

Title (en)

Coated metal electrode with improved barrier layer and methods of manufacture and use thereof.

Title (de)

Beschichtete Metallelektrode mit Sperrschicht und Verfahren zu deren Herstellung und Verwendung.

Title (fr)

Electrode métallique plaquée à couche d'arrêt et procédés pour sa fabrication et son utilisation.

Publication

EP 0027051 A1 19810415 (EN)

Application

EP 80303526 A 19801007

Priority

GB 7934856 A 19791008

Abstract (en)

An electrode for use in electrolytic processes comprises a substrate of film-forming metal such as titanium having a porous electrocatalytic coating comprising at least one platinum-group metal and/or oxide thereof possibly mixed with other metal oxides in an amount of at least about 2 g/m² of the platinum-group metal(s) per projected surface area of the substrate. Below the coating is a preformed barrier layer constituted by a surface oxide film grown up from the substrate. This preformed barrier layer has rhodium and/or iridium as metal or compound incorporated in the surface oxide film during formation thereof in an amount of up to 1 g/m² (as metal) per projected surface area of the substrate.

IPC 1-7

C25B 11/10; **C25B 1/34**; **C25D 17/10**; **C23C 15/00**

IPC 8 full level

C23C 18/12 (2006.01); **C25B 1/34** (2006.01); **C25B 1/46** (2006.01); **C25B 11/00** (2006.01); **C25B 11/04** (2006.01); **C25B 11/08** (2006.01); **C25B 11/10** (2006.01); **C25D 17/10** (2006.01)

CPC (source: EP KR)

C25B 1/34 (2013.01 - KR); **C25B 11/061** (2021.01 - KR); **C25B 11/069** (2021.01 - KR); **C25B 11/093** (2021.01 - EP KR); **C25D 17/10** (2013.01 - KR)

Citation (search report)

- US 4127468 A 19781128 - ALFENAAR MARINUS, et al
- AT 314928 B 19740425 - MARSTON EXCELSIOR LTD [GB]
- US 3711385 A 19730116 - BEER H
- DE 2255690 A1 19740606 - CONRADTY FA C
- US 4112140 A 19780905 - HEIKEL HENRIK R, et al
- US 3926773 A 19751216 - KOZIOL KONRAD, et al
- GB 1206863 A 19700930 - ICI LTD [GB]
- GB 925080 A 19630501 - AMALGAMATED CURACAO PATENTS CO
- DE 2113795 B2 19750403

Cited by

CN102465312A; EP0090425A1; US5665218A; EP0063540A3; GB2342099A; GB2342099B; EP0430893A1; US5141606A; CH649315A5; FR2540141A1; US6251254B1; EP0046449B1; WO8303265A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0027051 A1 19810415; **EP 0027051 B1 19840711**; AT E8414 T1 19840715; AU 540213 B2 19841108; AU 6298480 A 19810416; BR 8006373 A 19810414; DD 153397 A5 19820106; DE 3068540 D1 19840816; DK 153166 B 19880620; DK 153166 C 19881219; DK 423380 A 19810409; ES 495705 A0 19820616; ES 504762 A0 19820616; ES 8205882 A1 19820616; ES 8205887 A1 19820616; FI 68090 B 19850329; FI 68090 C 19850710; FI 803173 L 19810409; GR 70316 B 19820910; IS 1141 B6 19831205; IS 2586 A7 19810409; JP S5658984 A 19810522; JP S6160147 B2 19861219; KR 830004461 A 19830713; KR 860001050 B1 19860801; MX 159655 A 19890725; NO 155702 B 19870202; NO 155702 C 19870513; NO 802985 L 19810409; SU 1292670 A3 19870223; ZA 806185 B 19810930

DOCDB simple family (application)

EP 80303526 A 19801007; AT 80303526 T 19801007; AU 6298480 A 19801006; BR 8006373 A 19801003; DD 22437180 A 19801008; DE 3068540 T 19801007; DK 423380 A 19801007; ES 495705 A 19801007; ES 504762 A 19810814; FI 803173 A 19801007; GR 800163063 A 19801006; IS 2586 A 19801007; JP 14035180 A 19801007; KR 800003849 A 19801007; MX 18422480 A 19801007; NO 802985 A 19801007; SU 2990890 A 19801004; ZA 806185 A 19801007