

Floor for a lift cage

The invention relates to a floor for a lift cage according to the preamble of claim 1. Lift cages are, for example, installed in cage frames which in turn are guided at rails fastened in lift shafts and are moved up and down by drive engines via wire cables or other support means. Stiff cage floors can be executed in composite structure mode of construction or sandwich mode of construction, whereby the floor is distinguished by a high static and dynamic capability of loading and by a comparatively low weight. A 'sandwich' floor of that kind can be constructed substantially from the following components: a first plate (base plate) for predetermining a lower side, a second plate (top plate) spaced from the first plate and a support structure arranged therebetween.

A comparable floor of this category has become known from EP 1 004 538 A1. The support structure arranged between two plates consists of a plurality of intersecting flat profile members which in EP 1 004 538 A1 are termed slats. The longitudinal and transverse profile members are joined together by way of mutually complementary slots to form a grating-like composite structure and are subsequently welded together. In practice it has proved that even this floor, which is stiff in bending, is no longer sufficient for, primarily, purposes of use with very high mechanical loads.

A floor in sandwich mode of construction has become known from EP 566 424 A1, which comprises two layers, which are arranged one above the other and separated from one another by an intermediate plate, with a honeycomb structure. Each honeycomb layer has honeycombs of identical construction uniformly distributed over the entire area. The two honeycomb layers in that case have honeycombs of different size. The honeycomb layers superimposed in plan view define a packing density which remains unchanged over the entire floor area.

It is accordingly an object of the present invention to avoid the disadvantages of the prior art and, in particular, to create a floor of the kind stated in the introduction which even under particularly high mechanical loads satisfies high demands with respect to stiffness and capability of loading. Moreover, the floor shall be capable of production simply and economically.

According to the invention these objects are fulfilled by a floor with the features of claim 1. The flat lower side for the floor can be formed by a metallic plate, for example of steel. A second plate for predetermination of the flat upper side can be arranged approximately planoparallelly to this base plate. This top plate can, like the base plate, similarly consist of steel or another metallic material. However, it would obviously also be conceivable to provide other materials or

FLOOR FOR AN ELEVATOR CAR

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