

Title (en)

PLASMA NITRIDING WITH PECVD COATINGS USING HOLLOW CATHODE ION IMMERSION TECHNOLOGY

Title (de)

PLASMA-NITRIERUNG MIT PECVD-BESCHICHTUNGEN UNTER VERWENDUNG EINER HOHLKATHODEN-IONEN-TAUCHTECHNOLOGIE

Title (fr)

NITRURATION PAR PLASMA AVEC DES REVÊTEMENTS PECVD À L'AIDE D'UNE TECHNOLOGIE D'IMMERSION D'IONS À CATHODE CREUSE

Publication

**EP 3874497 A4 20220720 (EN)**

Application

**EP 19877691 A 20191101**

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Abstract (en)

[origin: WO2020092988A1] Rapid plasma nitriding is achieved by harnessing the power and increased density of plasma discharges created by hollow cathodes. When opposing surfaces are maintained at the proper voltage, sub atmospheric pressure, and spacing, a phenomenon known as the hollow cathode effect creates additional hot oscillating electrons capable of multiple ionization events thereby increasing the number of ions and electrons per unit volume (plasma density). The present invention describes the harnessing of this phenomenon to rapidly plasma nitride metal surfaces and optionally rapidly deposit functional coatings in a continuous operation for duplex coatings.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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