

MEMENTO

Removable Equipment and Sets

First English edition – May 2017



PREFACE

The lack of regulations on removable equipment and sets for designers, builders, service providers and auditors imposed the use of manufacturer's assembly instructions / model appraisal.

In February 2015, Synpase decided to resume the work abandoned in 2014 by the Ministry of the Interior, in order to produce "Good professional practice" for removable equipment and sets' implementation.

For 18 months, a group comprised of all the actors concerned with removable equipment and sets security issues worked to produce this founding text.

Today, this handbook brings a useful answer tailored for this sector's expectations. This is a practical and documented reference tool.

This handbook is made to evolve with technological progress or regulation evolutions, hence this new edition and the digital version online.

I hope that you enjoy reading it and make good use of it.

Patrick Fromentin, President



MEMENTO

Removable Equipment and Sets

First English edition – Avril 2017



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PREREQUISITES

This Handbook should make it possible to work risk-free and to accommodate people safely, also, the nine main principles of risk prevention defined by the Labour Code in Article L.4121-2 as well as the amended safety regulation to counter the risks of fire in the ERP adopted by decree on 25 June 1980 and the applicable standards are a necessary prerequisite:

The 9 general principles of prevention (Labour Code)

This Handbook should make it possible to work safely and to accommodate people safely, also, the nine general principles of risk prevention set out by the Labour Code in Article L.4121-2 are a necessary prerequisite:

- Avoiding risks;
- Evaluating risks that cannot be avoided;
- Combating risks at the source;
- Adapting work to the individual;
- Taking into account the state of technical progress;
- Replacing anything dangerous with something non-dangerous or less dangerous;
- Planning prevention;
- Giving priority to collective protection measures;
- Giving appropriate instructions to workers.

The fundamentals of ERP regulation (modified decree of 25 June 1980)

- Facilitating the quick and safe evacuation of people;
- Ensuring access to facades for the fire fighters;
- Building components (the building's structure, doors, partitions, sheathing, ceilings and floors) and decoration materials must be fire-resistant;
- The layout, distribution and isolation must ensure that occupants and third parties are protected;
- The number and width of exits and passageways must be proportionate to the number of people who are going to be using them;
- Emergency lighting is mandatory;
- The storage, distribution and use of explosive and toxic products and flammable liquids is prohibited in places accessible to the public;
- Technical installations must have compulsory security and correct functioning guarantees;
- Every establishment must have a means of alerting fire fighters and the public, trained staff and risk-appropriate emergency facilities.

TITLE I

Scope of application

Article 1 - [Definition of removable equipment and sets](#)

This text applies to removable equipment and sets, hereinafter “removable sets”, installed for temporary events, without prejudice to any obligations arising from other regulations.

§ 1. It consists of a removable set, all frames are designed to be able to be assembled and disassembled repeatedly or for a one-off, and installed temporarily for accommodating people, for instance for any cultural events, sporting events, exhibitions, conferences, whatever the installation site may be.

§ 2. Removable sets are temporary installations set up inside or outside closed and/or covered constructions for no longer than 3 months, excluding assembly and disassembly times.

This period of time can, however, be extended for the duration of cultural, commercial, tourism and sporting events, up to a maximum of one year for removable sets directly related to this event.

Installations lasting longer than 3 months constitute an extended installation.

Beyond the limit of one year, cited above, the removable sets are considered, calculated and verified according to the requirements applicable to permanent buildings.

§ 3. Removable sets include:

- The frames intended to support people (OP) include the stands and their integrated equipment, podiums, walkways, stairs, ramps, stages, raised platforms, stage management, tracking and camera towers, etc.;
- The stage equipment frames (OS) support the sets, ceilings, walls, lighting, sound system, screens, video, advertising materials and signage, etc.;
- The stage equipment frames (OS) only support authorised personnel subject to the technical requirements related to assembly, disassembly and maintenance;
- Accessories contribute to the installation, lifting and maintenance of the frames. They include hoists, slings, guy wires, pulleys, carts, shackles, axles, pins, etc.

§ 4. The terms and definitions in the Glossary clarify the provisions in this Handbook.

§ 5. The following shall be excluded from the scope of this Handbook:

- Cart-type towed stages on wheels;
- Telescopic stands.

Article 2 - [Sturdiness and stability of the removable sets](#)

§ 1. Removable sets are designed, manufactured, installed and maintained so as to ensure their sturdiness and stability, and to allow the safe accommodation and evacuation of all people on site. The technical requirements for these removable sets are defined in Title II onwards.

§ 2. The manufacturer of the component parts and removable sets provides technical instructions, the content of which is defined in article 28.

§ 3. The owner ensures that the component parts of the removable set are in good condition before they are made available to the installer.

§ 4. The installer ensures that the removable set is assembled correctly in accordance with the manufacturer's technical instructions.

§ 5. The user appoints any person or company working in or on the removable set to put on a show or an event. This removable set is likely to be completed without changing its structural and safety features, except with written agreement from the installer.

§ 6. Components added on to the removable sets shall comply with the provisions of the texts that apply to them and shall not be detrimental to the sturdiness and stability of the structure as well as the safety of the set.

§ 7. The inspection of the removable sets is carried out by a qualified technician (cf. articles 20 and 21) or an ERP-authorized inspection body or a CTS-authorized audit office following the methods outlined in Title XI.

§ 8. The aim of a COFRAC accreditation specific to removable sets is to be achieved within 5 years following the publication of this text.

§ 9. The technical audit bodies applying for approval from the Ministry of the Interior for regulatory audits of marquees, tents and structures are accredited for this activity beforehand as Type A inspection body under the NF EN ISO/CEI 17020 standard by the French accreditation committee or by any other equivalent accreditation body that is a signatory of the multilateral agreement reached within the framework of the European coordination of accreditation bodies.

Article 3 - [Labelling of the removable sets](#)

The components that contribute to the sturdiness of a removable set are labelled in a non-removable way so as to ensure their traceability. The type and methods of labelling to be carried out are determined below separately for new and existing equipment.

§ 1. Labelling of new equipment.

§1.1 The labelling of the new equipment is carried out by the manufacturer. In general, all the elements and components contributing to the stability/sturdiness of the structure or people's safety are labelled (excluding pins and axles).

The labelling shall include at least the following information:

- The name or the acronym of the manufacturer;
- The model number which makes it possible to make the link between this number and the technical data sheet for the product;

The year of manufacture or any indication that makes it possible to find the year of manufacture (such as the order number, batch number of manufacture, etc.). Every reference is made up of letters, numbers or a combination of both. This labelling, which is easily identifiable and legible, is carried out in a durable way. It is compatible with the size of the parts. The formulation of the labelling is specified in the manufacturer's technical instructions defined in the Glossary.

The list of parts to be labelled include:

- Bases, fixed or articulated footings, articulated or non-articulated adjustable base plates;
- Load-bearing parts, jambs, poles, trusses, frames and elevation triangles;
- Double members;
- Gin poles;
- Bracing elements (excluding bracing by tubes and collars);
- Support elements for seats or benches;
- Frames or floor supports;
- Floor elements;
- Protection against falls from a height (railing).

§1.2 Labelling of the seats.

The individual seat comprises the seat and its attachment. When the seat is moulded, only the labelling confirming its reaction to fire is required.

§1.3 Labelling of accessories.

The maintenance and lifting accessories include a specification of their SWL (Safe Working Load), or WLL (Working Load Limit).

In addition to the manufacturer's mark, the scaffolding assembly collars also bear the model number.

§ 2. Labelling of existing equipment.

§2.1 The labelling of existing material shall be carried out by the owner of the removable set no later than 1 January 2020. However, on the expiry of this deadline, the labelling is only necessary when the parts are removed from storage.

§2.2 The labelling of existing equipment is ensured on a durable basis (by way of a stamp, a ring, etc.). It is labelled "earlier than (four digits of the year of publication of the document)» and specifies the manufacturer's name or acronym if known, or otherwise the name or the initials of the owner.

Article 4 - [List of the parts to be labelled](#)

§ 1. For the removable stands:

- Trusses;
- Elevation components;
- Bracing components;
- Seat support components;
- Railings;
- Floors or floor frames/supports;
- Bases, fixed or articulated footings, articulated or non-articulated adjustable base plates, jacks;

§ 2. For scaffolding and towers:

- Jambs;
- Trusses, frames;
- Double members;
- Diagonals;
- Prefabricated frames or floor supports;
- Protection against falls from a height (railings and baseboards);
- Stair components;
- Bases, fixed or articulated footings, articulated or non-articulated adjustable base plates, jacks. The main parts bear the mark provided for by the NF EN 12810-1 standard.

§ 3. For the stages and covered stages:

- Jambs, poles, trusses, frames;
- Frames or floor supports;
- Lift masts;
- Railings;
- Bases, fixed or articulated footings, articulated or non-articulated adjustable base plates, jacks.

§ 4. For stairs and walkways:

- Jambs, poles, trusses, frames;
- Frames or floor supports;
- Trusses;
- Railings;
- Steps, risers and baseboards;
- Bases, fixed or articulated footings, articulated or non-articulated adjustable base plates, jacks.

§ 5. For the trusses, totems, and grids:

- Base plates, heavy baseplate components, weighted or unweighted;
- Trusses;
- Angles, clamps, mast lift trolleys, tower tops;
- Specific suspension components, flanges etc.;
- Bases, fixed or articulated footings, articulated or non-articulated adjustable base plates, jacks;
- Connecting sleeves (olives): only the manufacturer's identification mark is required.

TITLE II

General

Article 5 - [Categorisation of the removable sets](#)

§ 1. Frames for supporting people.

Frames for supporting people are categorised according to the height a person could fall from. Drop height refers to the largest vertical distance between the floor level of the main frame and impact area located below.

For the purposes of this paragraph, the following are concerned:

- Covered or uncovered stages;
- Stages and podiums accommodating spectators joined with stands;
- Covered or uncovered towed stages and stands, operated at a fixed station, considered the same as other stages and stands;
- Stage management towers and tracking towers or structures.

The height looked at in the remainder of this document is the height measured at the “high point” of the removable set.

§ 1.1 Category OP1:

- Stands for seated and standing spectators, podiums, stages or raised floors, stairs and ramps (prefabricated) with a drop height of less than 1.20 metres, wedges included;
- Prefabricated walkways with a maximum range of 3 metres and a drop height of less than 1.2 metres, wedges included.

§ 1.2 Category OP2:

- Stands for seated and standing spectators with a drop height greater than or equal to 1.2 metres and less than 3.5 metres, wedges included;
- Podiums, stages or raised floors with a drop height greater than or equal to 1.2 metres and less than 2 metres, wedges included;
- Stairs and ramps with a drop height greater than or equal to 1.2 metres and less than 3.5 metres, wedges included;
- Prefabricated walkways with a maximum range of 3 metres and a drop height of more than or equal to 1.2 metres and less than 3.5 metres, wedges included.

§ 1.3 Category OP3:

- Stands for spectators with a drop height greater than or equal to 3.5 metres, wedges included;
- Podiums, stages or raised floors with a drop height greater than or equal to 2 metres, wedges included;
- Walkways with a range that is greater than or equal to 3 metres, regardless of the drop height, wedges included;
- Any walkway with a drop height greater than or equal to 3.5 metres, wedges included;
- Stairs and ramps with a drop height greater than or equal to 3.5 metres, wedges included;

§ 2. Stage equipment frames.

Stage equipment frames are categorised according to the risk they pose to people in the event of tipping or collapse. These include crossbars, totems, grids, trusses, lifting towers, structures supporting sound, lighting and video equipment and/or sets. They are not intended to accommodate personnel, except during assembly, disassembly, adjustment and maintenance.

The heights defined in the categories of stage equipment frames are measured from the bearing surface.

§ 2.1 Category OS1:

All stage equipment frames whose highest point is less than 3.5 metres, wedges included.

