

Title (en)

GRADING RING FOR AN HVDC TRANSFORMER WINDING OR AN HVDC REACTOR WINDING

Title (de)

SCHIRMRING FÜR EINE HGÜ-TRANSFORMATORSPULE ODER EINE HGÜ-DROSSELSPULE

Title (fr)

ANNEAU DE PROTECTION POUR UNE BOBINE DE TRANSFORMATEUR DE TRANSMISSION DE COURANT CONTINU HAUTE TENSION OU UNE BOBINE DE RÉACTANCE DE TRANSMISSION DE COURANT CONTINU HAUTE TENSION

Publication

**EP 2661760 B1 20180711 (DE)**

Application

**EP 11807943 A 20111227**

Priority

- DE 102011008462 A 20110107
- EP 2011074082 W 20111227

Abstract (en)

[origin: WO2012093052A1] The invention relates to a grading ring (24) for an HVDC transformer winding or an HVDC reactor winding. Said winding comprises an annular core (28), which has a conductive surface (29) and is surrounded by a layer (30) made of cellulose material. According to the invention, said layer (30) is designed as a composite, wherein the resistivity of said composite is reduced as compared to untreated cellulose material. This has the advantage that a voltage drop is better distributed over the layer (30) of the grading ring when an electric direct current field is applied to the grading ring. Load peaks can thus be reduced, and as a result the grading ring (24) can advantageously have a lower height (h) and/or smaller radii (r) of the corners of the cross-section of the grading ring and/or a thinner layer thickness (s) of the layer (30). The design freedom for creating the grading ring can thus advantageously be increased and the material requirement can be decreased.

IPC 8 full level

**H01F 27/32** (2006.01); **H01F 27/36** (2006.01)

CPC (source: EP US)

**H01F 27/324** (2013.01 - EP); **H01F 27/36** (2013.01 - EP); **H01F 27/363** (2020.08 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2012093052 A1 20120712**; BR 112013017401 A2 20161004; BR 112013017401 B1 20200929; CN 103415901 A 20131127; CN 103415901 B 20170517; DE 102011008462 A1 20120712; EP 2661760 A1 20131113; EP 2661760 B1 20180711

DOCDB simple family (application)

**EP 2011074082 W 20111227**; BR 112013017401 A 20111227; CN 201180069112 A 20111227; DE 102011008462 A 20110107; EP 11807943 A 20111227