

Title (en)
Method of and device for wrapping hollow filament bundles

Title (de)
Verfahren und Vorrichtung zum Einhüllen von Hohlfadenbündeln

Title (fr)
Procédé et dispositif pour envelopper des faisceaux de filaments creux

Publication
EP 1031526 A2 20000830 (DE)

Application
EP 00103291 A 20000218

Priority
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Abstract (en)
To form a mantle shrouding round a hollow fiber bundle with a film tube, the film web (1) is cut to length to form the tube and to be self-bonding. The film web is wound round the hollow fiber bundle in three sections, where the second section shrouds the bundle. The first and third sections are laid over each other, aligned away from the bundle, and are bonded. The film web is spread out, and a hollow is formed to form the second section where the hollow fiber bundle is to be laid. The hollow is rolled into a tube, containing the bundle of hollow fibers, and the first section is bonded to the third. The film web is spread out on a two-part table (2,3). The two table tops are moved apart to form a gap with a width equal to or greater than the diameter of the hollow fiber bundle (9) to be covered. The hollow is formed by pushing the film into the gap by a depth which is at least equal to the diameter of the fiber bundle, or more. To form the film tube (8), the gap between the table sections is set at a width which is greater than twice the film thickness but smaller than the fiber bundle diameter. The first and/or third film sections are led from the table gap by a length until the second section forming the hollow lies loosely round the fiber bundle in a tube. A bonding unit at the gap between the edges of the two table sections forms a bond between the first and third film sections by welding and, at the same time, the surplus film of the first and third sections is trimmed off by the welding action, with simultaneous welding/cutting. An Independent claim is included for an apparatus with two table sections which can be separated to form a gap between them for laying the film web. The second table section is next to the film feed unit. Preferred Features: A die is over the table, to be lowered against the laid film to form a hollow in it in the gap between the two table sections. The die moves up and down on a plane at 90-60 degrees to the table surface, into the center of the gap between the table sections. The film web is fed to the table by a step motor. The first table section has a mechanism to hold the film. The welding unit, to bond the film material, also incorporates a film cutter.

Abstract (de)
Verfahren zum Einhüllen von einem Hohlfadenbündel in eine das Hohlfadenbündel umhüllende Folienröhre, wobei eine Folienbahn um das Hohlfadenbündel zur Ausbildung der Folienröhre geschlagen, auf Länge abgetrennt und mit sich selbst verbunden wird, dadurch gekennzeichnet, dass die Folienbahn derart um das Hohlfadenbündel gelegt wird, dass die Folienbahn aufeinander folgend einen ersten, zweiten und dritten Abschnitt aufweist, wobei das Hohlfadenbündel vom zweiten Abschnitt umhüllt ist, und der erste und dritte Abschnitt aufeinander gelegt sind und vom Hohlfadenbündel weg weisen, dass der erste und der dritte Abschnitt in der Nähe des Hohlfadenbündels miteinander zu einem Verbund verbunden und vom Hohlfadenbündel aus gesehen im oder hinter dem Verbund abgetrennt werden. <IMAGE>

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CPC (source: EP)
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Cited by
CN103935545A; CN102501540A; CN111559527A; CN104039373A; EP2420464A1; EA014702B1; CN103159080A; WO2005087596A1; DE102014019506A1; US10343121B2; WO2008067934A3; WO2015055960A1; US8327901B2; US8764925B2; US9387945B2

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