

Title (en)  
Underwater electro-acoustic transducer.

Title (de)  
Elektroakustischer Unterwasserwandler.

Title (fr)  
Transducteur électro-acoustique immergé.

Publication  
**EP 0462037 A1 19911218 (FR)**

Application  
**EP 91430011 A 19910610**

Priority  
FR 9007552 A 19900612

Abstract (en)  
The subject of the present invention are underwater electro-acoustic transducers and a method for manufacturing these transducers. A transducer according to the invention comprises, in a cylindrical casing (3), a first stack of piezoelectric plates (washers) (6) coaxial with the second stack. It comprises a top (1) and a counter-mass (2). It comprises a rigid part (8) which is inserted between the first and the second stacks. A first end (A) of the first stack bears against a bearing face (1A) of the top. A first end (D) of the second stack bears against a bearing face (2A) of the counter-mass. The two ends (B and C) of the two stacks bear against bearing faces (81 and 82) of the intermediate part. One application is the construction of underwater electro-acoustic transducers of high power per unit volume. <IMAGE>

IPC 1-7  
**B06B 1/06**

IPC 8 full level  
**B06B 1/06** (2006.01); **G10K 9/12** (2006.01)

CPC (source: EP US)  
**B06B 1/0618** (2013.01 - EP US); **G10K 9/121** (2013.01 - EP US); **Y10T 29/49005** (2015.01 - EP US)

Citation (search report)  
• [A] US 3110825 A 19631112 - MILLER HARRY B  
• [A] EP 0367681 A1 19900509 - THOMSON CSF [FR]

Cited by  
FR2720586A1; EP0555084A3; EP0684085A1; FR2728425A1; EP0728533A1; FR2731130A1; EP0728535A1; FR2731129A1; US5694374A; EP0728534A1; FR2731128A1; US5636183A; EP0596763A1; FR3029816A1; CN107206426A; WO2016097513A1; US10702889B2

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**EP 0462037 A1 19911218; EP 0462037 B1 19940907**; CA 2044335 A1 19940106; DE 69103819 D1 19941013; FR 2663182 A1 19911213; FR 2663182 B1 19920918; US 5130953 A 19920714

DOCDB simple family (application)  
**EP 91430011 A 19910610**; CA 2044335 A 19910611; DE 69103819 T 19910610; FR 9007552 A 19900612; US 71294791 A 19910610