

Development of Coated Steel Belts for Elevator Applications

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The Otis Elevator Company has developed a revolutionary new component to replace the traditional round steel ropes used in conventional elevators. The coated steel belt (CBS) technology involves encapsulating steel cords in a high abrasion resistant polyurethane jacket to form a thin belt which can be bent around smaller sheaves than normal round steel ropes. This technology has been applied in Otis' unique Gen2 elevator system. This paper will present some of the technical design challenges associated with the CBS development and the testing and analysis that was performed to ensure component robustness.