

Title (en)  
PROCESS FOR TREATING METALS BY USING DIES

Publication  
**EP 0114592 B1 19880330 (DE)**

Application  
**EP 83890233 A 19831222**

Priority  
AT 467982 A 19821223

Abstract (en)  
[origin: ES8501657A1] The weapon barrel comprises a liner and at least one jacket tube. The liner is made of a highly wear-resistant material, like a cobalt or nickel base alloy, and the jacket tube is made of a tough alloy, like steel. In the manufacturing process the liner material is packed into the jacket tube in the form of a powdery material which may be pre-pressed or pre-sintered. The packing is arranged such as to leave a central free space in the jacket tube, and the jacket tube may be surrounded by an encapsulating tube. The jacket tube or the encapsulating tube is closed either before or after evacuation, and the closed tube arrangement is subjected to a combined heat and pressure treatment at temperatures of at least 900 DEG C., but below the melting point of the relevant materials and at pressures of at least 900 bar. The compound body thus obtained is formed with a full-area metallic bond between the liner and the jacket tube. After eventual heat treatment the compound body is further machined and a rifling is worked thereinto as, for example, by forging.

IPC 1-7  
**B22F 7/04**; **B21D 31/00**; **B22F 3/14**; **B32B 15/16**; **B23K 20/00**

IPC 8 full level  
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CPC (source: EP US)  
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**EP 0114593 A1 19840801**; AT E33218 T1 19880415; AT E33219 T1 19880415; DE 3376100 D1 19880505; DE 3376101 D1 19880505; EP 0114591 A1 19840801; EP 0114591 B1 19880330; EP 0114592 A1 19840801; EP 0114592 B1 19880330; ES 528315 A0 19841201; ES 528317 A0 19841201; ES 8501657 A1 19841201; ES 8501658 A1 19841201; GR 79748 B 19841031; GR 81355 B 19841211; US 4747225 A 19880531

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