

Title (en)

Method and plant for freezing soils by means of a cryogenic liquid.

Title (de)

Verfahren und Vorrichtung zum Gefrieren von Böden mittels einer Kryoflüssigkeit.

Title (fr)

Procédé et installation de congélation de sols au moyen d'un liquide cryogénique.

Publication

**EP 0165161 A1 19851218 (FR)**

Application

**EP 85401054 A 19850529**

Priority

FR 8408647 A 19840601

Abstract (en)

[origin: ES8608086A1] The injection of liquid nitrogen into the probe (2) is regulated in an on-off manner so as to maintain the temperature of the ground at the coldest point above a value within the range of between -140 DEG C. and -160 DEG C. so as to cause calefaction of the liquid nitrogen. The liquid nitrogen is alternately injected into the central passage (9) and into the annular passage (11) of the probe, these passages being thermally insulated from each other.

Abstract (fr)

L'injection d'azote liquide dans la sonde (2) est régulée en tout ou rien de façon à maintenir la température du sol au point le plus froid au-dessus d'une valeur comprise dans la plage - 140°C, - 160°C, de façon à assurer la caléfaction de l'azote liquide. L'azote liquide est alternativement injecté dans le passage central (9) et dans le passage annulaire (11) de la sonde, lesquels sont isolés thermiquement l'un de l'autre.

IPC 1-7

**E02D 3/115**

IPC 8 full level

**E02D 3/115** (2006.01); **E02D 19/14** (2006.01)

CPC (source: EP US)

**E02D 3/115** (2013.01 - EP US); **E02D 19/14** (2013.01 - EP US)

Citation (search report)

- [A] FR 2113980 A1 19720630 - UNION CARBIDE CANADA LTD
- [A] DE 3112291 A1 19821007 - LINDE AG [DE]
- [A] FR 2041356 A5 19710129 - AIR LIQUIDE
- [A] GB 642058 A 19500823 - JEAN PIERRE DAXELHOFER
- [A] US 3220470 A 19651130 - BALCH JOSEPH C

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AT396881B

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0165161 A1 19851218**; **EP 0165161 B1 19880803**; AT E36181 T1 19880815; CA 1269852 A 19900605; DE 3564142 D1 19880908; ES 543739 A0 19860601; ES 8608086 A1 19860601; FR 2565274 A1 19851206; FR 2565274 B1 19861017; JP S6117625 A 19860125; US 4676694 A 19870630

DOCDB simple family (application)

**EP 85401054 A 19850529**; AT 85401054 T 19850529; CA 482932 A 19850531; DE 3564142 T 19850529; ES 543739 A 19850531; FR 8408647 A 19840601; JP 11552185 A 19850530; US 73960285 A 19850529