§ 2.2 Category OS2: All stage equipment frames whose highest point is more than or equal to 3.5 metres and less than 6.2 metres, wedges included.

§ 2.3 Category OS3:

All stage equipment frames whose highest point is greater than or equal to 6.2 metres, wedges included.

Article 6 - [Headcount calculation](#)

The maximum number of people admitted to a viewing space is calculated by adding up:

- The number of people sitting on the seats;
- The number of people sitting on benches or terraces at a rate of two people per linear metre;
- The number of people standing, outside of passageways used for evacuations, at a rate of three people per square metre.

The maximum number of people admitted onto a stage or a podium is determined according to the organiser's declaration, in order to calculate the passageways.

The maximum number of people admitted in the OP when it is not public, will comply with the requirements of the Labour Code.

TITLE III

Instructions for existing removable sets

Article 7 - [Applicable guidelines](#)

§ 1. With the exception of the requirements relating to technical and design documentation, administrative provisions for the categorisation of removable sets, and those relating to inspections, audits and checks, this document does not apply to removable sets put on the market before its date of publication.

§ 2. When the design and manufacturing guidelines are not known, the owner justifies the sturdiness by a calculation note and/or by a laden test. The results are approved by a person or a body certified in technical checks by the ministry in charge of construction.

Article 8 - [Compliance](#)

Making the removable sets comply with the technical requirements for design and manufacturing is carried out within a period of 5 years from the publication of this text.

TITLE IV

Requirements related to an event

Article 9 - [Safety record](#)

§ 1. Prior to the event, the organiser provides the administrative police authority with a safety record , the content of which is outlined in Article 65.

§ 2. The organiser shall also forward it to the owner, the operator and the installer of the removable set. The safety record includes all of the elements implemented to carry out the installation.

§ 3. Before any installation and up to the point of disassembly, the organiser shall ensure the updating and the availability on site of the documents confirming the compliance of the removable sets and their adaptation to the constraints of the place and the event.

§ 4. During the phases of supply, preparation, assembly, adjustment, check and inspection, repetition, and until disassembly, the concurrent activities of the participants come under a prevention plan. It is the organiser who initiates it and coordinates the implementation. In accordance with Decree n°2008-244 of 7 March 2008 (articles Article R4511-1 et seq. of the Labour Code), the overall coordination of the prevention measures is intended to prevent the risks related to interference between the activities, installations and equipment of different companies at the same place of work.

§ 5. The organiser ensures that a safety protocol is implemented for loading and unloading operations performed by a haulier, which does not require the development of a prevention plan.

TITLE V

Control methods for removable sets

Article 10 - [Appraisal on model, technical record and technical instructions](#)

§ 1. Model appraisal.

Appraisal of the construction principle of the model, prior to the technical inspections operations. The model appraisal is limited to the module assembly configurations foreseen by the manufacturer and clearly listed in the technical instructions. It specifies the maximum conditions of use of the system.

The constitutive file for the issuance of the model appraisal comprises in particular:

- The references of the equipment used;
- The plans for manufacturing and the entire model;
- The calculation notes specific to each model;
- The test reports, if applicable, and their interpretative documents;
- Description of the operating procedures for the assembly of the components;
- The technical, installation and usage instructions.

This model appraisal is issued by a technical controller recognised by the ministry in charge of the construction. The appraisal has no time limit, with the exception of the release of new legislative or regulatory texts, or total or partial modification of the model.

Installations that support equipment, the effect of which has not been taken into account in the study of model, are subject to an appraisal of the technical record.

§2. Technical record appraisal.

Appraisal of the construction principle of the removable set, prior to the technical inspections operations. It is created for removable sets for which there is no model appraisal or for which the model appraisal does not take into account the configuration(s) of the event (monotype interaction (non-independent), assembly of materials with different manufacturing, specific parts, addition of materials such as extensions of covered stages on wheels, tarpaulins, covers, masts, billboards...).

The technical record is limited to an identical installation (which can be repeated at the same place), an event or a tour configuration for example.

The technical record includes:

- The technical instruction(s);
- The assembly and detailed plans;
- The calculation notes referred to by a technical controller recognised by the ministry in charge of the construction, ensuring the sturdiness and the stability of the removable set and its components, in the configuration outlined in the organiser's safety record;
- In the absence of calculation notes, justification by testing;
- Model appraisals, if there are any;
- In all cases, the technical instructions and/or loads charts of the removable set's components.

§ 3. Technical instructions.

The technical instructions are written by the manufacturer and they make it possible to identify parts, identify risks and to get familiar with the process of safe assembly and disassembly.

At a minimum it contains the components and/or the description of the following components:

- The acronym and the name of the manufacturer;
- The contact details of the importer, if applicable;
- Reference to this text;
- Description of the parts;
 - The codification of the labelling of the components;
 - Assembly and disassembly risk analysis and the means of protecting oneself from them;
 - The assembly and disassembly procedure with a description of the different phases, their order, the necessary tools and lifting equipment, the aerial lifts and forklift trucks that may be needed, individual and collective protection equipment and any possible anchor points;
 - Slings techniques and installation techniques of safety systems (slings, fall breakers, etc.);
 - Adapting tracking workstations and cameras located high up on the trusses and grids, taking into account the installations and the possibilities of evacuation and emergency services;
 - The installation of collective protection equipment and/or anchor points and temporary safety lines;
 - Upkeep and maintenance requirements specifying the operations to be carried out and their frequency;
 - Acceptable deformation limits during inspections are specified in the manufacturer's technical instructions;
 - The removable sets' components can only be repaired by the manufacturer or by personnel that they have authorised in a written document;
 - Implementation precautions for supports, floors and stability;
 - Usage limitations associated with weather conditions outside and in the presence of people during the phases of assembly, operation and disassembly;
 - The limits, in terms of loads, during the operational phase;
 - The reference of the model appraisal, if applicable;
 - The reference of the reaction to fire report, if applicable.

Article 11 - [Examination, check, audit and inspection](#)

The removable sets are subject to:

- An examination in order to ensure that they are consistent with the organiser's safety record;
- A stability and sturdiness check confirmed by a model appraisal and/or a technical record;
- A check on the components to verify that they are in good condition;
- An inspection of the assembly before the first opening to the public;
- An inspection during the operational phase to ensure the sustainability of the assembly condition. The associated frequency, content and degree of competence are defined in Title XI.

Article 12 - [Stability and sturdiness check](#)

Titles XI and XIII identify the removable sets for which the manufacturer, owner, organiser or installer is carrying out checks on the stability and sturdiness or is having them carried out. At the end of this check, an appraisal relating to stability and sturdiness, drawn up by an inspection body approved to conduct technical checks on buildings, is issued for these removable sets.

This appraisal may take the form of a "model appraisal" drawn up by an inspection body approved for ranges of modular removable sets allowing for several installation configurations, or the form of a "technical record appraisal" in other cases.

Article 13 - [Review of the non-operating or pre-installation conservation status](#)

The owner or installer shall carry out, or have carried out, an examination on the conservation status for the removable sets outlined in article 58.

Article 14 - [Inspection of the assembly before the first opening to the public](#)

Article 58 identifies the removable sets for which the organiser is conducting an inspection, or having one conducted, of the assembly before its first opening to the public.

The article 68 “Inspection report” specifies the nature and methods of this inspection.

This inspection ensures that they are installed in line with the specifications provided by the technical instructions and the requirements specification drawn up for the event, and that they can be used safely.

This inspection is carried out by an ERP-recognised inspection body or a CTS-authorized audit office, or a qualified technician (see Article 20), or by the person in charge of the assembly, according to the categories of removable sets defined by Article 5.

Article 15 - [Operational phase inspection](#)

The owner or organiser shall carry out, or have carried out, the following inspections for the removable sets outlined in article 58:

- An inspection to ensure good condition before each arrival of people;
- An inspection after repairs or modification of the installed removable set;
- Consistency with the new requirements specification in the particular case of removable sets used for an event other than the one that they were originally installed for.

These inspections are carried out either by the organiser if they have the necessary competence, or by a qualified technician (see Article 20) or by an ERP-recognised inspection body or a CTS-authorized audit office according to the categories of removable sets defined by this text (see Article 5), and following the methods outlined in Title VI.

TITLE VI

Training and skills

Article 16 - [General information](#)

§ 1. The manufacturers, owners, installers and organisers are, for their part, each responsible for carrying out audits and inspections in order to guarantee the safety of the removable sets.

§ 2. The assessment of models and technical records are approved by somebody authorised to do technical inspections or by an inspection body authorised to do technical inspections of buildings. The inspections are carried out by qualified technicians, ERP-recognised inspection bodies or CTS-authorised audit offices in accordance with the methods defined in Article 18.

Article 17 - [Training](#)

Management staff assigned to assembly operations and inspection and audit staff shall have adequate levels of skills for the type of removable set in question. This skill may be the result of either recognition by the employer or specific training. This training will be updated in accordance with technical developments and as often as necessary.

Article 18 - [Qualified technician, ERP-recognised inspection body or CTS-authorised audit office](#)

When an article in this text requires the intervention of a person authorised to carry out technical inspections by the ministry in charge of the construction, the approval relates to sections A1 or B1 of the classification of the capacity of technical controllers cited in Article R. 111-30 of the Construction and Housing Code. At the date of this text's publication, this section is included in appendix I of the decree of 26 November 2009 (Official Journal of 29 November 2009). It is titled "All building works for all audit missions: all buildings".

Article 19 - [Person approved for construction technical checks](#)

In accordance with Article 2 of this text, within the framework of the 5 year objective, where an article of this text requires the intervention of a technical audit body for removable sets, the said body is accredited for this activity as a Type A inspection body under the NF EN ISO/CEI 17020 standard by the French accreditation committee or by any other equivalent accreditation body that is a signatory of the multilateral agreement reached within the framework of the European coordination of accreditation bodies.

Article 20 - [Qualified technician in the inspection of removable equipment and sets](#)

§ 1. The installer shall appoint a qualified technician when the provisions of this document provides for their intervention.

§ 2. The qualified technician is a person who has been trained in the field of removable sets and equipment inspections, corresponding to the programme outlined in Article 21.

§ 3. The qualified technician's certificates issued by accredited training bodies include the following information:

- Name of the training centre;
- Name of the trainer;
- Reference to the approval of the Synpase;
- Full name of the qualified technician;
- The qualified technician's training session sequence number in the following format: yyyy/mm/dd/number in alphabetical order of surname/initials name-first name;
- Date of session:
- Description of the programme outlined in the Handbook, this qualified technician training allows the holder to carry out the inspection of the following removable sets:
 - Stairs, podiums, stages and covered stages;
 - Removable stands;
 - Scaffolding and walkways, stage management, tracking and camera towers;
 - Trusses and grids.
- Signature of trainer or teaching manager at the training centre;
- Qualified technician's signature;
- Certifying officer's signature.

These certificates are issued for each type of removable set.

Article 21 - [Training of qualified technician in the inspection of removable equipment and sets](#)

§1. Training bodies.

Training bodies will be selected and approved by the Synpase. They will present a programme that accurately respects the guidelines, curriculum and length of time as defined in the Memento and Handbook.

§2. Presentation of training.

§ 2.1. Prerequisites.

For OP2 and OS2, future qualified technicians should have five years of professional experience and have previously worked or be currently working as :

- Technical director
- Stage manager
- Site supervisor
- Functions of the structure
- Rigger
- Scaffolder

And, as a general rule, they must be professionals with a global approach to the techniques implemented in the live and audiovisual shows.

For OR3 and OS3, the inspectors from the ERP-recognised inspection bodies or the CTS-authorized audit offices will have approved in-house training on the same content.

§ 2.2. Training guidelines.

