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(71) Applicant: OTIS ELEVATOR COMPANY [US/US]; 10 Farm Springs, Farmington, CT 06032 (US).

(72) Inventors: O'DONNELL, Hugh, J.; 289 Converse Street, Longmeadow, MA 01106 (US). OLSEN, Eric, G.; 147 Old Woodbury Road, Southbury, CT 06488 (US).

(74) Agent: HENLEY, Randy, G.; Otis Elevator Company, Intellectual Property Dept., 10 Farm Springs, Farmington, CT 06032 (US).

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(54) Title: SYNTHETIC NON-METALLIC ROPE FOR AN ELEVATOR

(57) Abstract

A hoist rope (18) for an elevator is formed from synthetic, non-metallic materials. The hoist rope (18) includes a plurality of load-carrying strands (28) with each strand (28) encased within a coating layer (32). The coating layers (32) provide protection against wear and provide sufficient lubricity to permit relative movement of the strands (28) to equalize loading on the strands (28). The plurality of strands (28) are surrounded by a jacket (34). The jacket (34) provides sufficient traction with a traction sheave (24), transfers traction loads to the strands (28) while permitting movement of the strands (28), and provides a flame retardant characteristic to the hoist rope (18). In one embodiment of a passenger conveyor system (10), the hoist rope (18) is engaged with a traction sheave (24) having a sheave liner (36). The material for the jacket (34) and sheave liner (36) are selected to optimize the coefficient of friction between the hoist rope (18) and traction sheave (24).

