

Title (en)

Three-layer laminated matrix electrode.

Title (de)

Lamellierte Dreischicht-Matrixelektrode.

Title (fr)

Electrode lamelleuse du type matrice à trois couches.

Publication

EP 0051435 A1 19820512 (EN)

Application

EP 81305089 A 19811028

Priority

- US 20257880 A 19801031
- US 20258580 A 19801031

Abstract (en)

The present disclosure is directed to an improved fibrillated, matrix-type active layer; laminated electrodes containing it which possess improved strength and durability and are capable of operation at high current density with enhanced resistance to mechanical failure, a process for producing such improved active layers and laminates. The process for producing these electrode active layers is characterized by alternately or simultaneously producing two components; combining the components; shear blending (fibrillating) the mixture; drying; chopping to a fine powder form, and rolling into a self-sustaining, coherent sheet form. Alternatively, the active layer can be formed by wet deposition of the powder on a filter paper or like medium. The term "matrix" as used herein means that the active carbon particles are present within an unsintered network of carbon black/PTFE (fibrillated) material. This three-layer laminated electrode includes a porous, coherent, hydrophobic polytetrafluoroethylene (PTFE)-containing backing (wetproofing) layer, with or without carbon black therein, in contact with the nonworking surface of a "matrix" active layer containing catalyzed or uncatalyzed active carbon particles present within an unsintered network of fibrillated carbon black-PTFE and an electroconductive current distributor laminated to the working surface of said active layer, and to a process for making said laminate.

IPC 1-7

C25B 11/12; **C25B 11/08**; **C01B 31/08**; **C08L 27/18**; **C09C 1/56**

IPC 8 full level

C25B 11/04 (2006.01); **C25B 11/00** (2006.01); **C25B 11/08** (2006.01)

CPC (source: EP)

C25B 11/00 (2013.01)

Citation (search report)

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Designated contracting state (EPC)

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EP 0051435 A1 19820512; **EP 0051435 B1 19870114**; CA 1214753 A 19861202; DE 3175831 D1 19870219; JP H01152290 A 19890614

DOCDB simple family (application)

EP 81305089 A 19811028; CA 387770 A 19811013; DE 3175831 T 19811028; JP 27597788 A 19881031