A. CORE CURRICULUM

- MODULE 1: Introduction
 - Identification of the risks involved in the assembly of removable equipment and sets
 - Structure of legal texts and safety regulation
 - Bibliography of safety with comments and reliable internet sources
- MODULE 2: Establishment open to the public & Construction and Housing Code
 - Participants, roles and missions
 - The main points of the regulations for the person in charge of assembly and the technician inspector (references on CCH & ERP articles)
 - Passageways and UP, partitioning in buildings, special facilities and large gatherings
 - The reaction to fire of the equipment
- MODULE 3: Labour code
 - CT, CSS, CNAM, INRS
 - Participants, role and missions
 - The CT provisions to be retained: philosophy of the Code
 - Specific texts: decrees, orders, recommendations
 - Prevention plans
- MODULE 4: The “Handbook”
 - Legal significance
 - Content
 - Inspection method
 - Inspector’s responsibilities
- MODULE 5: Removable equipment and sets
 - History
 - Glossaries and descriptions
 - The different types of removable equipment
 - Manufacturers
 - Administrative documents
 - Distributions of loads and wedges
 - Principles of safeguarding employees and the public

B. ACTIVITIES AND COMPETENCE STANDARDS

The inspection of removable equipment and sets consists of 6 key competences:

- Competence 1: Analysing the contracting party’s request
 - Studying the project incorporating RES [removable equipment and sets];
 - Examining the documents: graphic documents, simulations, model appraisals, etc.;
 - Referring to the Handbook on RES.
 - Making an inventory of RES.
- Competence 2: Preparing the field inspection
 - Classifying the project;
 - Getting information on the different RES;
 - Carrying out literature searches (technical instructions, charts, etc.)
 - Outlining the inspection method;
 - Identifying key or vigilant points;
 - Using the Handbook analysis frameworks.

- Competence 3: Checking that the RES are consistent with the original project
 - Approving the installations on site;
 - Comparing the general plan with the installed infrastructure;
 - Measuring any discrepancies;
 - Making and inventory of the RES and classifying them according to their types.
- Competence 4: Inspecting the compliance of equipment and approving the assembly safety on site
 - Comparing the installed equipment in relation to the technical documents, the regulations originally received and the applicable standards;
 - Visually inspecting the RES involved in the inspection;
 - Checking the checklist of the key points outlined in the analysis frameworks;
 - Taking snapshots of this inspection over time by way of drawings, photographs and any appropriate means or formats.
- Competence 5: Writing an inspection report
 - Collecting the information required for writing the inspection report
 - Questioning the installer and/or the contracting party if there are doubts about the origin and use of a removable set.
 - Integrating the components of the elements of the preliminary study, the field inspection and the final information and/or documents collected
 - Completing the report appropriate to the inspection;
 - Providing information on the sections of the report in a clear and concise way;
 - Checking that the information involving the participants is complete;
 - Issuing a favourable or unfavourable appraisal on the operation;
 - Justifying the appraisal issued
- Competence 6: Submitting the inspection report to the contracting party
 - Setting out the content of the report;
 - Indicating and explaining the anomalies observed;
 - Negotiating the “Resolution of Observations” with the contracting party;
 - Establishing possible areas for improvement.

C. VALIDATION OF PRIOR EXPERIENCE

Those with the following backgrounds and titles are exonerated from taking the “common part” :

- Up to date PRV2 or AP2, issued by the ENSOSP;
- and
- Health and Safety Risk Assessment Consultant (IPRP in France) registered at the DIRRECTE, field :
technic - speciality health and safety for work.

Moreover, they must have worked as Prevention officer and preventionist for at least 5 years.

D. FINAL TEST

§ 2.3. A three-day core curriculum will validate the theoretic module. A theory test will conclude this part.

§ 2.4. Then one day per removable set in order to approve the inspection method, with an exercise and a test. This day must take place with the installed equipment.

§ 2.5. An accreditation of training centres is issued by the Ministry of Culture and Communication.

§ 2.6. Training approval is established on the basis of the theory module and each inspection module of the specific removable sets. A qualified technician is approved by the training body to carry out the inspection of one or several removable sets:

- Stages;
- Removable stands;
- Scaffolding;
- Trusses and Grids.

§ 3.1. Glossaries and descriptions (reminders).

§ 3.2. The document review will include the following elements depending on the equipment or removable set in question:

- Appraisal of the model or technical record;
- The safety committee's appraisal of the file submitted;
- The plans for manufacturing and the entire model;
- The test reports, if applicable, and their interpretative documents;
- The technical, installation and usage instructions;
- Study of the ground;
- The load distribution gate of the structure's poles;
- Load plans
- Load charts
- The reports on the equipment's fire rating;
- The installation plans and sections;
- Technical data sheets;
- For the technical records: the calculation notes referred to by a technical controller recognised by the ministry in charge of the construction, ensuring the sturdiness and the stability of the removable set and its components, in the configuration outlined in the organiser's safety record; in the absence of calculation notes, justification by testing;
- Confirmation of correct assembly.

§ 3.3. The list of check points.

§ 3.4. The inspection report.

- Information about the event;
- Reference texts;
- Information about the participants;
- Submitted documents;
- Description;
- The findings;
- Observations (which should be lifted before members of the public are admitted);
- Treatment of non-conformances;
- The favourable or unfavourable appraisal of the inspector or technician competent in the operation;
- Areas for improvement (which do not involve the predefined security level).

§ 3.5. Usage of the list of issues: every future qualified technician completed a list of points on the removable set in question.

§ 3.6. Use of the inspection.

§ 3.7. Evaluation of training.

- Critique of the list of points;
- Critique of the inspection;
- Evaluation of the list of points;
- Evaluation of the inspection report.

§ 3.8. Conclusions: issues, relationship with the sponsor.

E. UPDATE CERTIFICATE

The certificate should be updated every five years during a one-day training to each type of removable equipment, as defined in Article 20 § 3.

Article 22 - [Prevention officer](#)

The prevention officer specialises in prevention.

Two areas:

- In an ERP, they are considered to be the “Prevention officer”, the specialist in analysing the risks of “fire and panic” in the company. They are often referred to as a “preventionist”. They are able to write an event safety record and to draft ERP safety instructions before work or at the construction. The prevention officer holds an AP2 or PRV2.
- In a company, for the safety of the individual at work, they are considered to be “Prevention officer”, the specialist in analysing risks at work. They are able to draw up a single document or a prevention plan for situations where there are concurrent activities. They are a prevention leader and/or IPRP [Occupational risk prevention facilitator].

TITLE VII

Design and manufacturing

Article 23 - [General design principle](#)

The reference documents to prove the sturdiness and stability of the removable equipment and sets are the Eurocodes and their French national appendices. However, when the requirements formalised in this document differ from those of the Eurocodes', it is the provisions in this document that overrule.

The calculation basis rules are the Eurocodes, however, during the transitional phase, the French national calculations rules are permitted.

Article 24 - [Materials](#)

§ 1. Choice.

The materials used, contributing to the stability and the sturdiness of the removable set, are sufficiently strong and durable to be able to withstand the normal operating conditions. The materials are free from any impurity and defect that may affect their satisfactory use.

§ 2. Characteristic values.

The characteristic values of the yield strength and the ultimate strength specified in the standards are used in the design calculations.

§ 3. Documents for checks on metallic materials.

The builder shall ensure, at their supply level, that the mechanical and chemical characteristics of the received materials are consistent with the values taken into account in the calculation and are adapted to the purpose of the work. These checks are documented (see NF EN 1090 for steel and aluminium).

§ 4. Documents for checks on wood, bamboo and plywood materials.

The builder shall ensure, at their supply level, that the mechanical and chemical characteristics and the durability of the received materials are consistent with the values taken into account in the calculation and are adapted to the purpose of the work. These checks are documented and in reference to the following standards:

- NF EN 14081 for solid wood;
- NF EN 14080 for glued laminated wood;
- NF EN 13986 and NF EN 13636 for plywood.

Article 25 - [Actions to be taken into account during design](#)

§ 1. To prove the sturdiness of the frames intended to support people and of stage equipment frames, the actions to be taken into account are as follows:

- Permanent loads;
- Climate responses "snow" and "wind" once the structures are exposed to them;
- Operational loads;
- Different settlements of support.

The weather conditions to be taken into account for the calculation of removable set frames are those directly applied to the calculated frame and those resulting from the presence of people and/or mounted equipment.

§ 2. The permanent loads are those of the weight of the structure itself and the potential fixtures.

§ 3. Climate responses.

§ 3.1. Climate responses due to snow.

The notion of “snow load”, consistent with the presence of people, is introduced for stands, stages and podiums and their access. Admitting people is allowed when the calculation notes prepared at the design or project stage, determines the value of the maximum permitted “snow load”. Snow removal is a prerequisite for admitting people for OP and OS. The “snow load” is to be weighted when calculating the ultimate limit state (ELU).

§ 3.2. Climate responses due to wind.

The removable sets are designed to be operational up to a pre-determined wind speed and to resist, regardless of whether they are occupied or not, wind without structural failure, dislocation of component parts, shifting or tipping.

- During the operational phase:

The notion of “wind load”, consistent with the presence of people, is introduced for frames and their access. With the exception of specific provisions, the presence of people is therefore excluded as soon as the speed of the gusts of wind measured over 3 seconds - corresponding to peak pressure - on the installation site exceeds the speed of the wind load set at 20 m/s, or 72km/h. This “wind load” is independent of the place of the construction and installation.

The “wind load” effects are to be weighted when calculating the ultimate limit state (ELU).

- Outside of the operational phase:
 - The manufacturer assures the stability of the frame up to 72km/h;
 - From 72 to 100km/h, the manufacturer specifies the provisions to be implemented in order to ensure the stability of the frame and justifies them;
 - Beyond 100km/h, the manufacturer specifies additional provisions and the pressure limit compatible with the stability of the frame.

Except for the particular requirements specification requiring requests that are lower or higher than the figures in the aforementioned paragraphs requested by the operator.

In all cases, the use of deduction or plus factor coefficients is justified.

§ 3.2.1. For the stands, effects on the partitions due to wind must be evaluated.

In order to estimate the reference surfaces on which the wind pressures apply, the side walls must be considered as being either open or closed depending on the conditions of usage of the removable set.

- Horizontally, the reference surface: $A_{ref} = \text{structure frontal area} + \text{spectators frontal area}$, with:
 - Structure frontal area obtained by equating the structure to a full vertical screen;
 - Spectators' frontal area obtained by equating the spectators to a full vertical screen that is 1.2 metres high for seated people and 1.8 metres high for standing people on the entire length or depth of the stand.
- Vertically, the reference surface: $A_{ref} = \text{surface area of the stand}$.
Except for a particular study, the panels and perforated tarpaulins are considered to be full.

§ 3.2.2. For the stages.

In order to estimate the reference surfaces on which the wind pressures apply, the side walls must be considered as being either open or closed depending on the conditions of usage of the removable set.

Following the specific cases, it will be necessary to take into account the frontal area brought about by the presence of people on the basis of: spectators' frontal area obtained by equating the spectators to a full vertical screen that is 1.2 metres high for seated people and 1.8 metres high for standing people on the entire length or depth of the stand.

In the case of there being suspended equipment (tone cluster, screens, decorations, etc.), the calculation must take account of the frontal area brought about by this equipment.

§ 3.2.3. For the scaffolding.

§ 3.2.3.1. Scaffolding accommodating the public is subject to the rules of the "stands" paragraph above.

