

Title (en)

JOINING OF CVD DIAMOND BODIES TO METAL STRUCTURES

Title (de)

VERBINDEN VON CVD-DIAMANTKÖRPERN MIT METALLSTRUKTUREN

Title (fr)

FORMATION DE JOINT ENTRE DES CORPS DE DIAMANT DEPOSE ET DES STRUCTURES METALLIQUES

Publication

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Application

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Abstract (en)

[origin: WO0116051A1] The invention is concerned with a method of forming a joint between a CVD (chemical vapour deposition) diamond and a metal support structure, and with a joint formed by the method. In the method, a CVD diamond body (14) is bonded to a ceramic body (16) having thermal expansion characteristics compatible with those of CVD diamond. The ceramic body (16) is in turn bonded to a dimensionally compliant, intermediate metal element (18). The metal element is then secured to the metal supporting structure (12). Optimally, the intermediate metal element has thermal expansion characteristics between those of the ceramic body and the metal supporting structure. In one application, the joint may be used to mount the window in a gyrotron viewport flange.

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