CLAIMS

1. A tunnel boring machine having a number of sliding tube units, each with a sliding tube flange (215), with a sliding tube bearing ring (212) and with a sliding tube (209) which is connected to the sliding tube flange (215) and to the sliding tube bearing ring (212) and in which an excavation tool (106) is displaceably mounted for a tool change, and having at least one load measuring element (242) which is configured to measure loads exerted on excavation tools (106), **characterized in that** at least one load measuring element receptacle (236) extending in the axial direction is designed in at least some sliding tubes (209), that the or each load measuring element receptacle (236) is designed in a blind hole manner and that a load measuring element (242) is arranged in at least one load measuring element receptacle (236).

2. The tunnel boring machine according to claim 1, characterized in that the or each load measuring element receptacle (236) designed in a sliding tube (209) has an internally threaded region (309) and the load measuring elements (242) have an externally threaded portion (321) associated with the internally threaded region (309).

3. The tunnel boring machine of claim 2, characterized in that each load measuring element (242) comprises an end portion (315) and a head portion (318) extending between the end portion (315) and the externally threaded portion (321), wherein the end portion (315) and the termination of the load measuring element receptacle (236) designed in the sliding tube (209) are shaped in such a way that a line- or strip-like peripheral contact region is designed between the end portion (315) and the termination of the load measuring element receptacle (236) designed in the sliding tube (209).

4. The tunnel boring machine according to claim 3, characterized in that each load measuring element (242) is arranged on the head portion (318) of at least one load sensor part (403).

5. The tunnel boring machine according to claim 4, characterized in that each sliding tube (209) is connected to a sliding tube bearing ring (212) on the side opposite the load measuring element (242).

6. The tunnel boring machine according to claim 5, characterized in that each sliding tube (209) rests against a sliding tube flange (215) in the region of a load measuring element (242).

7. The tunnel boring machine according to claim 6, characterized in that the sliding tube flange (215) has a number of load measuring element bushings (239) corresponding to the number of load measuring element receptacles (236) designed in the sliding tube (209), which load measuring element bushings (239) are aligned with the respectively associated load measuring element receptacle (236).

8. The tunnel boring machine according to any of claims 1 to 7, characterized in that each load measuring element (242) is connected to a connecting cable (330) for outputting electrical signals.

9. The tunnel boring machine according to claim 8, characterized in that a mounting protective housing (245) is present into which the connecting cable (330) opens.

10. The tunnel boring machine according to claim 9, characterized in that an adapter cable (506) with two connectors (509, 512) is present which is arranged in the mounting protective housing (245).

11. The tunnel boring machine according to claim 10, characterized in that the adapter cable (506) is connected to a connecting cable plug (512) which is designed with external contact strips (518).

12. The tunnel boring machine according to claim 11, characterized in that the connecting cable plug (512) is arranged in a connection chamber (515) and in that a wall recess (527) is designed in a wall of the connection chamber (515) in the region of the connecting cable plug (512).