

Title (en)

Three bars kit to build polyhedric structures based on the law of Cosines

Title (de)

Drei-Stangen-Kit für die Ausbildung von polyedrischen Strukturen gemäss der Cosinus-Regel

Title (fr)

Kit avec trois planches pour la formation des structures polyédriques selon la loi des Cosinus

Publication

EP 2060688 A1 20090520 (EN)

Application

EP 07398016 A 20071113

Priority

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Abstract (en)

The three bars kit is constituted by three kinds of bars, where the bar of kind (1), has uniform square convex hull section along its length, and both the other two bars, the bars of kind (2) and (3), have equal and uniform regular hexagonal convex hull sections along their lengths, such that the height H of the hexagonal convex hull section is related to the length L of the side of the square convex hull section by the following formula: $H = (\sqrt{3}-1) \times L$. This kit allows the construction of three-dimensional structures with one or more of the following characteristics: - Structures made of polygons such that each triplet of mutually adjacent polygons creates one of four "triple connections"; - Structures containing one or more groups of bars mutually connected in parallel; - Structures containing polygons whose edges have integer length; - Structures made of planar polygons such that each pair of polygons connected by a common edge creates a dihedral angle of 0, 60, 90, 120 or 180 degrees; - Structures containing bars of different scales; - Structures containing one or more groups of four bars mutually connected with four standard connectors, two of the bars being of the same kind and the other two bars being of the same kind and parallel. These groups of four bars constitute "quadruple connections"; - Structures containing one or more groups of two or more non-parallel bars connected with a single standard connector.

IPC 8 full level

E04B 1/58 (2006.01)

CPC (source: EP)

E04B 1/58 (2013.01)

Citation (applicant)

- WO 2004024277 A2 20040325 - WARNER TIMOTHY JOHN [GB]
- WO 9921669 A1 19990506 - ALUTERM S R L [IT], et al
- WO 0045083 A1 20000803 - MOCCIARO SALVATORE [IT]
- PT 103301 A 20061229 - UNIV NOVA DE LISBOA [PT]

Citation (search report)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

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