Patent claims

1. Handrail (2) for an escalator or a moving walkway, comprising a grip strip (3), a guide (4) with guide surfaces (5) at a balustrade upper side (7) of a balustrade (6), and a drive (8) which moves the handrail (2) along the guide (4) by a traction means (9), characterised in that a casing surrounds the grip strip (3), wherein the casing is at least in part of self-extinguishing plastics material, that the grip strip (3) consists of individual segments in its longitudinal direction (14), that the individual segments have in the cross-section thereof bracing (27a, 27b, 28a, 28b) which separates cavities (29a to 29d) between the bracing and the casing from one another, that the grip strip (3) lies in the length or width of the handrail in a range between 40 and 78 mm, preferably between 70 and 75 mm, that the grip strip (3) lies in height in a range of 34 to 70 mm, preferably between 35 and 62 mm, and that the casing has a thickness which is substantially smaller than the width or height of the handrail.

2. Handrail (2) according to claim 1, characterised in that the grip strip (3) consists of different materials or different plastics materials or of a material compound.

3. Handrail (2) according to one of the preceding claims, characterised in that the grip strip (3) is completely or partially of self-extinguishing plastics material, preferably a fifth to three-quarters.

4. Handrail (2) according to any one of the preceding claims, characterised in that the self-extinguishing plastics material does not contain any chlorides and/or any fluorides and/or any halogens and/or any phosphorous.

5. Handrail (2) according to any one of the preceding claims, characterised in that the self-extinguishing plastics material in the event of ignition does not release or emit any inert gases and/or any sulphur dioxide and/or any sulphurous acid and/or any ammonia and/or any nitrogen oxide and/or any nitric acid and/or any sulphuric acid and/or any soot and/or any hydrocyanic acid or hydrogen cyanide and/or any hydrogen fluoride and/or any hydrogen chloride and/or any hydrogen bromide and/or any hydrogen iodide and/or any nitrous substances and/or any nitrous gases.

6. Handrail (2) according to any one of the preceding claims, characterised in that the

self-extinguishing plastics material has a bending strength in a range of 30 to 185 N/mm^2, but preferably 50 to 95 N/mm^2.

7. Handrail (2) according to any one of the preceding claims, characterised in that the inflammability rate according to the test of Underwriters Laboratories UL 94 at 0.75 mm thickness corresponds with at least class V1, preferably class V0.

8. Handrail (2) according to any one of the preceding claims, characterised in that that the grip strip (3) has an oval or elliptical cross-section with the dimensions 40 to 70 mm length and 40 to 60 mm height.

Patent Claims

1. A handrail for an escalator or a moving walkway, comprising: a grip strip, a guide with guide surfaces at an upper side of a balustrade, and a drive for moving the handrail along the guide by a traction means, the grip strip comprising layers of at least two different materials with a cover layer only of a self-extinguishing plastic and having a plurality of longitudinally arranged individual segments, each of the segments having interior transversely extending bracings with separate interior cavities, an exterior surface of the cover layer of each segment being formed as one of a group consisting of a physical vapor deposition surface, a metallized surface, a diamond-like carbon layer, a plasma surface, and a nano surface.

2. The handrail according to claim 1, wherein the self-extinguishing plastic does not contain any chlorides, fluorides or halogens or phosphorous.

3. The handrail according to claim 1, wherein the self-extinguishing plastic is chosen from a material of a group that, in the event of ignition does not release or emit any inert gases, sulphur dioxide, sulphurous acid, ammonia, nitrogen oxide, nitric acid, sulphuric acid, soot, hydrocyanic acid, hydrogen cyanide, hydrogen fluoride, hydrogen chloride, hydrogen bromide, hydrogen iodide, any nitrous substance, or any nitrous gas.

4. The handrail according to claim 1, wherein the self-extinguishing plastic material has a bending strength in a range of 30 to 185 N/mm^2.

5. The handrail according to claim 1, wherein the self-extinguishing plastic has a creep current resistance of over 400 volts.

6. The handrail according to claim 1, wherein the inflammability rate of the handrail according to Underwriters Laboratories standard UL 94 at a 0.75 mm thickness corresponds to at least class V1.

7. The handrail according to claim 1, wherein the grip strip has an oval or elliptical cross-section with a 40 to 70 mm width and 40 to 60 mm height.