

## Title (en)

Method of making bimetallic tubes, and tubes made by this method.

## Title (de)

Verfahren zur Herstellung von Bimetallrohren und nach diesem Verfahren hergestellte Rohre.

## Title (fr)

Procédé de fabrication de tubes bimétalliques et tubes obtenus par ce procédé.

## Publication

**EP 0377390 A1 19900711 (FR)**

## Application

**EP 89420523 A 19891229**

## Priority

FR 8900025 A 19890103

## Abstract (en)

[origin: JPH02229616A] PURPOSE: To simplify the manufacture of a bimetal or the like by simultaneously extruding a blank containing two coaxial rotary tubular components formed of metals (alloy) of different composition which are coaxial in arrangement and one component of which is fitted to the other under the heated condition. CONSTITUTION: The thickness of a cross-section of tubular components 2, 3 of the surface orthogonal to the common axis is at least 3 mm, and equal to at least 2% of the outside diameter of an internal component. An annular space 4 of the radius not larger than the radius of the tubular component 3 of smaller thickness is provided between walls of the component opposite to each other. A splitting alloy (metal) adaptable to the composition of two tubular components 2, 3 is filled in the annular space 4. The annular space is sealed and closed by a closure means arranged at two end parts. A blank is heated to the extrusion temperature to be determined according to the characteristic of the metal. The blank is simultaneously extruded piercing a die through a press so as to obtain a bimetallic tube. The reduction ratio of the solid cross-section of the blank to the cross-section of the bimetallic tube is at least 4.

## Abstract (fr)

Le procédé suivant l'invention concerne la réalisation d'un tube bimétallique dont la section comporte une zone annulaire externe et une zone annulaire interne de compositions différentes. Ce procédé consiste à préparer une ébauche (1) comportant deux composants tubulaires (2, 3) logés l'un dans l'autre, de compositions différentes et séparés par un espace annulaire (4) qu'on remplit de métal divisé. On solidarise l'ensemble par deux pièces d'extrémité (7, 8) et on effectue une coextrusion à température convenable de façon à solidariser métallurgiquement entre eux le composant interne (3) et le composant externe (2). Le tube bimétallique obtenu convient en particulier aux utilisations dans lesquelles l'une de ses deux parois externe ou interne est exposée à un fluide plus agressif que l'autre.

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## Citation (search report)

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- [A] SU 869927 A1 19811007 - INST PROBLEM MATERIALOVEDENIA [SU]
- [A] PATENT ABSTRACTS OF JAPAN, vol. 9, no. 38 (M-358)[1761], 19 février 1985; & JP-A-59 179 212 (SUMITOMO KINZOKU KOGYO K.K.) 11-10-1984

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