§ 3.2.3.2. Structural coefficient equal to 1.0:

Horizontally: $C_{fh.S} = 1.3 \times (\text{structure frontal area} + \text{people frontal area})$ with:

- For non-adorned scaffolding (tarpaulins, decorations):
 - Open structure frontal area obtained by equating the structure to a full vertical screen taken equal to 50% of the full screen;
 - Frontal area of people (spectators or technicians) at a rate of 0.7m²/person at 1m above the floor;
 - Frontal area of the material obtained by equating it to a vertical corresponding to its surface. The stress is applied to the frontal area's centre of gravity.
- For adorned scaffolding (tarpaulins, decorations):
 - The adorned parts are considered to be full screens, according to the Eurocodes forms criteria;
 - Except for a particular study, the panels and perforated tarpaulins are considered to be full.Vertically: uplift taken equal to 0 except in special cases (covered scaffolding, bulky sets, awning, etc.) for which vertical wind effects are taken into account, based on forms, following the Eurocode requirements for all the cases to be considered.

§ 4. Operational loads to be taken into account for frames intended to support people.

For the calculation of operational loads, the minimum values to be used are those listed in the table below. The introduction of any other value is substantiated by the calculation and the operating conditions. The operational loads are to be weighted when calculating the ultimate limit state (ELU).

Loads (basic actions to be chosen)	Stands or platforms for seated spectators	Stands or platforms for standing spectators	Stairs, podiums/ stage and access ramps associated with the stands and platforms	Walkways associated with stands and platforms	Walkways not associated with stands and platforms	Stairs not associated with stands and platforms	Podiums/ stages and access ramps not associated with the stands and platforms	Stage management, tracking and camera towers
A - vertical load evenly distributed over the entire projected surface on a horizontal plane	5 kN/m ²	6 kN/m ²	5 kN/m ²	5 kN/m ²	5 kN/m ² (*)	3 kN/m ² (**)	5 kN/m ²	2 kN/m ²
B - Horizontal load	6% of the load operational vertical	6% of the load operational vertical	6% of the load operational vertical	6% of the load operational vertical	6% of the load operational vertical	6% of the load operational vertical	6% of the load operational vertical	6% of the load operational vertical
C - Concentrated load on a surface of 0.5 x 0.5m	3 kN	3 kN	3 kN	3 kN	3 kN	3 kN	3 kN	1.5kN
C - Point load on a surface of 0.2 x 0.2m	1 kN	1 kN	1 kN	1 kN	1 kN	1 kN	1 kN	1 kN
E - Horizontal load on outward railings	1.7 kN/m exerted at 1m	1.7 kN/m exerted at 1m	1.7 kN/m exerted at 1m	1.7 kN/m exerted at 1m	1 kN/m exerted at 1m	1 kN/m exerted at 1m	1 kN/m exerted at 1m	1 kN/m exerted at 1m
E - Horizontal load on inward railings	0.4 kN/m	0.4 kN/m	0.4 kN/m	0.4 kN/m	0.4 kN/m	0.4 kN/m	0.4 kN/m	0.3 kN/m
G - Vertical load on the railings from top to bottom	1 kN/m	1 kN/m	1 kN/m	1 kN/m	1 kN/m	1 kN/m	1 kN/m	1 kN/m

*For walkways not connected to the stands, for which there is no risk of crowds, the application of the following formula is sufficient: $q = 2 + [120 / (L + 30)]$ kN/m² where L is the loaded length in metres with $q \rightarrow 2,5$ kN/m² and $q \leftarrow 5$ kN/m².

**Landings whose length is greater than the width of the staircase and which can be used for accommodating standing people are sized to support a load of 6kN/m² ; Loads A and B are loads that enable the sizing of the structure's elements (operational loads); Loads A, C, D, E, F and G are loads enabling the sizing of the circulation elements.

NB: In unfavourable cases G loads are to be added up with E loads.

§ 5. Regarding the different settlements of supports, the transfers of supports compatible with the sizing of the structure, and therefore taken into account for the justification of its sturdiness, are defined by the manufacturer in the technical record or in the model appraisal file.

Article 26 - [Principles of distribution of loads and wedges](#)

The principles of distribution of loads and wedges are described by the manufacturers while respecting the recommendations described in Article 66 at a minimum.

Article 27 - [Manufacturing](#)

§ 1. The reference documents for manufacturing the removable sets are the NF EN 1090- 2+A1 (October 2011) standards relating to the technical requirements for the completion of structures in steel and NF EN 1090- 3 (February 2009) relating to the technical requirements for the completion of structures in aluminium. The levels of manufacturing requirements are expressed in execution classes, EXC noted.

§ 2. The manufacturing of the removable sets defined in Article 1 shall comply with the requirements of execution class 2 (EXC2).

§ 3. In mitigation of the requirements of paragraph 2 above, only class execution 1 (EXC1) is required for the podiums, stages and raised floors with a drop height of less than 1.2 metres, wedges included.

Article 28 - [Technical instructions](#)

The technical instructions are written by the manufacturer and they make it possible to identify parts, identify risks and to get familiar with the process of safe assembly and disassembly.

At a minimum it contains the components and/or the description of the following:

- a) The acronym and the name of the manufacturer;
- b) The contact details of the importer, if applicable;
- c) Reference to this text;
- d) Description of the parts;
- e) The codification of the labelling of the components;
- f) Assembly and disassembly risk analysis and the means of protecting oneself from them;
- g) The assembly and disassembly procedure with a description of the different phases, their order, the necessary tools and lifting equipment, the aerial lifts and forklift trucks that may be needed, individual and collective protection equipment and any possible anchor points;
- h) Slings techniques and installation techniques of safety systems (slings, fall breakers, etc.);
- i) Adapting tracking workstations and cameras located high up on the trusses and grids, taking into account the installations and the possibilities of evacuation and emergency services;
- j) The installation of collective protection equipment and/or anchor points and temporary safety lines;
- k) Upkeep and maintenance requirements specifying the operations to be carried out and their frequency;
- l) Acceptable deformation limits during inspections are specified in the manufacturer's technical instructions;
- m) The removable sets' components can only be repaired by the manufacturer or by personnel that they have authorised in a written document;
- n) Implementation precautions for supports, floors and stability;
- o) Usage limitations associated with weather conditions outside and in the presence of people during the phases of assembly, operation and disassembly;
- p) The limits, in terms of loads, during the operational phase;
- q) The reference of the model appraisal, if applicable;
- r) The reference of the reaction to fire report, if applicable.

TITLE VIII

General safety requirements

The design of the removable sets takes into account the temporary nature of these installations.

Article 29 - [Structures](#)

There is no fire stability requirement. There is no seismic stability requirement.

Article 30 - [Maximum distance to be crossed](#)

§ 1. The maximum distance to be crossed to reach an exit at any point of a removable set that is set up in a closed and/or covered structure is determined by the regulations applicable to this structure.

§ 2. Evacuation routes that force people to go up and then down (or go down and then up) are permitted.

Article 31 - [Raised floors](#)

§ 1. The raised floors of the stands, terraces, passageways, stairs and ramps are designed to ensure that people are safe from falls, whatever the weather conditions. The components are joined end to end, allowing the clearance required for assembly and disassembly. To avoid any risk of tripping, the maximum height difference between several adjacent decking elements is less than 4 millimetres. Failing that, suitable chamfers or ramps are installed.

§ 2. Outdoor floors are classified as at least CFL - s1 or in M 3 material. The possible coating of the upper surface is classified as DFL-s1 or in M 4 material.

§ 3. They include a frame classified as C-S3, d0 or in category M3 materials.

Article 32 - [Tiering of the terraces and stands](#)

§ 1. The alignment of the front of the terraces does not exceed 35 degrees relative to the horizontal plane of the floors. The minimum depth dimension of the row of seats is 0.7 metres with a tolerance of 0.05 metres.

§ 2. The risers are solid or openwork. When they are openwork, the unladen height cannot exceed 0.11 metres and the potential traffic flows under structures are protected against falling objects.

Article 33 - [Traffic flow in the terraces and stands with seating](#)

§ 1. Traffic flows between two rows of seats or benches have a minimum width of 0.35 metres when the seats or benches are unoccupied. This width is consistent in the row.

§ 2. The spacing between rows must allow free passage in the vertical position, a gauge of 0.35 metres in front, 1.20 metres in height, and 0.20 metres as another dimension. The gauge test is conducted either between the rows of raised seats, if their backs are fixed, or between a row of raised seats and a row of inclined seats in their occupying position, if they are moveable.

Article 34 - [Fixed rows of seats and benches](#)

§ 1. The benches, seats or rows of seats are firmly secured to the floor, terraces, stands, stages or supports.

§ 2. The maximum number of seated places between two traffic flows and between a traffic flow and a partition or a railing complies with the planning rules stipulated by the regulations applicable to the planned activity, or the one that comes closest to this activity. However, the length of the rows of fixed seats or benches cannot exceed 20 metres between two passageways and 10 metres between a passageway and a partition or a railing.

Article 35 - [Movable seats](#)

§ 1. A set of movable seats does not comprise more than 19 seats. Each set formed like so is demarcated by dividing elements, attached to stands, terraces, stages or supports. These elements have a minimum height of 0.7 metres. The set also comprises at least one exit with a minimum width of 0.8 metres opening directly onto a passageway.

§ 2. However, if the set of moveable seats comprises more than 19 seats, one of the following provisions shall be complied with:

- The seats are joined together by row, with each row being fixed to the floor or partitions at its ends;
- The seats are joined together by row, with each row being rigidly connected to the adjacent rows so as to form blocks that are difficult to tip over or move.

The planning rules prescribed in paragraph 2 of Article 31 shall apply.

§ 3. Notwithstanding the provisions in § 1 and 2, the installation of movable seats can be permitted following a risk analysis eventually leading to the implementation of compensatory measure(s). This risk analysis, integrated into the organiser's safety record, takes into account the category of the frame intended to accommodate people, the number of people it is intended to accommodate and the nature of the event.

Article 36 - [Reaction to fire of the seats](#)

§ 1. Inside closed and covered structures, the materials used in the non-upholstered seats and the structure of the upholstered seats are category C-s3 or at least M 3.

§ 2. The removable set seats installed outdoors can be classed as D-s2 or M 4.

§ 3. Seats made of wood or derived from wood with a thickness equal to or more than 9mm are accepted.

§ 4. With regard to their reaction to fire, the upholstered seats shall comply with the provisions of the technical instruction relating to the reaction to fire of upholstered seats, whether they are installed inside the premises or outdoors.

Article 37 - [Case of circular or faceted terraces and stands](#)

When the terraces and stands are circular or faceted, the maximum number of seated places between two traffic flows and between a traffic flow and a partition or a railing, prescribed by the regulations applicable to the planned activity, is counted at the median row.

In cases where the number of rows of seats is even, reference should be made to the row immediately above the median row. A maximum length of 20 metres between two traffic flows and 10 metres between a traffic flow and a partition or a railing is observed for the last row of seats or benches.

Article 38 - [Tiered stands with room for standing](#)

The rows of terraces intended to accommodate people standing have a maximum length of 20 metres between two passageways and 10 metres between a passageway and a partition.

Article 39 - [Passageways](#)

§ 1. Passageways have a passage width, referred to as a unit of exit width, which is in proportion to the number of people likely to use them. The passage width is fixed:

- At 0.6 metres outdoors for 150 people;
- At 0.6 metres for 100 people in other cases. When a passageway has a unit of exit width of only one or two, the passage width is increased from 0.6 metres to 0.9 metres and from 1.2 metres to 1.4 metres respectively.

However, a negative tolerance is permitted, so that up to a height of 1.1 metres from the floor, the width may be reduced by:

- 0.05 metres from each side or 0.1 metres from on only one side of the passageways of 0.9 metres;
- 0.1 metres from each side of the passageways with more than one unit of exit width.

§ 2. The height of the steps in the terraces may not exceed 0.2 metres.

§ 3. Removable sets with a headcount of more than 19 people have at least two passageways.

Article 40 - [Vomitories and traffic flow under the stands](#)

§ 1. When they exist, the vomitories add up the widths of the passageways attached to them. The number of exits from the stands, terraces and vomitories is such that their width comprises two to eight units of exit width. The provisions in paragraph 1 of Article 44 shall apply to them.

