

STRUCTURES TO BE APPROVED BY AN INDEPENDENT STRUCTURAL ENGINEER

On-site structural statics inspections

For safety reasons, all structures which - particularly if incorrectly constructed - could pose a danger for the physical wellbeing, life and health of individuals, will be inspected by an independent structural engineer. The inspection is conducted during tours of the structures in the assembly period in compliance with norm EN13814 point 7.7.2., and serves as an official inspection required for the approval of structural statics.

Features subject to statics inspections are:

- All overhead structures, such as portals and all structures suspended from - or affixed to - the ceiling, pre-installed suspension points etc., except for textile-based decorative features which do not pose threats to the physical wellbeing, life and health of individuals - even if they fall.
- All structures with upper floors and all walkable stage constructions, except runways and stages constructed from pre-approved stage/platform elements proven to carry at least 5.0 kN/m², and system-compatible safety barriers, hand rails and bannisters up to a height of 0.8 m.
- Expo booth structures and crossbeam truss constructions built to a height of 4 metres or more.
- Free-standing columns and free-standing walls built to a height of 2.5 metres or more.
- Custom-built structures, the construction of which is subject to the provision of all essential statics information (as with items such as tensioned cable constructions, cable suspension bridges etc.)
- The authorities are entitled to conduct additional inspections if considered prudent.

All structures not subject to an obligation to be inspected must be erected and installed to guarantee requisite structural stability, operational safety and to comply with all the latest applicable technical standards. A proof of stability must be kept at the stand for an official inspection.

Inspection fundamentals:

Structures and their measurements are evaluated according to the most recent and legally enforceable version of **Norm EN13814** governing the safety of mobile constructions and build-ons for show venues and amusement parks.

Procedure:

Depending on the size and complexity of the event in question, inspections may either be conducted in a single step - when all essential construction work has been completed, or in two steps - involving a walk-around inspection during construction, and a final inspection when all essential construction work has been completed.

While conducting these walk-around inspections, the assessor must be given full access to all required construction plans, component approval documents, truss load tables, statics measurements, calculations for suspended loads, as well as the required static calculations for all constructions with upper floors and free-standing wall structures. Structures and their measurements are evaluated according to the specifications of the most recent, legally valid version of **Norm EN13814**.

All relevant documents must be kept on-site by technical companies and stand builders and have to be presented upon request to the civil engineer, RX or the authorities.