

Title (en)
METHOD FOR MANUFACTURING A DIAPHRAGM BELLOWS MEMBER

Title (de)
HERSTELLUNGSVERFAHREN FÜR EIN MEMBRANBALGELEMENT

Title (fr)
PROCÉDÉ DE FABRICATION D'UN ÉLÉMENT DE SOUFFLET DE DIAPHRAGME

Publication
EP 3342497 B1 20190403 (EN)

Application
EP 16207555 A 20161230

Priority
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Abstract (en)
[origin: EP3342497A1] A method for manufacturing a diaphragm bellows member (1) from a work (10) which is thin walled, axisymmetric and metal, the method comprising: a hydroforming step of applying a hydrostatic pressure (P) to the interior of the work (10) whilst a plurality of dies (20, 21, 22) surround the outside circumference of the work (10), the axial positions of the dies (20, 21, 22) being changed to allow the work (10) to contract axially as it expands radially under the hydrostatic pressure into spaces between adjacent dies (20, 21, 22), thereby forming corrugations (5) in the work (10); an expanding step, performed after the hydroforming step, of applying an outward axial force to the work (10) whilst changing the axial positions of the dies (20, 21, 22) to allow the work (10) to extend axially as the shape of the work (10) bends under the outward axial force; and a die removal step of removing the dies (20, 21, 22) between adjacent corrugations (5) whilst the outward axial force is applied to the work (10).

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CPC (source: EP)
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Cited by
CN113909369A; CN114378164A; WO2022228873A1

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