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(54) A METHOD FOR PREPARING OPTIMIZED STRUCTURE FOOTBALL

(57) A method for preparing optimized structure football comprises the following steps: Step 1: sewing a plurality of layers of cloth into a inner shell through a sewing machine; Step 2: loading the football liner into the interior of inner shell; Step 3: brush glue in the football mouth area; Step 4: brush glue in the bare sewing line after inflatable stereotypes; Step 5, dry the liner shell after brushing the glue; Step 6, making the ball skin; Step 7, sewing the ball skin into ball shell; Step 8, bonding EVA foam cotton layer in the ball shell surface through the glue; Step 9, put the liner shell into the ball shell; Step 10, the detection of ball leakage; Step 11, brush glue in the bare sewing line of the ball shell. The invention has the advantages of simple process and low cost. The football prepared by the invention has the advantages of softness, good bouncing performance, not easy to absorb water, durable and beautiful appearance.

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Description

BACKGROUND OF THE INVENTION

Field of the invention

[0001] The present invention relates, generally, to the field of preparing football, and more particularly to a method for preparing optimized structure football.

Description of the Prior Art

[0002] In the course of the existing football liner production process, yarn wrapping is a very important step, the yarn is immersed in glue and then winding in the Liner surface, currently, yarn wrapping is mainly completed by artificial winding or equipment winding. The above methods requires lots of mechanical equipments, with complex process, high labor costs, high material cost, low efficiency and uneven thickness. The production of the prior art is also easy to absorb water, with poor bouncing performance, not durable, yarn expose and other deficiencies.

SUMMARY OF THE INVENTION

[0003] In order to overcome the above-mentioned deficiencies of the prior art, it is an object of the present invention to provide a simple method for preparing optimized structure football with low cost. The football obtained is flexible, soft, with good bouncing performance, durable and not easy to absorb water.

[0004] In order to achieve the above object, the present invention includes the following technical solution:

A method for preparing optimized structure football characterized in that the manufacturing process comprises the steps of:

Step 1, selecting the interlaced cloth, cutting the interlaced cloth into pieces, and sewing the plurality of cloth pieces into a Liner shell;

Step 2, put the football Liner into the interior of the Liner shell, and sewing by using the sewing machine;

Step 3, brush glue in the football mouth area;

Step 4, fill air into the Liner, and brush glue in the bare sewing line after inflatable stereotypes;

Step 5, dry the Liner shell after brushing the glue;

Step 6, the football is made from the outside to the middle by the PU layer, the EVA foam layer, the non-dampening layer and the interlaced cloth layer, and the PU layer and the EVA foam layer I are adhered by glue wherein the EVA foam layer I is bonded to the non-dampening layer through the glue, the non-dampening layer is bonded to the interlaced cloth layer through the glue;

Step 7, cut the football skin into pieces, and sewing the pieces into football shell by sewing machine;

Step 8, bonding EVA foam cotton layer with the ball shell surface through the glue;

Step 9, put the drying Liner shell into the ball shell and sewing; the Liner shell contact with EVA foam layer.

Step 10, check the leakage of the football, fill air into the football at constant pressure, and make sure the pressure is consistent in a time period of a plurality of hours;

Step 11, for the pressure changes within 0-0.5pa, use the plastic processing to the bare sewing line.

[0005] Further, the interlaced cloth is folded into two to six layers.

[0006] Further, the stitch of the sewing machine employs a cotton thread.

[0007] Further, the margin of the sewing machine is 2 to 8 mm.

[0008] Further, the football Liner is made of rubber inner Liner, PVC Liner, TPU Liner or latex gall Liner.

[0009] Further, the thickness of the latex coated on the sewing machine is 1 to 10 mm.

[0010] Further, the interlaced cloth is made of one or more of a nonwoven fabric, a polyester, a cotton cloth, an acrylic or a polyester-cotton blended fabric.

[0011] Further, the PU layer is replaced with a PVC layer or a TPU layer.

[0012] Further, the EVA foam layer I and the EVA foam layer II are respectively replaced with a TPE foam layer and / or an SBR foam layer.

[0013] Further, a plurality of hours in step 10 are 60 to 100 hours.

Embodiments

The technical solutio

[0014] n of the present invention will be further described by specific embodiments.

[0015] A method for preparing optimized structure football characterized in that the manufacturing process comprises the steps of:

Step 1, selecting the interlaced cloth and folded into

four layers, cutting the interlaced cloth into pieces, and the 8-layer cloth is sewn into a liner shell by a sewing machine into a Liner shell; The stitch of the sewing machine is made of cotton thread, and the margin of the sewing machine is 4 mm.

