

Title (en)  
METHOD AND APPARATUS FOR MAKING FILLING ELEMENTS FROM EXPANDED METAL

Publication  
**EP 0342608 B1 19921007 (DE)**

Application  
**EP 89108781 A 19890516**

Priority  
DE 3816792 A 19880517

Abstract (en)  
[origin: WO8911357A1] Containers of explosive liquids can be prevented from exploding by filling the containers with meshes made from metal foil which occupies a negligible fraction of the volume of the container although it must completely fill the container. In order to refill the containers, the rib mesh (1) must consist of sufficiently small, spherical bodies (24). The invention also deals with the production of these filling bodies (24) from aluminium strip expanded into a mesh. The aluminium strip is first passed through a calibration opening (4) which compacts it into a bar (2) of circular cross-section which is then compacted perpendicularly to its length and continuously transported in the longitudinal direction as it is being squeezed. The front piece of the bar is then detached and pressed in a mould with a hemispherical bottom (21) by a die with the same inner contour to form a spherical filling body.

IPC 1-7  
**B21D 51/08**

IPC 8 full level  
**B65D 90/22** (2006.01); **B21D 51/08** (2006.01)

CPC (source: EP US)  
**B21D 51/08** (2013.01 - EP US); **Y10T 29/18** (2015.01 - EP US)

Cited by  
EP0669176A3; EP0486464A1; AT402166B

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0342608 A1 19891123; EP 0342608 B1 19921007**; AT E81312 T1 19921015; AU 3691889 A 19891212; AU 615759 B2 19911010; CA 1333235 C 19941129; DE 3816792 A1 19891123; DE 3816792 C2 19900419; DE 58902403 D1 19921112; ES 2035983 T3 19930501; GR 3006742 T3 19930630; JP 2677694 B2 19971117; JP H03501949 A 19910509; US 5247822 A 19930928; WO 8911357 A1 19891130; ZA 893608 B 19900926

DOCDB simple family (application)  
**EP 89108781 A 19890516**; AT 89108781 T 19890516; AU 3691889 A 19890516; CA 599661 A 19890515; DE 3816792 A 19880517; DE 58902403 T 19890516; EP 8900535 W 19890516; ES 89108781 T 19890516; GR 930400007 T 19930107; JP 50546989 A 19890516; US 45535990 A 19900312; ZA 893608 A 19890515