

Title (en)  
An inflatable knitting ball structure and manufacturing method thereof

Title (de)  
Aufblasbare Strickballkugel und Herstellungsverfahren dafür

Title (fr)  
Structure de bille de tricotage gonflable et son procédé de fabrication

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Application  
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Abstract (en)  
The present invention provides an inflatable knitting ball structure (1), which is continuously knitted by moving threads back and forth in a horizontal manner, and encapsulating the outer peripheral surface of an inflatable inner rubber bladder (7). The inflatable knitting ball structure (1) includes a plurality of sheet body structures (4, 5) that are continuously arranged and integrally connected, wherein a connection region (41, 51) is formed on both the left and right side of the sheet body structure (4, 5), between the plurality of sheet body structures (4, 5) and other sheet body structures (4, 5); wherein the connection region (41, 51) is positioned towards an arc region (42, 52) formed on the upper and lower two ends of the plurality of sheet body structures (4, 5); and a plurality of olive-shaped structures (6) are formed together by the connective region (41, 51) and the arc region (42, 52); at least a connection thread (45) is formed by the connection between the plurality of sheet body structures (4, 5) and the arc region (42, 52) of the plurality of sheet body structures (4, 5). According to the present invention, the present invention may provide the predetermined certain roundness by continuously knitting the inflatable knitting ball structure (1) through a flat knitting machine moving threads back and forth in a horizontal manner. As such, the effect of the outer peripheral surface of the inflatable inner rubber bladder (7) being exactly encapsulated by the inflatable knitting ball structure (1) can be achieved by the present invention.

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Citation (search report)  
• [X] US 2011177895 A1 20110721 - LIN MEI SUN [TW]  
• [XA] GB 462853 A 19370317 - CONTINENTAL GUMMI WERKE AG  
• [A] US 6109068 A 20000829 - STOLL THOMAS [DE], et al  
• [A] GB 1308909 A 19730307 - COURTAULDS LTD  
• [A] HONG H ET AL: "FLACHSTRICKMACHINEN ZUR HERSTELLUNG DREIDIMENSIONALER GESTRICKE FUR TECHNISCHE ANWENDUNGEN", MELLIAND TEXTILBERICHTE, DEUTSCHER FACHVERLAG, FRANKFURT AM MAIN, DE, vol. 77, no. 1/02, 1 January 1996 (1996-01-01), pages 41 - 43, XP000554341, ISSN: 0341-0781  
• [A] STOLL T: "LES TEXTILES TECHNIQUES POINTS FORTS DU RECTILIGNE", FILIERE MAILLE, INDUSTRIE TEXTILE, PARIS, FR, no. 30, 1 November 1994 (1994-11-01), XP000477803, ISSN: 1146-0733

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