Step 2, put the football Liner into the interior of the Liner shell; And use the sewing machine to seal the Liner shell, the Liner is made of rubber, and the thickness of the glue brushed on the sewing thread is 3mm;

Step 3, brush glue in the football mouth area;

Step 4, fill air into the Liner, and brush glue in the bare sewing line after inflatable stereotypes;

Step 5, dry the Liner shell after brushing the glue;

Step 6, the football is made from the outside to the middle by the PU layer, the EVA foam layer, the non-dampening layer and the interlaced cloth layer, and the PU layer and the EVA foam layer I are adhered by glue wherein the EVA foam layer I is bonded to the non-dampening layer through the glue, the non-dampening layer is bonded to the interlaced cloth layer through the glue;

Step 7, cut the football skin into pieces, and sewing the pieces into football shell by sewing machine;

Step 8, bonding EVA foam cotton layer with the ball shell surface through the glue;

Step 9, put the drying Liner shell into the ball shell and sewing; the Liner shell contact with EVA foam layer.

Step 10, check the leakage of the football, fill air into the football at constant pressure, and check if the pressure is consistent in 72 hours;

Step 11, for the pressure changes of 0.5pa, use the plastic processing to the bare sewing line.

[0016] The basic principles and main features of the present invention have been shown and described above. It should be understood by those skilled in the art that the present invention is not limited by the above-described embodiments and that the principles described in the above examples and specification are illustrative of the principles of the invention without departing from the spirit and scope of the invention Various changes and modifications, and such changes and modifications are within the scope of the invention as claimed. It is intended that the scope of the invention be defined by the appended claims and their equivalents.

Claims

1. A method for preparing optimized structure football **characterized in that** the manufacturing process comprises the steps of:

   Step 1, selecting the interlaced cloth, cutting the interlaced cloth into pieces, and sewing the plurality of cloth pieces into a liner shell;
   Step 2, put the football liner into the interior of the liner shell, and sewing by using the sewing machine;
   Step 3, brush glue in the football mouth area;
   Step 4, fill air into the liner, and brush glue in the bare sewing line after inflatable stereotypes;
   Step 5, dry the liner shell after brushing the glue;
   Step 6, the ball is made from the outside to the middle by the PU layer, the EVA foam layer, the non-dampening layer and the interlaced cloth layer, and the PU layer and the EVA foam layer I are adhered by glue wherein the EVA foam layer I is bonded to the non-dampening layer through the glue, the non-dampening layer is bonded to the interlaced cloth layer through the glue;
   Step 7, cut the ball skin into pieces, and sewing the pieces into ball shell by sewing machine;
   Step 8, bonding EVA foam cotton layer with the ball shell surface through the glue;
   Step 9, put the drying liner shell into the ball shell and sewing; the liner shell contact with EVA foam layer.
   Step 10, check the leakage of the ball, fill air into the ball at constant pressure, and make sure the pressure is consistent in a time period of a plurality of hours;
   Step 11, if the pressure changes in step 10 is within 0-0.5 pa, use the plastic processing to the bare sewing line.

2. A method for preparing optimized structure football according to claim 1, wherein the interlaced cloth is folded into two to six layers.

3. A method for preparing optimized structure football according to claim 1, wherein the stitch of the sewing machine employs a cotton thread.

4. A method for preparing optimized structure football according to claim 1, wherein the margin of the sewing machine is 2 to 8 mm.

5. A method for preparing optimized structure football according to claim 1, wherein the football liner is made of rubber inner liner, PVC liner, TPU liner or latex gall liner.

6. A method for preparing optimized structure football

according to claim 1, wherein the thickness of the latex coated on the sewing machine is 1 to 10 mm.

7. A method for preparing optimized structure football according to claim 1, wherein the interlaced cloth is made of one or more of a nonwoven fabric, a polyester, a cotton cloth, an acrylic or a polyester-cotton blended fabric.

8. A method for preparing optimized structure football according to claim 1, wherein the PU layer is replaced with a PVC layer or a TPU layer.

9. A method for preparing optimized structure football according to claim 1, wherein the EVA foam layer I and the EVA foam layer II are respectively replaced with a TPE foam layer and / or an SBR foam layer.

10. A method for preparing optimized structure football according to claim 1, wherein a plurality of hours in step 10 are 60 to 100 hours.

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EUROPEAN SEARCH REPORT

Application Number
EP 17 18 3499

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	29 January 2018	Vesin, Stéphane

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X : particularly relevant if taken alone
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