

Title (en)  
FRICTION STIR SPOT WELDING METHOD AND APPARATUS

Title (de)  
VORRICHTUNG UND VERFAHREN ZUM DREHENDEN REIBSCHWEISSEN VON PUNKTSCHWEISSVERBINDUNGEN

Title (fr)  
PROCEDE ET DISPOSITIF DE SOUDAGE PAR POINTS PAR AGITATION-FRICTION

Publication  
**EP 1286805 A1 20030305 (EN)**

Application  
**EP 00970327 A 20001018**

Priority  
• NO 0000344 W 20001018  
• NO 995093 A 19991019

Abstract (en)  
[origin: WO0128732A1] Modified method for friction stir welding process where the shoulder (2) being independently movable of the pin (1) exercises controlled and variable forces on the assembled joined-to-be members so that the down force under retraction of the pin exceeds the plasticity limit of excess material collected under the shoulder.

IPC 1-7  
**B23K 20/12**

IPC 8 full level  
**B23K 20/12** (2006.01)

CPC (source: EP)  
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Citation (search report)  
See references of WO 0128732A1

Designated contracting state (EPC)  
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**WO 0128732 A1 20010426**; AU 7972600 A 20010430; EP 1286805 A1 20030305; NO 995093 D0 19991019

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