Patent Claims

1. A method for testing the tension stress in tension elements (22.1, 22.2, 22.3, 22.4) of a tension element cord, having the following steps:

provision of a measuring gage (100) which is designed to be clamped between two tension elements (22.1, 22.2, 22.3, 22.4) of the tension element cord,

definition of a fixed point (M) at a point (25) stationary with respect to the tension element cord and of a reference point (M1) of the measuring gage (100),

clamping of the measuring gage (100) between two length sections of the tension elements (22.1, 22.2, 22.3, 22.4) of the tension element cord,

determination whether displacement of the reference point (M1) of the measuring gage (100) with respect to the defined fixed point (M) occurs, such displacement being dependent on the difference of the tension stresses (F1, F2) in the two tension elements (22.1, 22.2, 22.3, 22.4).

2. The method as claimed in claim 1, the tension elements (22.1, 22.2, 22.3, 22.4) being belts or ropes.

3. The method as claimed in claim 1 or 2, said method being used in an elevator system (20) in order to detect different tension stresses (F1, F2) in two or more tension elements (22.1, 22.2, 22.3, 22.4) of the elevator system (20).

4. The method as claimed in claim 3, the fixed point (M) being defined on a guide rail (25) of the elevator system (20) which is located in the middle between the two tension elements (22.1, 22.2, 22.3, 22.4).

5. The method as claimed in one of the preceding claims, the reference point (M1) of the measuring gage (100) being marked on the latter, the definition of the fixed point (M) taking place in that the reference point (M1) of the measuring gage (100) is transferred to a stationary point (25).

6. The method as claimed in one of the preceding claims, the measuring gage (100) being clamped between the two tension elements (22.1, 22.2, 22.3, 22.4) by these being pressed apart from one another.

7. The method as claimed in one of the preceding claims, the clamping of the measuring gage (100) and the determination of displacement being repeated in each case for different pairs of tension elements (22.1, 22.2, 22.3, 22.4).

8. The method as claimed in one of the preceding claims, the measuring gage (100), after being clamped, lying in a plane which stands perpendicularly to the plane spanned by the tension elements (22.1, 22.2, 22.3, 22.4) before clamping.

9. The method as claimed in one of the preceding claims, the tension stress being adjusted in one or in both tension elements (22.1, 22.2, 22.3, 22.4), the tension stresses (F1, F2) of which are related to one another by means of the measuring gage (100).

10. A measuring gage (100) which has two side faces (101.1, 101.2) lying symmetrically to a reference point (M1) of the measuring gage (100), characterized in that, to test the tension stress in tension elements (22.1, 22.2, 22.3, 22.4) of a tension element cord, the measuring gage (100) can be clamped between two tension elements (22.1, 22.2, 22.3, 22.4) of said tension element cord, and in that the measuring gage (100) comprises a sprit level or a spirit level attachment.

11. The measuring gage (100) as claimed in claim 10, the measuring gage (100) having a U-shape or C-shape.

12. The measuring gage (100) as claimed in claim 10, the measuring gage (100) having, in addition to the two side faces (101.1, 101.2), two further side faces (102.1, 102.2) which also lie symmetrically to a reference point (M1) of the measuring gage (100).

Claims

1. A method for testing a tension stress in tension elements of a tension element cord, comprising the following steps:

providing a measuring gage which is configured to be clamped between two tension elements of the tension element cord, the measuring gage having a reference point;

holding the measuring gage adjacent the tension elements and establishing a fixed point at a point stationary with respect to the tension element cord using the reference point of the measuring gage;

clamping the measuring gage between sections of the two tension elements of the tension element cord; and

determining whether displacement of the reference point of the measuring gage with respect to the fixed point occurs, such displacement being dependent on and an indication of a difference of tension stresses in the two tension elements.

2. The method according to Claim 1 wherein the two tension elements are belts or ropes.

3. The method according to Claim 1 including performing the method in an elevator system to detect different tension stresses in two tension elements of the elevator system.

4. The method according to Claim 3 wherein the fixed point is on a guide rail of the elevator system which is located between the two tension elements.

5. The method according to Claim 1 wherein the reference point of the measuring gage is marked on the measuring gage and the fixed point is established by transferring the reference point to the stationary point.

6. The method according to Claim 1 wherein the measuring gage is clamped between the two tension elements by the two tension elements being pressed apart from one another.

7. The method according to Claim 1 wherein the tension element cord has more than two of the tension elements and the steps of clamping and determining are repeated for different pairs of the tension elements of the tension element cord.

8. The method according to Claim 1 wherein the measuring gage, after being clamped, extends longitudinally in a direction perpendicular to a longitudinal direction of each of the tension elements before clamping.

9. The method according to Claim 1 adjusting the tension stress in at least one of the two tension elements based upon the displacement of the reference point of the measuring gage.