§ 2. Traffic flows under stands, in the corridor or perpendicular to the vomitories are permitted subject to the presence of a side fence. The risk of falling objects on these traffic flows is taken into account either in the design of the stand or by the addition of a suitable device,
Traffic flows under the stands, other than those needed for evacuations, are permitted under the same conditions, without the presence of a side fence.

§ 3. The passage width offered by a vomitorium or traffic flow under stands is at least equal to one of those defined in Article 36 with a negative tolerance of 5%. The negative tolerances in Articles 36 and 37 are not cumulative.

Article 41 - [Stairs](#)

§ 1. The provisions in paragraph 1 of Article 44 are applicable.

§ 2. The stairs are integral with or connected to the removable set that they serve.

§ 3. The width of the stairs makes it possible to evacuate the number of people likely to use the passageways that they are attached to.

§ 4. The headroom between the nosing and any element of the structure is at least 2.25 metres.

§ 5. The stairs can be alternate flights. Spiral staircases are prohibited.

§ 6. The alignment of the nosing does not exceed 35 degrees.

§ 7. The tread g and h the height of the step satisfy the following relationships:

- $0.57 \text{ m} \leftarrow g + 2h \leftarrow 0.66 \text{ m}$;
- $0.25 \text{ m} \leftarrow g \leftarrow 0.36 \text{ m}$;
- $0.13 \text{ m} \leftarrow h \leftarrow 0.17 \text{ m}$;

§ 8. The risers are solid or openwork.

When they are openwork, the unladen height cannot exceed 0.11 metres and the potential traffic flows under stairs are protected against falling objects. If there are no risers, the successive steps shall overlap by 0.05 metres.

Article 42 - [Scaffolding](#)

§ 1. The “multi-directional” steel or aluminium scaffolding materials, conforming to the NF EN 12810-1, -2 and 12811-1, -2 et -3 standards, are used for a number of functions in performing arts, including:

- Stage;
- Covered stage;
- Mounting equipment for sets, lighting, sound and video;
- Stage management, tracking and camera towers;
- Totems and mounting equipment for advertising banners;
- Walkways;
- Stairs;
- Covers.

§ 2. Aluminium or steel serving mobile scaffolding (at least class 3 in accordance with the standard NF EN 1004 May 2005) are used for maintenance and adjustment operations, and, more rarely, in accordance with the loads in the table in Article 16, to service, for example:

- Work equipment for installation and maintenance;
- Mounting equipment, lighting, sound and video devices;
- Stage management, tracking and camera towers;

§ 3. For serving mobile scaffolding, the option of scaffolding with levels roughly every 2 metres, designed with railings installed from the bottom level is recommended.

§ 4. Scaffolding used as substructures of removable sets, whether it is used for levelling sloping ground or it is a removable sets support structure, it is subject to the technical rules and inspections provided for their intended use.

Article 43 - [Stages and podiums](#)

§ 1. The sets and podiums can be covered or uncovered. They can be designed from multi-directional scaffolding components or framework systems or any other system.

§ 2. “Prefabricated” risers are not affected by this document except for the minimum operating load and devices for protection against falls

§ 3. Protection measures against falls are outlined in Article 46.

§ 4. The theatrical machinery elevators (removable or non-removable materials or sets) are indeed work machines and equipment but, due to their particular natures, they are excluded from the Machinery Directive 2006/42 CE, pursuant to Article R4311-5 § 11 of the Labour Code.

Article 44 - [Safety barriers or crash barriers](#)

§ 1. When safety barriers are necessary, in order to resist pushing from the crowds, in front of the stage, for protection of the stage management, towers, etc., the rules to follow are:

- Safety barriers are not subject to the rules applicable to the and OP;
- Safety barriers are mounted in a continuous fashion, without interruption, including in the presence of an Elizabethan spur, a proscenium or tracking cameras;
- Where there are doors, needed for evacuations for example, or angles, these are integral and compatible;
- The safety barriers are assembled according to the manufacturer's assembly instructions. In particular the presence of all axles and/or bolts is ensured.

§ 2. The safety barriers are needed:

- To stop any pushing from a standing audience;
- To block public access to the stage, stage management and towers, etc., and the performers' area;
- In order to secure an evacuation corridor in front of the stage in the event of public unrest (minimum of 1.2m between the edge of the stage and the safety barriers).

§ 3. The installation operator carries out a risk analysis (based on the number of spectators, the typology of the public, planning and layout of the site), in order to determine if safety barriers need to be installed. They inform the organiser.

Article 45 - [Trusses](#)

§ 1. Truss components, intended for gin poles or mounting equipment for sets, stage covers, grids, battens, bridges, poles or totems, are constructed in aluminium and/or steel.

These components are defined by two indications: the length of the truss and the section of it. The sections can be: flat, triangular, square or rectangular, The lengths are measured at the centre distance, at the interlocking. The hoops are defined by two indications: the section and the outside diameter of the hoop.

§ 2. Permitted loads are clearly defined in the manufacturer's technical instructions. Permitted loads include the loads charts and the following configurations with the different points of application of the load:

- Maximum permitted point loads;
- Maximum permitted distributed loads;
- Overhanging point loads.

§ 3. The gripping of the trusses for lifting is described in the manufacturer's technical instructions. It can be achieved by steel slings, textile slings reinforced with steel, textile slings. However, in the case of stages integrated or built against ERP Type L, textile slings are only accepted if there is a steel safety sling or a steel cable fall breaker. The gripping of trusses can also be achieved by specific collars or flanges, as described in the manufacturer's technical instructions.

§ 4. The connecting elements, angles, "T", clamps and carts are described in the manufacturer's technical instructions. Their permitted load is also outlined.

§ 5. The sections of the tubes and thicknesses, the quality of the aluminium or steel, used in the manufacturing, are specified in the technical instructions. The bossheads, axles and pins are also described in the technical instructions.

Article 46 - [Protection measures against falls](#)

§ 1. The provisions of paragraphs 2, 3 and 4 are not applicable to OS and OP accessible exclusively to people who come under the provisions of the Labour Code, for example: stage management, tracking and camera towers, etc.

§ 2. It is not permitted for there to be a floor gap greater than 5cm between the passageways and the stairs.

§ 3. Requirement for protection against falls:

- From 0 metres to 0.4 metres excluded: no protection required;
- From 0.4 metres to 1 metre: something must be put in place to prevent any risk of falling. This can be, for example, a barrier, a handrail and middle rail, a sturdy set up, light fencing, etc.;
- More than 1 metre: protection is required under the conditions of paragraph 4.

§ 4. Removable sets are equipped with collective protection devices for falls. For a drop height of more than 1 metre this protection device takes the form of a railing.

§ 4.1. Characteristics of the railings.

The provisions of paragraphs 2.3 and 3 of the NF P 01-012 standard dated July 1988 are applicable; Clearance due to assembly should not allow a horizontal displacement of more than 1/250th of its height without loading.

§ 4.2. Stages, podiums, raised platforms.

In mitigation, the obligation to install railings does not apply to stages and their stairs on the “spectators” side, provided that the number of people allowed is strictly limited to the needs of the show or the animation.

§ 4.3. Stairs.

Removable set stairs accessible to audience members include handrails and railings installed under the following conditions:

- Regardless of the width: a railing on the side(s) of the gap;
- If the span of the stairs is more than 4 units of exit width, they shall be intersected by one or several interim handrails separating the integers of the units of exit width, without being greater than four;
- They have a height of at least 0,90 metre, the side taken in relation to the nosing.

§ 4.4 Stands and terraces.

§ 4.4.1. The railings are at least 1 metre (and 1,1 metre recommended), dimension taken in relation to the floor, with a minimum height of 0.9 metres in relation to precarious support areas.

In addition, at the rear of a stand or a terrace, the height of the railing measured from the base of the seat shall be at least 1.1 metres if the distance between the seat and the rear railing is less than 0.3 metres. If this distance is greater than or equal to 0.3, the railing height is measured from the floor.

§ 4.4.2. The height of railings installed in front of a stand, a platform or a terrace can be limited to 0.8 metres when the following two conditions are met:

- They are likely to impede visibility;
- The passage width between the front of the first row of seats and the railing facing it is less than or equal to 0.6 metres.

§ 4.4.3. This attenuation does not apply in passageways, traffic flows or vomitories.

§ 4.5. Terraced stands intended to accommodate standing people.

In addition to the provisions in § 4.3 above, they have discontinuous lines of grab rails, installed on the viewing areas, parallel to the terrace rows. Grab rails are staggered every five rows of seats. They have a minimum height of 1.1 metres and withstand a horizontal force of a minimum value of 1kN per linear metre applied to 1 metre in height.

Article 47 - [Cladding and covering](#)

§ 1. Inside constructions, cladding materials intended to prohibit access to below the removable sets are classified as at least C-s3, d0 or M 3. The tarpaulins, which have the same function, are classified as at least B-s3, d0 or M1.

§ 2. Outdoors, wooden cladding materials intended to prohibit access to below the removable sets are classified as at least M 4. When fabrics are used they are classified as C-s3, d0 or M 3.

§ 3. Regardless of the location of the set up, the coverage of the “removable sets” is carried out with materials classified as C-s3, d0 or M 2 at a minimum.

§ 4. The proof of the classification of the fabrics is provided either by the marking “NF reaction to fire», or by the submission of a report on the reaction to fire, supplemented by the permanent etching of the reaction to fire classification in the material or in the assembly welds, following the fabric manufacturer’s mark.

Article 48 - [Electrical and lighting installations](#)

§ 1. Removable sets with electrical or lighting installations have an equipotential bonding compliant with the NF C 15-100 standard.

§ 2. Removable sets may have normal lighting. In this case, it is provided by lights installed at a fixed position or suspended in a safe way.

Light fixtures shall not obstruct the public’s traffic flow; the lower part is placed at a minimum height of 2.25m above the spaces reserved for the public.

§ 3. When normal lighting exists and in order to allow the evacuation of the public and to facilitate any emergency services operations, emergency lighting to at least enable evacuations is installed or completed if necessary.

This lighting is provided by either:

- Self-contained emergency lighting;
- Or a centralised source;
- Or by a combination of a centralised source and self-contained lighting.

TITLE IX

General installation requirements

Article 49 - [Organiser safety record](#)

§ 1. The installation of removable sets is subject to the drafting of a safety record by the event organiser.

§ 2. The safety record makes it possible to adapt the removable sets to their location and to the constraints of the event. Article 65 sets out the contents of the safety record, this is communicated to the owner, the operator and the installer within a time period that is consistent with the fulfilment of the order. It is made available to administrative authorities and to those responsible for checks.

Article 50 - [Installation of the removable sets](#)

§ 1. The removable sets are installed in risk-free areas and far away from dangerous neighbourhoods. Locally, the risk is assessed particularly with regard to the restrictions prescribed in the prevention plans for natural and technological risks developed in accordance with the Environmental Code.

§ 2. The place of installation allows people to be evacuated quickly and safely and allows access for fire fighting and emergency services.

Article 51 - [Nature of the ground](#)

§ 1. The organiser gives the installer all the information about the nature of the support or the ground at the place where the removable set is planned to be installed. They ensure that this information is not subject to change regardless of weather conditions. They also check with the owner of the land that there are no buried networks or cavities underground that could affect the assembly and/or the stability of the removable set.

§ 2. The load-bearing capacity of the soil or support is determined as follows:

- Either by an estimate based on the typical use of the land and/or the recurrence of an event;
- Or by encrypted data communication when the load-bearing capacity is known;
- Or by a study of the load-bearing capacity of the ground by a specialised company. The results of the study shall provide a conclusive report on:
 - The mechanical properties of the upper layers of the soil affected by the structure supports (OS and OP)
 - The possible settlements by heterogeneous zone, generated by the lowering of the load.

