

Title (en)

A method of manufacturing a neutron absorbing article and neutron absorbing articles.

Title (de)

Verfahren zur Herstellung eines Neutronen absorbierenden Artikels und Neutronen absorbierende Artikel.

Title (fr)

Procédé de fabrication d'un article absorbant les neutrons et articles absorbant les neutrons.

Publication

**EP 0016252 A1 19801001 (EN)**

Application

**EP 79104502 A 19791114**

Priority

US 1355579 A 19790221

Abstract (en)

A neutron absorbing article, suitable for absorbing neutrons released by spent nuclear fuel stored in a storage rack in a storage pool, to prevent undesirable emission thereof, is made by plasma spraying onto a metal or metal alloy substrate (15) boron carbide and a metal or metal alloy (17), fed to the plasma spray gun (11) in powder form, until a suitable areal density of B (or a suitable thickness of the boron carbide in a matrix of the metal or alloy) is deposited. Such a real density is usually obtained at a thickness from 3 to 6 mm. and the deposit resulting is hard and strong and may be ground or otherwise machined to desired surface configuration, which is preferably smooth and flat or tubular. The plasma sprayed coating is also usefully applied to various other items, such as spent fuel shipping casks, body shields, vehicle shields, equipment housings and room walls, to prevent passing of neutrons through them.

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**G21F 1/08**; **C23C 17/00**

IPC 8 full level

**G21C 19/40** (2006.01); **G21F 1/08** (2006.01)

CPC (source: EP)

**G21F 1/08** (2013.01)

Citation (search report)

- GB 1075655 A 19670712 - NORTON CO
- US 2727996 A 19551220 - ROCKWELL III THEODORE, et al
- FR 1252868 A 19610203 - LARDERELLO

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