Title (en)

ELEVATOR ROPE

Title (de)

AUFZUGSEIL

Title (fr)

CÂBLE D'ASCENSEUR

Publication

EP 3683179 A4 20210519 (EN)

Application

EP 18853024 A 20180717

Priority

- JP 2017173775 A 20170911
- JP 2018026671 W 20180717

Abstract (en)

[origin: EP3683179A1] Elevator ropes that allow reduction of the amount of change of rope elongation that results from a change in rope tension due to passengers getting in and off an elevator even if the breaking strength of ropes is improved to reduce the number of ropes are provided. An elevator rope of the present invention is an elevator rope formed by intertwisting a plurality of strands formed by intertwisting a plurality of steel wires, wherein when a diameter of the elevator rope is defined as d (mm), intervals between turns of the strands are defined as a rope pitch P₁, intervals between turns of the steel wires are defined as a strand pitch P₂, a ratio a of P₁to d, a ratio b of P₂to d and a breaking strength T (N) of the elevator rope satisfy the following Formula A. In Formula A explained above, E denotes a modulus of longitudinal elasticity (MPa) of a material used in the elevator rope, G denotes a modulus of transverse elasticity (MPa) of the material used in the elevator rope, and N denotes the number of the strands.

IPC 8 full level

D07B 1/06 (2006.01); **B66B 7/06** (2006.01)

CPC (source: EP)

B66B 7/06 (2013.01); **D07B 1/0673** (2013.01); D07B 2201/1014 (2015.07); D07B 2201/1044 (2013.01); D07B 2201/2025 (2013.01); D07B 2401/2005 (2013.01); D07B 2501/2007 (2013.01)

Citation (search report)

- [A] EP 2669426 A2 20131204 - TOKYO ROPE MFG CO [JP]
- [A] WO 03064760 A2 20030807 - THYSSEN ELEVATOR CAPITAL CORP [US]
- [A] JP 3910377 B2 20070425
- [A] JP 2016094677 A 20160526 - TOKYO SEIKO CO LTD
- [A] JP H05125676 A 19930521 - TOKYO ROPE MFG CO
- See also references of WO 2019049514A1

Cited by

WO2019049514A1

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)

EP 3683179 A1 20200722; **EP 3683179 A4 20210519**; CN 111065594 A 20200424; CN 111065594 B 20210727; JP 2019048698 A 20190328; JP 6767327 B2 20201014; WO 2019049514 A1 20190314

DOCDB simple family (application)

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