Otherwise, the permissible soil stress in natural ground will be considered to be 1 bar (1daN/cm² or approximately 1kg/cm²).

§ 3. The installer adapts the load distribution devices to the descents of the loads and to the bearing capacity of the soil or the support as communicated by the organiser. They ensure the rigidity, resistance and stability of the load distribution devices and wedges, in accordance with the manufacturer's technical instructions and Article 66.

§ 4. The following documents are sent to the qualified technician, ERP-recognised inspection body or CTS-authorized audit office for inspection:

- Load distribution;
- Studies on the soil bearing capacity;
- The methods of load distribution (materials, height and surface).

Article 52 - [Support](#)

§ 1. Load distribution devices on the ground can ensure, depending on the load distribution and the nature of the ground on which the removable set is installed, that the pressure exerted under the distribution device will be less than or equal to the bearing capacity of the soil. The organiser shall ensure the sustainability of the load distribution during the installation of the removable set, regardless of the circumstances.

§ 2. Load distribution devices and supports are solid and non-deformable and comply with the installation rules specified in Article 66.

Article 53 - [Assembly of the removable sets](#)

The assembly of removable sets is understood to mean specific connections, involving transmissions of complex stress, other than by simple support or simple suspension by hanging (examples: towers in scaffolding connected to a stand; totem connected to a stage).

- Where they are provided for in the technical instructions, assemblies of components from the same manufacturer are subject to a model appraisal;
- Where they are not provided for in the technical instructions, assemblies of components from the same manufacturer are submitted to a technical record;
- Assemblies of components from different manufacturers, including the stage equipment frames, are submitted to a technical record.

Article 54 - [Suspended technical equipment](#)

§ 1. The fixed attachment points, from the frame or the structure of a building, are subject to specific calculation notes.

§ 2. Technical equipment, whether fixed or in motion, contributing to the conduct of an activity, can only be suspended above people in accordance with the following rules and checks contained in article 55.

§ 3. Cables, baskets and ropes attached directly to abrasive or sharp frames are protected adequately.

§ 4. Technical equipment hooking devices are solid, reliable, traceable and appropriate.

- When choosing these hooks or suspensions, the conditions of use and the environment must be taken into account in order to prevent the risk of falling or recess due to external actions or movements;
- When they are rigidly connected to their support, they are attached by welds, bolts, collars, clamps or any suitable device;
- When they are not rigidly connected to their support(s), their hooking devices are made from lifting accessories complying with the applicable and appropriate standards (ropes, cables, slings, grommets, shackles, links, hooks, chains, etc.). All the rules and principles from the lifting industry are respected, both in terms of the protection of the textile components and the correct assembly of the connection accessories, and the technical equipment being mobile or fixed in suspension;
- The principles of the adequacy, assembly and conservation status exams are those of the applicable regulations for lifting devices and accessories.

§ 5. As a general rule, above people, technical equipment is suspended in a redundant way, i.e. by two independent devices with different technologies. The principle being that the breakdown or malfunction of a device, whatever it is, does not lead to the equipment falling down.

- When they are connected rigidly to their support by welds or by sufficiently dimensioned bolts, they cannot be secured by an additional mechanism. In this case the bolts are equipped with anti-loosening devices such as safety nuts, Nylstop®, lock nuts or cross pins;
- The welded metal frames suitable for this technical equipment (video projectors and their frames for instance) are considered to be solid without it being necessary to secure them with a separate device, in accordance with the manufacturer's technical data sheet specific to this equipment;
- When they are not rigidly connected to their support(s) and their attachment devices are made from lifting accessories or devices, they are subject to a secondary safeguarding measure to prevent the risk of falling;
- In general, secondary security systems need to be adjusted so as to limit the "slacks" to reduce the impact of a clash in line with the overall lifting system. The goal is to minimise the stopping distance of the load;
- The devices or accessories that make up these secondary security components are also solid, reliable, traceable and appropriate. They have a maximum working load that is at least equal to the mass of the objects to be secured. After a clash, they are disassembled and undergo a thorough check, in accordance with the applicable regulations for lifting accessories.
- The anti-fall devices requiring a mechanical trigger are reliable and suitable for suspended loads and the risk of rebounds.

§ 6. Various installation scenarios are considered for electric hoists, subject to the checks provided for in Article 55.

§ 6.1. The load is suspended from the motor with secondary safety: the load can stay on the motor if it is secured with a suitable secondary safety. No movement is allowed above people. This secondary safety will be covered in a separate point. If this is not possible, the secondary safety can be installed on the same point, if the load factor from this point is doubled.

§ 6.2. The load shall be suspended from the motor without secondary safety and without any movement above people, subject to compliance with all of the following provisions:

- All equipment that support loads have a double load factor (i.e. coefficient 8 for chains and coefficient 10 for cables) in relation to chapter 4 of the Machinery Directive (2006/42/CE);
- The hoist is equipped with a dual braking system operating directly on the lifting mechanism without passing through a load friction limiting device;
- The hoist is equipped with two mechanical stops, one on each end of the chain;
- No movement is allowed in the clearance or above people.

These provisions may be recommended in cases where it is necessary to act quickly on the equipment in anticipation of adverse weather conditions.

§ 6.3. The load shall be suspended from the motor without secondary safety and designed with movement above people, subject to compliance with all of the following provisions:

- In this case, all equipment that supports loads have a double load factor (i.e. coefficient 8 for chains and coefficient 10 for cables) in relation to chapter 4 of the Machinery Directive (2006/42/CE);
- The electrical hoist is equipped with a dual brake system in the event of a power failure, operating directly on the lifting mechanism without passing through a load friction limiting device;
- The electrical hoist is equipped with two mechanical stops, one on each end of the chain;
- The hoist is equipped with a load measurement device for detecting any possible overloads that operates directly on the power supply within a sensitivity range of between 100% and 120% of the nominal load. The personnel responsible for checks are able to disconnect these limiters so that they can properly carry out the static and dynamic tests prescribed by the regulations;
- Hoists used to lift a guided load or used in a group of hoists are equipped with a “chain slack” detection device acting directly on the power supply;
- For hoists used in a group, every control device has overall control of all the parameters of the group and any triggering of an end of travel or safety device leading to the stopping of a hoist leads to an automatic shutdown of the whole group;
- For hoists with variable speeds that are used in a group, every control device has appropriate control of the actual speeds and positions of the group hoists (position and speed encoding) in order to modulate these speeds within an appropriate range and/or lead to the automatic shutdown of the whole group;
- Orders using electronic programming technologies (automation software) shall comply with the EN 61-508 / EN 62-061 SIL.3 standards and are the subject of a written risk analysis document;
- By design, these electrical hoists allow people to be underneath the load(s): the electrical hoist is at a low voltage control, it is equipped with detection of over or under load, an incremental and absolute encoder for measuring altimetry, a measure of continuous load, thermal protection. Finally, the electric hoists are equipped with a computerised control with a “dead man’s switch”. The movements are placed under the control of an operator who has a direct view of the load. If this is not possible, the operator is accompanied by an assistant with a direct view of the movements and an emergency stop.

§ 7. Miscellaneous.

Textile slings and baskets are permitted provided that they are systematically secured by a non-combustible secondary safety.

Only slings that have been CE labelled by the manufacturer, and identified, are permitted;

Long link lifting chains are accepted for the suspension of technical equipment provided that they are at least “Grade 8” (cf. NF EN 818-7 standard), labelled, identified and are accompanied by an EC certificate establishing their breaking load and their load factor;

For lighting, video or sound equipment safety slings: these slings are stamped so that the manufacturer and SWL (safe working load) can be identified;

Support of the load by the sling: outside permanent installations (addressed in § 7. Permanent installations), the possibility of suspending a load without a motor does not require the presence of a secondary safety, subject to the doubling of the load factor.

§ 8. Permanent installations.

In the case of permanent installations (sound, lighting, video systems, etc.), the absence of safety slinging is not allowed. In other words, it will be permitted on the installations of the touring show being hosted in the establishment (subject to compliance with all the points in § 6), whereas it will not be permitted for the grid trusses or the hanging sound equipment permanently installed at the establishment.

Article 55 - [Checks on the lifting apparatus and accessories](#)

§ 1. The provisions of the Labour Code regarding verification and testing are deemed to have been met if, on the one hand, the attachment points of the room's framework have previously been verified as a support for lifting and bearing loads, either by way of an overload test or by way of calculation notes drawn up by specialised design office and if, on the other hand, the lifting devices have been checked separately by way of general periodic verification and commissioning. The results of the calculation notes can be used in a "rigging" technical data sheet of the venue, with different configurations of acceptable loads. As a result, lifting devices and accessories are exempt from undergoing static and dynamic reactivation tests. Adequacy and reassembly examinations remain mandatory.

§ 2. The general periodic inspection of lifting devices is required every 6 months. However, this audit period is extended to 12 months for fixed lifting devices (with no change in the attachment point) in the same operating site.

§ 3. An overall review of the loads is carried out for each configuration of the shows. The users define the sets of loads to be lifted or suspended, as well as their distribution. The venue provides the rigging technical data sheets showing the gripping abilities. Those in charge of the lifting operations draw up a summary document establishing the appropriateness of its loads with the framework. These documents are shown to the qualified technician or the technical controller for validation.

TITLE X

Organisation and prevention

Article 56 - [Concurrent activities and prevention plan](#)

§ 1. In accordance with Decree n°2008-244 of 7 March 2008 (Article R4511-1 et seq. of the Labour Code), the overall coordination of the prevention measures is intended to prevent the risks related to interference between the activities, installations and equipment of different companies at the same place of work.

§ 2. These provisions apply to the head of the user company and the head of the external company when an external company provides workers to carry out or participate in the execution of an operation, regardless of its nature, at a user company's establishment, including at its outbuildings or construction sites.

§ 3. The overall coordination of the prevention measures is under the authority and responsibility of the head of the user company. The user company is the operator of the establishment or the organiser of the event. The heads of the external companies shall provide all necessary information for risk prevention. The heads of the user and external companies carry out a joint analysis of risks that may result from the interference between the activities, installations and equipment. Where these risks exist, the employers shall adopt, by mutual agreement, and before the work begins, a prevention plan defining the measures taken by each company to prevent these risks.

§ 4. The prevention plan shall be in writing and adopted before work begins in the following two cases:

- Where the operation to be carried out by external companies, including subcontractor companies who they may call upon, involves a total number of working hours expected to be equal to at least 400 hours over a maximum period of less than or equal to 12 months, whether the work is continuous or intermittent. The same applies when, during the course of the work, it transpires that the number of working hours will reach 400 hours;
- Whatever the expected duration of the operation, when the work to be carried out is one of the dangerous types of work that appears on the list set, respectively, by decree of the ministry in charge of labour and by decree of the ministry responsible for agriculture (the following appear in the list of dangerous types of work: working at a height and hot point work).
- The management of the prevention plans and the risks at work may be entrusted to a prevention officer by the head of the user company, in accordance with article 22.

Article 57 - [Working at a height](#)

§ 1. In accordance with the Labour Code, temporary work at a height is carried out on the basis of a work plan that is designed, installed or equipped in such a way so as to protect the health and safety of the workers. The workspace is such that it enables work to be carried out under ergonomic conditions.

§ 2. Priority is given to work equipment that provides collective protection.

§ 3. In accordance with decree 2004-924 of 01/09/2004, the prevention of falls from a height is ensured by railings, built-in or securely fixed, rigid and of an appropriate strength, placed at a height of between 1m and 1.1m and with at least one 10-15cm toeboard, depending on the height for the railings, a handrail and an intermediate handrail at half-height or by any other means that ensures equivalent safety. If these provisions cannot be implemented, soft collection devices shall be installed and positioned so as to avoid a fall of more than three metres.

