

Title (en)
PNEUMATIC STRUCTURAL ELEMENT

Title (de)
PNEUMATISCHES BAUELEMENT

Title (fr)
ELEMENT DE CONSTRUCTION PNEUMATIQUE

Publication
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Application
EP 06817782 A 20061222

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Abstract (en)
[origin: WO2007071101A1] The pneumatic structural element according to the invention comprises from one to a number of interconnected elements of the following construction: two hollow bodies (1) with casings (9) made of textile material preferably coated in a gas-tight manner and having end caps (5) are assembled such that they produce a common sectional area (2). The edging of this sectional area (2) is formed by two curved tension/compression elements (3) into which is clamped a web (4) made of a flexible material of high tensile strength. By filling the two hollow bodies (1) with compressed gas, a tensile stress s is built up in their casings (9) and is transmitted directly or via the tension/compression elements (3) to the web (4) and pretensions said web. This pretensioning greatly increases the bending rigidity of the tension/compression elements (3). If a plurality of such elements is combined to form a roof, every two adjacent hollow bodies (1) thus form a sectional area (2) with a tension/compression element (3) and web (4).

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