Patent Claims

1. A side monitoring device (13) for a passenger transport system (1), wherein the side monitoring device (13) is configured for monitoring a force application upon a base plate (9) of the passenger transport system (1) along a gap (11) formed between a transport band (5) of the passenger transport system (1) and the base plate (9),
wherein the side monitoring device (13) comprises:
a mounting (15),
at least one elongate belt (19) and
a force sensor (21),
wherein the mounting (15) is configured for the installation of the side monitoring device (13) in a base plate region (10) of the passenger transport system (1) adjacent to a transport region (6), in which multiple tread units (7) of the transport band (5), which are arranged behind one another and coupled to one another, are displaced along a traveling path (25) during the operation of the passenger transport system (1), wherein the belt (19) is functionally connected to the mounting (15) and extends parallel to at least a portion of the traveling path (25), and wherein the force sensor (21) is functionally connected to the belt (19) and configured for detecting a force exerted upon the mounting (15) by the belt (19) in a direction of displacement (27) extending parallel to the traveling path (25), **characterized in** that the side monitoring device (13) furthermore comprises a supporting device (29), which is stationarily held in the base region (10) after its installation and arranged on a side of the belt (19) lying opposite of the transport region (6), wherein the supporting device (29) supports the belt (19) against a motion that is directed laterally away from the transport region (6).

2. The side monitoring device according to claim 1, wherein the belt (19) is held in such a way that it can be displaced over a displacement distance (37) in the direction of displacement (27).

3. The side monitoring device according to claim 2, wherein the displacement distance (37) amounts to at least 50 cm.

4. The side monitoring device according to one of the preceding claims, wherein the mounting (15) is supported on the supporting device (29).

5. The side monitoring device according to one of the preceding claims, wherein the supporting device (29) comprises guide structures (35) on its surface that is directed toward the belt (19), wherein said guide structures are configured for guiding the belt (19) vertically and transverse to the direction of displacement (27) during its displacement in the direction of displacement (27).

6. The side monitoring device according to one of the preceding claims, furthermore comprising a sliding element (31) that is interposed between a surface of the supporting device (29) and an opposing surface (43) of the belt (19), wherein the surface (41) of the sliding element that contacts the surface (43) of the belt (19) has a lower coefficient of sliding friction than a surface (39) of the supporting device (29) that contacts the surface (43) of the belt (19).

7. The side monitoring device according to one of the preceding claims, comprising a plurality of belts (19) that extend vertically adjacent to one another parallel to the traveling path (25) and parallel to one another.

8. The side monitoring device according to one of the preceding claims, wherein the force sensor (21) is a strain gauge (33).

9. The side monitoring device according to one of the preceding claims, wherein the belt (19) is realized in the form of a plastic belt.

10. The side monitoring device according to one of the preceding claims, wherein the belt (19) is realized in the form of a metal strip.

11. A passenger transport system (1) comprising:
multiple tread units (7) that are arranged behind one another, coupled to one another and can be displaced along a traveling path (25) within a transport region (6) and
a side monitoring device (13) according to one of claims 1 to 10,
wherein the mounting (15) of the side monitoring device (13) is installed in a base plate region (10) adjacent to the transport region (6) and the belt (19) of the side monitoring device (13) extends parallel to at least a portion of the traveling path (25), **characterized in** that the supporting device (29) is stationarily held in the base region (10) after its installation and arranged on a side of the belt (19) lying opposite of the transport region (6), wherein the supporting device (29) supports the belt (19) against a motion that is directed laterally away from the transport region (6).

12. The passenger transport system according to claim 11, wherein the passenger transport system (1) comprises a safety chain circuit (45) with multiple safety switches (47) that are connected to one another in series, and wherein the force sensor (21) forms part of the safety chain circuit (45) and is designed for opening a switching state and for thereby interrupting the safety chain circuit (45) when

it is detected that a force exceeding a minimum force value is exerted upon the mounting (15) by the belt (19).

13. The passenger transport system according to one of claims 11 or 12, wherein the force sensor (21) is realized in the form of a strain gauge (33), and wherein the passenger transport system (1) furthermore comprises a measuring device (49) that is configured for generating a stop signal, based on which the operation of the passenger transport system (1) can be stopped, when it is detected that a force exceeding a minimum force value is exerted upon the force sensor (21) by the belt (19).