

Title (en)
DEVICE FOR ULTRASONIC CUTTING AND/OR ULTRASONIC WELDING OF WEBS.

Title (de)
VORRICHTUNG ZUM ULTRASCHALL-SCHNEIDEN UND/ODER ULTRASCHALL-SCHWEISSEN VON BAHNEN.

Title (fr)
DISPOSITIF DE DECOUPE ULTRASONORE ET/OU DE SOUDAGE ULTRASONORE DE BANDES TEXTILES.

Publication
EP 0682725 A1 19951122 (DE)

Application
EP 94904625 A 19940105

Priority
• DE 4303092 A 19930204
• EP 9400011 W 19940105

Abstract (en)
[origin: WO9418373A1] The operative part (20) of a device for cutting or welding webs consists of an oscillation generator divided into several sections and comprising a piezo element (21), and a horn radiator which amplifies the sonic energy generated in the oscillation generator (26) and transfers it to the web via the end of the horn (28). To improve efficiency and save space, the horn radiator (26) as per the invention is fixed directly on the piezo element, on the opposite side of which is located only a counter-section (22) of the oscillation generator. These three components are firmly secured together and form a novel combination (20). In this arrangement, the axial length (32) of the counter-section (22) is smaller than or equal to 1/8 of the effective sonic wavelength, while the axial overall length (38) of the combination (20) is smaller than or equal to 3/4 of the sonic wavelength.

IPC 1-7
D06H 7/22; B06B 3/00

IPC 8 full level
B26D 7/08 (2006.01); **B26F 3/00** (2006.01); **B29C 65/00** (2006.01); **B29C 65/74** (2006.01); **D03J 1/08** (2006.01); **D06H 7/22** (2006.01)

CPC (source: EP KR)
B26D 7/086 (2013.01 - EP KR); **B26F 3/16** (2013.01 - KR); **B29C 65/086** (2013.01 - EP); **B29C 65/7439** (2013.01 - EP); **B29C 65/7443** (2013.01 - EP); **B29C 66/81469** (2013.01 - EP); **B29C 66/8161** (2013.01 - EP); **B29C 66/8167** (2013.01 - EP); **B29C 66/8432** (2013.01 - EP); **D03J 1/08** (2013.01 - EP); **D06H 5/00** (2013.01 - KR); **D06H 7/223** (2013.01 - EP KR); **B29C 66/729** (2013.01 - EP); **B29C 66/81264** (2013.01 - EP); **B29K 2313/00** (2013.01 - EP); **B29K 2995/007** (2013.01 - EP)

Citation (search report)
See references of WO 9418373A1

Citation (examination)
• EP-A- 0 341 942
• DE-A- 3 813 176
• FR-A- 2 313 186
• GB-A- 1 466 862
• GB-A- 2 023 965

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

DOCDB simple family (publication)
WO 9418373 A1 19940818; AU 5859494 A 19940829; BR 9405822 A 19951205; CA 2153150 A1 19940818; CN 1094344 A 19941102; EP 0682725 A1 19951122; JP H08506060 A 19960702; KR 960701254 A 19960224

DOCDB simple family (application)
EP 9400011 W 19940105; AU 5859494 A 19940105; BR 9405822 A 19940105; CA 2153150 A 19940105; CN 94101185 A 19940204; EP 94904625 A 19940105; JP 51756494 A 19940105; KR 19950703232 A 19950804