

ANNEXURE – 1

“Structural Engineer for Certification of Temporary Structure”

The structural Engineer will be responsible for ensuring and certifying that all temporary set-up (like the stage, double story stand, rigging etc.,) is adequately & safely constructed and implemented on the site.

They are responsible for certifying any type of temporary structure like the stage, stands/booths (with the mezzanine floor), trusses at height for ariel performance, and other, rigging, etc., constructed. Their work/certification relates to the structure design stability, material quality, strength capacity, fit to human use, and secure working. They will have a duty to manage and monitor the designs/drawings submitted to them throughout its implementation.

The structural Engineer will be one of the first ports of call before the initiation of any temporary structure set-up. They will be consulted by the client, exhibitor, vendor, and construction team to consider the overall constructability of the structure.

This structural Engineer will be appointed by the client, exhibitor, vendor, and construction team, who will be responsible for the temporary structure constructed at the site.

Structural Engineer needs to be competent in their areas of work, with the appropriate up-to-date training, qualifications, and experience required for the complexity of the task at hand.

Roles and Responsibilities of a Structural Engineer:

They have a duty to study & approve the plans/drawings and monitor the design approved through out its construction & implementation.

They should ensure that all temporary works/construction designs are constructed following relevant drawings and specifications which are set out by the designer. Furthermore, they are responsible for the permit to load ensuring that all appropriate steps have been taken to ensure the stability of the temporary structure.

They will be required to check periodically that the temporary works have not been altered since being constructed on-site and then before loading.

The role of the entity is an important part of the temporary construction process as they will be responsible for overseeing the temporary works from creating the register and design briefs through to inspection and quality checks.

They will ensure that all Temporary Works/constructions are carried out in accordance with the Bureau of Indian Standards or applicable international standards or if they have its own temporary works procedure KINEXIN will work with these on a project-by-project basis with prior approvals.

They will also responsible for health, safety and welfare – should have a sound knowledge of legislation, hazards and safe systems of work, ability to manage health, safety and welfare within own area of responsibility. They should have interpersonal skills and communication – ability to communicate well with others at all levels, ability to discuss ideas and plans competently and with confidence.

They make sure the contractors should be able to demonstrate that they have in place effective arrangements for controlling risks arising from the use of temporary works:

- Appointment by organizer or contractor

- Preparation of an adequate design brief.
- Completion and maintenance of a temporary works record
- Design risk assessment and methodology of improvement
- Independent checking of the temporary works design.
- Issue of a design/design check certificate
- Pre-erection inspection of the temporary works

They will be responsible for checking that the temporary works have been erected in accordance with the design, and issue a formal "permit to load" where necessary.

They are responsible for ensuring that the procedures for the control of temporary works are implemented on-site. Also responsible for ensuring that a suitable temporary works design is prepared, checked and implemented on site in accordance with the relevant drawings and specification.

They should have a formal appointment from the organizer/contractor and should have adequate authority to carry out his/her tasks, including stopping the work if it is not satisfactory.

Requirement

They should have relevant up-to-date training, experience, and qualifications appropriate to the complexity of the project. Ideally, they would:

- Have experience of the relevant types of temporary work.
- Have completed formal training as per BIS.
- Hold a Degree / HND in civil/ structural engineering.
- Be a Chartered Civil / Structural Engineer

Record of work

It should contain a list of all identified temporary work items associated. These can be set out as a table using appropriate headings, which could include:

- Design brief number (for each item) and date issued
- Short description of temporary works
- Date required
- Category of temporary works
- Designer
- Design Checker
- Date design complete
- Date design checked/approved
- Erection complete and checked or "Permit to Load" "Permit to Dismantle"

References:

- BIS (Bureau of Indian Standards) - <https://www.bis.gov.in/>
- BSI (British Standards Institution) (2008) BS 5975:2008: Code of practice for temporary works procedures and the permissible stress design of falsework. BSI, Milton Keynes.
- ICE (Institution of Civil Engineers) (2010) ICE 3002 Route to Technician Membership. ICE, London