Claims

1. Monitoring apparatus (1) for a laser beam (6), comprising a body (3) having a passage opening (5) and a light-sensitive sensor (4) that is disposed on the body (3), wherein impact of the laser beam (6) onto the body (3) can be detected using the sensor (4), wherein the body (3) is a light wave guide being a hollow profile (3) having a closed cross-section and arranged such that the laser beam (6) can be coupled into the hollow profile (3) if the laser beam (6) impacts the hollow profile (3).

2. Monitoring apparatus (1) according to claim 1, characterized in that the hollow profile (3) has a mantle surface (9), wherein the sensor (4) is disposed on the mantle surface (9).

3. Monitoring apparatus (1) according to one of claims 1 or 2, characterized in that the hollow profile (3) has a first face surface (10) and a second face surface (11), wherein the second face surface (11) has a greater roughness than the first face surface (10).

4. Monitoring apparatus (1) according to one of the preceding claims, characterized in that the hollow profile (3) is produced from an optically conductive material, particularly acrylic glass.

5. Monitoring apparatus (1) for a laser beam (6), comprising a body (7) having a passage opening (5) and a sensor (4) that is disposed on the body (7), wherein impact of the laser beam (6) onto the body (7) can be detected using the sensor (4), wherein the body (7) is an electrical conductor (7) that is formed into at least one winding, and the sensor (4) is configured for measuring a resistance of the electrical conductor (7).

6. Monitoring apparatus (1) according to claim 5, characterized in that the electrical conductor (7) is guided in circular shape, so that a round passage opening (5) is present.

7. Laser apparatus (2), comprising a laser source (14) and a monitoring apparatus (1) according to one of the preceding claims, wherein the laser source (14) is configured for emitting the laser beam (6) through the passage openings (5) of the body (3, 7, 8) of the monitoring apparatuses (1).

8. Method for monitoring a laser beam, comprising the steps
   - emitting a laser beam (6) from a laser source (14), through a passage opening (5) of a body (3, 7), and
   - recognizing that the emitted laser beam (6) has been coupled into the body (3) using a light-sensitive sensor (4), wherein the body (3) is a light wave guide being a hollow profile (3) having a closed cross-section, or
   - measuring a resistance of an electrical conductor (7), wherein the body (7) is said electrical conductor (7) that is formed into at least one winding.