Title (en)

A SURGICAL INSTRUMENT

Title (de)

CHIRURGISCHES INSTRUMENT

Title (fr)

INSTRUMENT CHIRURGICAL

Publication

EP 1458300 A1 20040922 (EN)

Application

EP 02791916 A 20021223

Priority

- GB 0205893 W 20021223
- GB 0130975 A 20011227
- GB 0206207 A 20020315
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Abstract (en)

[origin: WO03055402A1] An electrosurgical cutting blade 1 comprises a first electrode 2, a second electrode 3, and an electrical insulator 4 separating the first and second electrodes. The first and second electrodes have dissimilar characteristics cross-sectional area, thermal conductivity etc. such that the first electrode 2 is encouraged to become an active electrode and the second electrode 3 is encouraged to become a return electrode. The spacing between the first and second electrodes between 0.25 mm and 3.0 mm and the peak voltage supplied to the electrodes 2 and 3 are both selected such that arcing does not occur directly between the electrodes, but between the first electrode and the tissue at the target site. The arrangement is such that, in use, a thermal differential of at least 50° C is established between the first and second electrodes 2 and 3, such that the second electrode is maintained below a temperature of 70° C. This is achieved either by thermally insulating the second electrode from the first electrode, and/or by transferring heat away from the second electrode, e.g. by conduction, forced cooling, or by means of a heat pipe 27.

[origin: WO03055402A1] An electrosurgical cutting blade (1) comprises a first electrode (2), a second electrode (3), and an electrical insulator (4) separating the first and second electrodes. The first and second electrodes have dissimilar characteristics (cross−sectional area, thermal conductivity etc.) such that the first electrode (2) is encouraged to become an active electrode and the second electrode (3) is encouraged to become a return electrode. The spacing between the first and second electrodes (between 0.25 mm and 3.0 mm) and the peak voltage supplied to the electrodes (2 and 3) are both selected such that arcing does not occur directly between the electrodes, but between the first electrode and the tissue at the target site. The arrangement is such that, in use, a thermal differential of at least 50° C is established between the first and second electrodes (2 and 3), such that the second electrode is maintained below a temperature of 70° C. This is achieved either by thermally insulating the second electrode from the first electrode, and/or by transferring heat away from the second electrode, e.g. by conduction, forced cooling, or by means of a heat pipe (27).

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IPC 8 full level

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