§ 4. If collective protection devices cannot be implemented, the protection of workers shall be ensured by way of an appropriate fall protection system that does not allow a freefall of more than one metre or that limits the effects of a fall from a greater height under the same conditions. When making use of personal protection equipment, a worker must never be left alone, so that they can be rescued within a time consistent with the preservation of their health. In addition, the employer shall specify in a manual the anchor points and the anchoring devices provided for the implementation of the personal protection equipment as well as procedures for its use.

§ 5. Work platforms for working at a low height (PIRL) are considered as workstations for maintenance and cleaning work in the buildings. Mobile elevating working platform personnel (MEWP) are provided for work at a greater height, maintenance and cleaning in the buildings.

§ 6. When the temporary work at a height cannot be carried out from the work plan as mentioned in § 1 above, appropriate work equipment is chosen to ensure and maintain safe working conditions.

§ 7. It is forbidden to use ladders, stepladders and footboards as workstations. However, this equipment can be used if it is technically impossible to resort to equipment providing collective protection of workers or where the risk assessment has established that this risk is low and that the work is short in duration and not of a repetitive nature (cf. R. 4323-63 of the Labour Code).

§ 8. Access and positioning techniques using ropes are not used to build a workstation. However, if it is technically impossible to use equipment that provides collective protection for workers or if the risk assessment determines that the installation or implementation of such equipment is likely to expose workers to a risk that is higher than the risk resulting from the use of access or positioning techniques using ropes, they may be used for temporary work at a height. After having assessed the risk, taking into account the duration of certain works and the need to perform them under conditions that are suitable from an ergonomic point of view, a seat equipped with appropriate accessories is provided.

§ 9. For the assembly and disassembly phases it is essential that personnel trained to work at a height are used. They will have taken one of the following training courses:

- Wearing of PPE (harness, etc.);
- Working at a height;
- Scaffolding user/fitter;
- Rope access work;
- Rigging;
- IRATA;
- CQP scaffolding fitter;
- CQP rope access technician;
- CQP rigging.

§ 10. The personal protection equipment for protecting against falls from a height (harness and accessories) is checked at least once a year by a qualified technician who is trained and able to complete the corresponding audit documents. It is compulsory to keep the audit report. It is signed by the auditor and the user.

§ 11. When making use of personal protection equipment, a worker must never be left alone, so that they can be rescued within a time consistent with the preservation of their health. In addition, the employer shall specify in a manual: the anchor points and the anchoring devices provided for the implementation of the personal protection equipment as well as procedures for its use.

TITLE XI

Inspections and Audits

Article 58 - [Types of inspections and audits](#)

§ 1. Design audit.

A technical inspector approved by the minister of construction shall verify the design and issue a model appraisal or technical record appraisal. This obligation to have an audit carried out by a technical inspector does not apply to category OP1 and OS1 frames, subject to the production of a document from the person placing the goods on the market confirming compliance with the provisions in the articles of Title VII. This obligation to have an audit carried out by a minister of construction-approved technical inspector does not apply to suspended removable sets representing an overall load that is less than or equal to 4 tonnes and to OS1 and OS2 on a lifting tower or lifting foot, made from component parts from the same manufacturer already having had a model appraisal for these components.

However the installer's design office produces specific calculation notes for each installation for this removable set. The inspection described in § 2 below remains mandatory.

§ 2. Inspection of the condition of non-operating or pre-installation equipment.

This inspection, which is the responsibility of the installer, is intended to eliminate defective or non-conforming parts before making the removable set available to the installer or the organiser. The assessment is based on the features provided by the technical instructions or the technical record.

Upon inspection, the main structural elements shall satisfy the following requirements:

- No permanent deformation on the support or safety elements;
- No substantial corrosion;
- No cracks or breaks in the welds;
- The bolt threading is in good condition;
- Axles and pins are in good condition;
- Tarpaulins are in good condition;
- Floors and seats are in good condition.

This inspection does not result in the drafting of any particular document.

§ 3. Validation of assembly.

The installer shall provide the organiser with a correct assembly certificate, the models of which appear in Article 67, for all materials and removable sets. The organiser or operator shall conduct, or have conducted, an inspection after each removable set assembly.

§ 3.1. The correct assembly certificate is an inspection document for OS1 and OP1 removable sets.

§ 3.2. In addition to the correct assembly certificate, an inspection of the correct assembly is carried out by at least a qualified technician in the following cases:

- For OP2 category stands;
- For OP2 category attached or non-attached podiums and stages with a maximum surface area of 120m² with category OS2 annexed frames;
- For OS2 category stage equipment frames;
- For OP2 category stairs and ramps.

This will entail the drawing up of a report, the examples of which can be found in Article 68. In addition to the correct assembly certificate, an installation inspection is carried out for the materials and removable sets whose verification does not fall under the provisions in § 3.1 and § 3.3 by an ERP-recognised inspection body or CTS-authorized audit office in accordance with the procedures defined in Title XIII. The various points described in the reports, the examples of which appear in Article 67, must be complied with in every respect, with each body having the opportunity to present its reports in its usual formats and presentations.

§ 4. Inspection during operational phase.

The operator is required to keep the material given to them in good condition. Prior to each new operation and/or at least every day, a visual inspection is carried out by the operator or by a specially designated member of staff. This visual inspection is based on the technical instructions or the technical record and enables the following in particular to be checked:

- The condition of the supports and the ground connection of OS and OP;
- The presence and condition of the ballast components, where they exist;
- The presence and condition of the guy wires, where they exist;
- The condition of the OS and OP hooking devices;
- The presence and efficiency of the railings;
- The condition of the bracing;
- The condition of the tarpaulins;
- The condition of the floors and seats;
- The vacuity of the evacuation routes.

The operator shall immediately take the necessary measures to correct any defects found during this inspection.

§ 5. Quarterly inspection.

Long-term removable sets installed in the open air are subject to a quarterly inspection carried out by a qualified technician.

This inspection is based on the technical instructions or the technical record and enables the following in particular to be checked:

- No deformation or modification to the removable set or equipment support;
- No permanent deformation on the support or safety elements;
- No substantial corrosion;
- The condition of the impermeability and the securing of the tarpaulin cover and the side tarpaulins;
- No cracks or breaks in the welds;
- The presence of nuts and bolts;
- Axles and pins are in good condition;
- The condition of the supports and the ground connection of OS and OP;
- The presence and condition of the ballasts, where they exist;
- The presence and condition of the guy wires, where they exist;
- The condition of the OS and OP hooking devices;
- The presence and efficiency of the railings;
- The condition of the floors and seats;
- The vacuity of the evacuation routes.

This inspection shall be the subject of a report, the examples of which can be found in Article 68.

§ 6. Summary table of inspections. General case

	OP1	OP2	OP3	OS1	OS2	OS3
Design audit	(2)	OA Strength	OA Strength	(2)	OA Strength	OA Strength
Inspection of the condition of equipment before installation.	INSTAL	INSTAL	INSTAL	INSTAL	INSTAL	INSTAL
Inspection of the assembly before the first opening to the public (4)	INSTAL (1)	<ul style="list-style-type: none"> • QT for the stands • QT for the podiums and stages $S < 120m^2$ associated or non-associated with OS2 (if $S > 120m^2$ then inspection by IB ERP or AO CTS) • QT for stairs and ramps 	IB ERP AO CTS	INSTAL (1)	QT	IB ERP AO CTS
Inspection during operational phase	ODP	ODP	ODP	ODP	ODP	ODP
Quarterly inspection (3)	QT	QT	QT	QT	QT	QT

Special case of OS made from component parts from the same manufacturer who have already had a model appraisal for these components.

	OS1 suspended (6)	OS2 suspended (6)	OS3 suspended (6)	OS1 supported (5)	OS2 supported (5)	OS3 supported (5)
Design audit	OA Strength	OA Strength	OA Strength	/	/	OA Strength
Inspection of the condition of equipment before installation	INSTAL	INSTAL	INSTAL	INSTAL	INSTAL	INSTAL
Inspection of the assembly before the first opening to the public (4)	INSTAL (1)	QT	IB ERP AO CTS	INSTAL (1)	QT	IB ERP AO CTS
Inspection during operational phase	ODP	ODP	ODP	ODP	ODP	ODP
Quarterly inspection (3)	QT	QT	QT	QT	QT	QT

Key:

Qualified technician: QT

ERP-recognised inspection body:

IB ERP CTS-authorized audit office:

OVCTS Recognised inspection body strength: OA Strength Installer: INSTAL

Operator or designated person: ODP

(1) The correct assembly certificate is an inspection document

(2) Obligation not imposed subject to the production of a document from the person placing the goods on the market confirming compliance with the provisions in the articles of Title VII - Design, Manufacture. Without this document verification of the design will be done by OA Strength.

(3) For long-term removable sets (duration of longer than 3 months) installed in the open air.

(4) In addition to the correct assembly certificate for OP 2 and 3 and OS 2 and 3.

(5) Supported on the lifting tower or lifting foot.

(6) Suspended OS representing an overall load of more than 4 tonnes.

§ 7. General periodic audit.

The inspections described above do not replace the obligation to carry out a general periodic audit of lifting equipment and accessories.

Article 59 - [Access control](#)

The organiser shall take necessary measures to control access to the removable set intended to support people. They limit the number of people admitted to it according to its capacity, such as it was designed, manufactured, installed and checked or inspected.

Article 60 - [Underneath the removable sets](#)

In the absence of any fire resistance requirement for the supporting structures, the underneath is to be kept clear of any potential heat, with the exception of electric cabinets required for operation. It is made inaccessible to people, with the following exceptions:

- Podiums and stages where access underneath is permitted for the purposes of the show;
- Traffic flow facilities for access and evacuation of people.

If there are electric cabinets, they are protected by appropriate fire extinguishers and visible from outside the perimeter of the removable set in question.

Article 61 - [Weather forecasts](#)

The organiser ensures that the running of the event is suitable for the weather forecast. In particular, they collect information about wind speeds and precipitation expected throughout the duration of the event.

Article 62 - [Emergency evacuation and alerting the emergency services](#)

§ 1. Occupants shall be evacuated from removable sets installed in the open air or surroundings when the top speed of a gust of wind measured at 3 seconds reaches 20m/s, or 72km/h, or any other value defined and justified in the manufacturer's technical instructions specifying configurations.

§ 2. The organiser shall ensure that for the installation at the highest point of the frame there is at least one anemometer for every event that has a category OP2 and 3 and/or OS2 and 3 removable set. The organiser is responsible for taking measurements. The anemometer is connected to a device that can inform the organiser about the speed of wind at all times.

§ 3. The organiser provides an emergency evacuation sound signal for any event. When the number of people admitted exceeds 700 people, the emergency evacuation sound signal can broadcast a voice message:

- Either by the sound system dedicated to the event, provided that its power supply is guaranteed or aided by an independent power supply source distributed by the public network;
- Or by a suitable number of separate portable devices (such as a megaphone).

§ 4. The method of alerting the emergency services is defined by the regulations that apply to the event. Otherwise, they can be alerted by mobile phone. In all cases, the operation of the general alarm is preceded by stopping the sound broadcast and, as far as possible, by the restoration of normal lighting if available.

TITLE XII

Various materials

Article 63 - [Methods of handling and lifting](#)

Work equipment for handling front-end loaders and/or telescoping lift trucks is not designed, and therefore not authorised, for holding the static loads of sound systems, video screens or light fixtures.

Article 64 - [Flight and lifting of people or objects](#)

§ 1. Items lifted outside of public areas are not affected.

§ 2. A risk analysis is carried during the design stage and is the design and is the subject of a written document.

§ 3. Strength: the mechanisms assisting with the suspension are sized according to the usual load factors (Machinery Directive 2006/42/CE Ch4) multiplied by the dynamic coefficient appropriate to the actions performed. This dynamic coefficient is at least 2. If it is not known, it must be measured during tests with a suitable dynamometer (cf Handbook circus apparatus: design and manufacturing).

