Printing system for creating a concrete support structure for a passenger transport system

The invention relates to a printer device for creating a concrete structure of a passenger transport system configured as an escalator or moving walkway.

Passenger transport systems, which are configured as escalators or as moving walkways, are used in buildings in the public sector, for example in train stations, subway stations, airports as well as in shopping malls, cultural centers and the like. Escalators or moving walkways have a supporting structure, which is referred to as a load-bearing structure. Most of the time, this structure is a truss structure, which is manufactured by the manufacturer as a complete unit or divided into load-bearing modules. The load-bearing structure or its load-bearing modules or truss modules are installed into a building with the load-bearing structure connecting two floors of the building, for example. In this load-bearing structure, the movable components of the escalator or moving walkway, for example a step belt or a pallet belt, deflecting axes, a drive shaft and the drive motor with gears, its control, monitoring systems, safety systems and the like, are installed. Furthermore, stationary components such as balustrades, comb plates, support points, tracks and guide rails are also firmly fastened to the load-bearing structure. If the load-bearing structure is subdivided into load-bearing modules, each separation point formed thereby constitutes a considerable increase in material, manufacturing time and assembly time. Therefore, separation points are avoided as much as possible or their number is kept as small as possible, which means that this component with its very large dimensions is transported from the place of manufacture to the place of use. This creates a large transport volume, which causes comparatively high transport costs.

Escalators and moving walkways of the aforementioned type or their modules are therefore large, bulky parts which, because of their structure, cannot be installed into a load-bearing structure as arbitrarily segmented components. As mentioned above, all the components of the escalator are mounted to the load-bearing structure, which supports them at two opposing support points in the structure. In other words, this means that the load-bearing structure extends across the entire planned length of the passenger transport system.