

Title (en)  
METHOD AND APPARATUS FOR THE CONICAL EXPANDING OF METAL TUBES

Publication  
**EP 0005194 B1 19801112 (DE)**

Application  
**EP 79101119 A 19790412**

Priority  
AT 339478 A 19780510

Abstract (en)  
[origin: EP0005194A2] 1. Method for the conical expanding of metal tubes by introducing the cylindrical metal tube (3) being on a mandrel (4) fitted with compressed air supplies into a movable die being conically shaped in the interior and expanding said tube conically by compressed air, characterized by bringing the tube (3) with its open end onto an axially movable sleeve (5) having spring tension which embraces the mandrel (4) and moving it with the die (1) towards an elastic ring (12) or an elastic collar (12) embracing the mandrel (4) air-tight until said elastic ring or collar (12) is fitted close with its exterior surface to the interior surface of the open end of said tube (3), then introducing compressed air through the openings (8) in the mandrel (4) exerting pressure through the openings (9) in the side wall of the sleeve (5) onto the interior tube walls and expanding it under overcoming of the spring tension axially towards the elastic ring or collar (12) moving it with its end according to the rhythm of the conical expansion until the exterior surface of the conical expanded tube (3) has attained the interior surface of said die (1).

IPC 1-7  
**B21D 26/02**; **B21D 51/10**; **B21C 37/18**

IPC 8 full level  
**B21C 37/18** (2006.01); **B21D 26/02** (2011.01); **B21D 26/033** (2011.01); **B21D 51/10** (2006.01)

CPC (source: EP)  
**B21C 37/18** (2013.01); **B21D 26/033** (2013.01); **B21D 51/10** (2013.01)

Designated contracting state (EPC)  
BE CH DE FR GB IT LU NL SE

DOCDB simple family (publication)  
**EP 0005194 A2 19791114**; **EP 0005194 A3 19791212**; **EP 0005194 B1 19801112**; AT 354224 B 19791227; AT A339478 A 19790515; DE 2960043 D1 19810205

DOCDB simple family (application)  
**EP 79101119 A 19790412**; AT 339478 A 19780510; DE 2960043 T 19790412