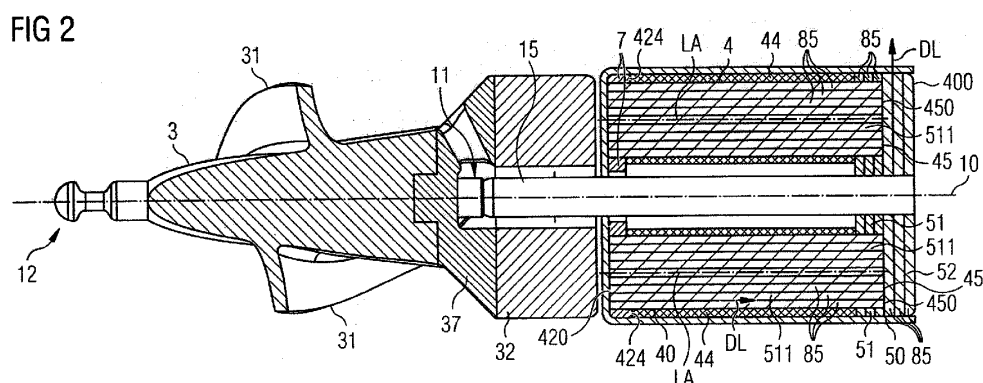




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| <p>(72) Inventors: GRAUWINKEL, Marius; c/o Abiomed Europe GmbH, Neuenhofer Weg 3, 52074 Aachen (DE).</p> | <p>(84) Designated States (<i>unless otherwise indicated, for every kind of regional protection available</i>): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,</p> |

(54) Title: BLOOD PUMP



(57) Abstract: This invention concerns an intravascular blood pump (1) for percutaneous insertion into a patient's blood vessel. The blood pump comprises a pump casing (2) having a blood flow inlet (21) and a blood flow outlet (22), an impeller (3) arranged in said pump casing (2) so as to be rotatable about an axis of rotation (10). The impeller (3) has blades (31) sized and shaped for conveying blood from the blood flow inlet (21) to the blood flow outlet (22). The blood pump (1) comprises a drive unit (4) for rotating the impeller (3), the drive unit (4) comprising a plurality of posts (40) arranged about the axis of rotation (10) and a back plate connecting rear ends of the parts, the posts and the back plate together forming a magnetic core of the drive unit. A coil winding (47) is disposed around each of the posts (40). The coil windings (82, 83, 86) are controllable so as to create a rotating magnetic field, wherein the impeller (3) comprises a magnetic structure (32) arranged to interact with the rotating magnetic field so as to cause rotation of the impeller (3). The magnetic core (400) or a part of it comprises a discontinuous soft magnetic material which is discontinuous regarding electric conductivity in a cross-section, wherein at least one weld (82, 83, 86) is provided at a surface (811) of the discontinuous soft magnetic material. The weld (82, 83, 86) bridges at least one discontinuity regarding electric conductivity in the discontinuous soft magnetic material. Further, the invention concerns a method of manufacturing the magnetic core (400).

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