

Title (en)

PHASE SEPARATION OF CRYOGEN IN CRYOSURGICAL INSTRUMENT

Title (de)

PHASENTRENNUNG EINES KÄLTEMITTELS IN KRYOCHIRURGISCHEM INSTRUMENT

Title (fr)

SÉPARATION DE PHASES D'UN CRYOGÈNE DANS UN INSTRUMENT CRYOCHIRURGICAL

Publication

EP 3116428 A1 20170118 (EN)

Application

EP 14806769 A 20141106

Priority

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- US 2014064292 W 20141106

Abstract (en)

[origin: WO2015138010A1] A cryosurgical instrument including: a shaft having a closed distal end defining an expansion chamber and a proximal end that receives an inflow of cryogen and to exhaust a flow of expanded cryogen; and a heat exchanger with a cryogen delivery tube that spirals around a core disposed along a longitudinal axis thereof. The cryogen delivery tube, where it spirals, is in fluid tight contact with the inner surface of the shaft so as to form spiraling cryogen exhaust pathways that extend along a portion of a length of the cryosurgical instrument from the distal end of the shaft. The cryogen delivery tube forces a two-phase flow of cryogen to undergo phase separation by centrifugal forces and urges the liquid phase against the external walls of the spiral coil and the outer surface of the spiral gap. Heat exchanging occurs close to the external wall of the instrument.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

See references of WO 2015138010A1

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