; AT A222686 A 19890715; DE 3776858 D1 19920402; JP S6350434 A 19880303; US 4786319 A 19881122

## DOCDB simple family (application)

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