Title (en)

Tungsten duplex composite electrode and filament material.

Title (de)

Elektrode und Drahtmaterial aus Wolfram von zweifältiger Zusammensetzung.

Title (fr)

Matériau pour une électrode ou un filament composé en tungstène.

Publication

EP 0272687 B1 19950628 (EN)

Application

EP 87119051 A 19871222

Priority

US 94574686 A 19861222

Abstract (en)

[origin: EP0272687A2] The present invention provides a tungsten-based duplex composite member, e.g., wire or rod, which combines the emissive, nonsag, or other desirable qualities of an inner tungsten-based core material with a different combination of properties, for example, resistance to attack, by the presence of a different tungsten-based material as an outer sheath or shell surrounding the core material. In one embodiment of the present invention, an electrode is formed from a duplex composite member, composed of a thoriated tungsten core (W - ThO2) and a thin rhenium (Re) shell. Other embodiments of duplex composite members are provided by thoriated tungsten discharge electrodes in which it is desirable to have two different concentrations of thoria (ThO2) in the element, a first concentration in the core of the duplex composite member and a second concentration in the shell or surface of the member.

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IPC 8 full level

H01J 61/073 (2006.01); **H01K 1/08** (2006.01); **H01K 1/14** (2006.01)

CPC (source: EP)

H01J 61/0737 (2013.01)

Citation (examination)

LAMPS AND LIGHTING, S.T. Henderson and A.M. Marsden, Thorn Lighting Ltd., 1972, pp. 142-147.

Cited by

US5874805A; US6903508B1; WO9602062A1; WO0115207A1

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