

Title (en)  
METHOD FOR FORMING HOLLOW PROFILE NON-CIRCULAR EXTRUSIONS USING SHEAR ASSISTED PROCESSING AND EXTRUSION (SHAPE)

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON UNRUNDEN EXTRUSIONEN MIT HOHLEM PROFIL MITTELS SCHERGESTÜTZTER VERARBEITUNG UND EXTRUSION (SHAPE)

Title (fr)  
PROCÉDÉ DE FORMAGE D'EXTRUSIONS NON CIRCULAIRES DE PROFILÉ CREUX À L'AIDE D'UN PROCESSUS DE TRAITEMENT ET D'EXTRUSION ASSISTÉS PAR CISAILLEMENT (SHAPE)

Publication  
**EP 3817872 A1 20210512 (EN)**

Application  
**EP 19745460 A 20190705**

Priority  
• US 201816028173 A 20180705  
• US 2019040730 W 20190705

Abstract (en)  
[origin: WO2020010331A1] A process for forming extruded products using a device having a scroll face configured to apply a rotational shearing force and an axial extrusion force to the same preselected location on material wherein a combination of the rotational shearing force and the axial extrusion force upon the same location cause a portion of the material to plasticize, flow and recombine in desired configurations. This process provides for a significant number of advantages and industrial applications, including but not limited to extruding tubes used for vehicle components with 50 to 100 percent greater ductility and energy absorption over conventional extrusion technologies, while dramatically reducing manufacturing costs.

IPC 8 full level  
**B21C 23/00** (2006.01); **B21C 23/08** (2006.01); **B21C 23/20** (2006.01); **B21C 23/21** (2006.01); **B21C 25/02** (2006.01); **B21C 25/04** (2006.01); **B21C 26/00** (2006.01)

CPC (source: CN EP)  
**B21C 23/00** (2013.01 - CN); **B21C 23/002** (2013.01 - EP); **B21C 23/08** (2013.01 - CN); **B21C 23/085** (2013.01 - EP); **B21C 23/20** (2013.01 - CN EP); **B21C 23/205** (2013.01 - EP); **B21C 23/21** (2013.01 - CN); **B21C 23/218** (2013.01 - EP); **B21C 25/02** (2013.01 - CN EP); **B21C 25/04** (2013.01 - CN); **B21C 26/00** (2013.01 - CN)

Citation (search report)  
See references of WO 2020010331A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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DOCDB simple family (publication)  
**WO 2020010331 A1 20200109**; CA 3105375 A1 20200109; CN 112512710 A 20210316; CN 112512710 B 20231003; CN 117443968 A 20240126; EP 3817872 A1 20210512

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**US 2019040730 W 20190705**; CA 3105375 A 20190705; CN 201980045070 A 20190705; CN 202311192831 A 20190705; EP 19745460 A 20190705