§ 4. In the case of ropes, if there is a thermal or pyrotechnic risk then only aramid ropes are permitted.

§ 5. Redundancy: all flight systems are designed with at least two load-bearing cables, ropes or chains.

§ 6. Flights on soft support: all components and accessories used, when they are all taut, have a double load factor compared to the usual load factor.

§ 7. Flights on rigid support (rail, truss, etc.): The rollers are fitted with anti-disgorgement devices. If the travelling is completely independent from the lifting, there is no need for it to be redundant. However, emergency facilities for people are implemented and tested.

§ 8. In general, only lifting devices specially designed for lifting people can be used for this purpose. If this is not possible, an independent security system shall be installed in the form of a secondary safety or a descent control device (EN 360), either in the form of a mattress or a suitable landing net.

§ 9. For acrobatic flights, please refer to Handbook circus apparatus: design and manufacturing,

§ 10. For non-acrobatic flights, the performer is either directly suspended by a harness or, if on a structure, connected to it by the shortest possible safety rope, depending on the scenographic needs and risk analysis.

§ 11. If the harness is not specifically a harness for working at a height, it is made specifically for that effect, labelled appropriately and in an indelible way and is accompanied by a manufacturer's certificate ensuring traceability.

§ 12. If the installation of the flight or the suspension does not fit into any of the above categories, the risk analysis carried out during the design stage is sent for validation to an authorised inspection body along with a written document.

TITLE XIII

Technical Documents

Article 65 - [Organiser safety record](#)

The organiser's safety record consists of at least four parts. The following points must be filled.

§ 1. General and administrative information:

- The name or company name and address of the organiser and their representative;
- Name or company name of the installer;
- Name or company name of the body approved for inspections or the qualified technician;
- Address of the installation location of the removable set(s);
- For removable sets installed in a closed and/or covered construction:
 - The classification of construction in terms of fire safety rules;
 - The maximum number of people that the construction is authorised to accommodate.

§ 2. Information about the event:

- The nature of the event;
- The date, duration and frequency of the event;
- The expected duration for assembly and disassembly.

§ 3. Information necessary for the risk analysis:

- Review and adequacy of the calculation of exit aisles and units of exit widths in terms of the type and category of the establishment;
- Category of the main frame intended to accommodate people and the attached frame;
- How the main frame will be occupied (fixed and/or movable seats, standing places);
- The number of people allowed on each main frame;
- The nature of the ground;
- The bearing capacity of the ground or support, estimated according to the methods in Article 51.

§ 4. Graphic documents (plans or diagrams) required for OP2, OS2, OP3 and OS3.

- For removable sets installed outdoors, the plan of the installation site making it possible to locate:
 - The location of the removable set(s);
 - Existing structures;
 - Surrounding roads that can be used for access by the emergency services;
 - Exit aisles.
- For removable sets installed inside a building, the floor plan making it possible to pinpoint the location:
 - The location of the removable set(s);
 - The location of pathways and exits to get outside.

Article 66 - [Details of loads and wedges distributions](#)

§ 1. Transmission of loads to the ground.

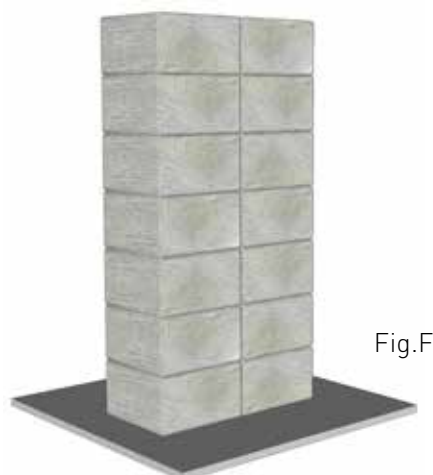
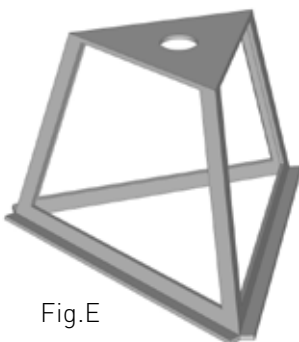
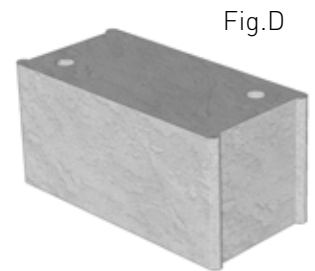
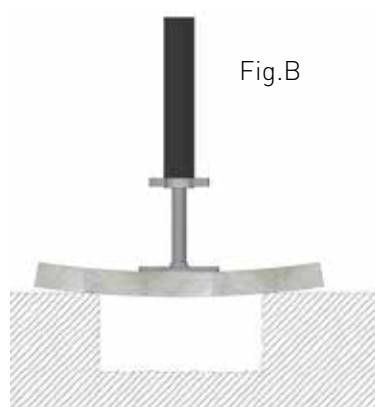
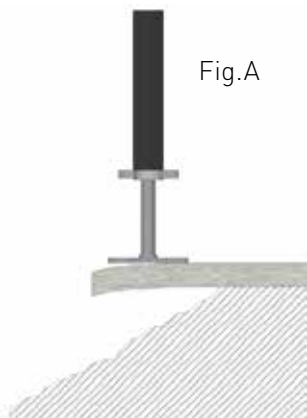
The manufacturer determines the size of the jack, base plates or footing plates, in line with the load-lowering of its product and for a predefined ground bearing capacity. If the ground resistance is less than this value then the manufacturer shall state, in the technical instructions, the size of the necessary load distribution plates and usable materials.

The installer ensures the transmission of the load on the ground using load-distributing plates when the bearing capacity of the ground on the site is less than the predefined bearing capacity of the ground hypothesised by the manufacturer in its technical instructions.

§ 2. Distribution of loads and wedges. The following are prohibited:

- Pressed woods: all types, bare, melamine (one side or two sides);
- The use of fixed jacks, base plates or footings, on a slanting floor without recess (Fig. A);
- The use of jacks, base plates or footings on an empty space: gutter, trench, kerbs (Fig. B);
- B);
- Non-reinforced cement and concrete plates, hollow and solid breeze blocks, bricks (Fig. C and D);
- Supports and pillars, provided that they are not accompanied by calculation notes and/or that the working load is not indicated (Fig. E). Please be reminded that the stacking of supports and pillars is not permitted;
- The stacking of wedges (beyond the determined values, the non pyramidal stacking or stacking where the pieces of wood are not crossed and joined together (Fig. F);
- The use of plastic studs made for terrace drainages (Fig. G);
- For the record, the fitting of jacks, base plates or fittings where the minimum overlap length is less than what was foreseen by the manufacturer.

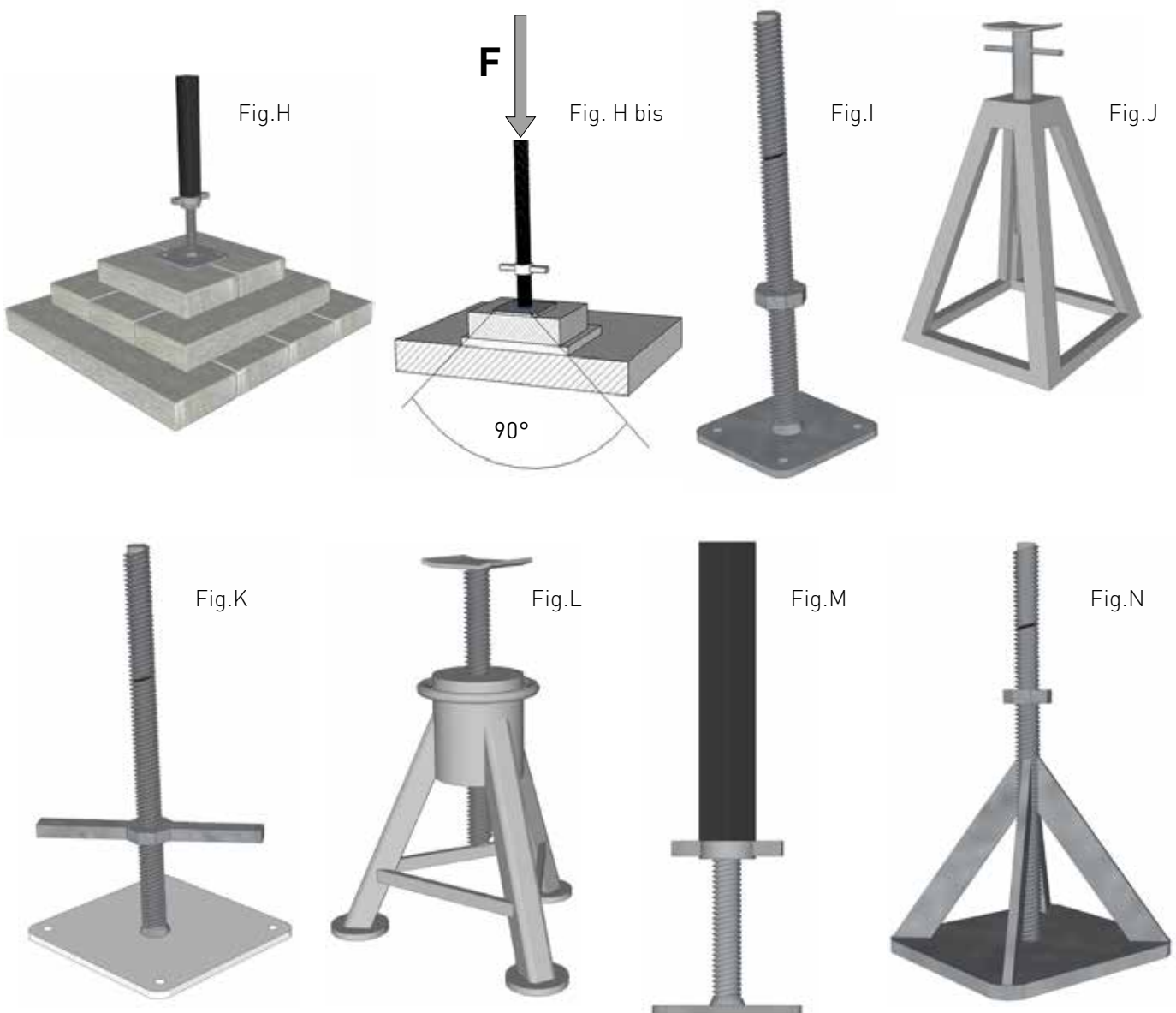
PROHIBITED



§ 3. Distribution of loads and wedges. Permitted:

- Load distribution systems in “pyramid” form (Fig. H), in accordance with the stack principles (Fig. Ha);
- The manufacturer’s jacks are the only ones permitted, otherwise they must be accompanied by a calculation note; For the scaffolding: The NF EN 12811-1 standard specifies that the minimum overlap length is 25% of the total length of the rod or 150mm (take the largest value). For the other removable sets, the locking of the nut to its maximum stroke by the grinding, welding point or crushing of the threading is permitted (Fig. I);
- Supports or pillars or other metal parts justified by calculation notes and bearing an indication of the working load: (CU: 1T, for example), or justified by static loading tests (Fig. J and K);
- The manufacturer’s standard fixed jacks (Fig. L and M). The manufacturer’s elevated jacks (Fig. N). The jacks justified by calculation notes regarding the lowering of the load of the removable set;
- As a reminder, shoring under a slab or floor is permitted in order to transfer the lowering of a load on the ground or a slab receiving the load of a removable set (special cases of stage floors, car parks, etc.).

PERMITTED



Article 67 - [Confirmation of correct assembly of removable equipment and sets](#)

CONFIRMATION OF CORRECT ASSEMBLY

Event:

Address of the assembly location:

.....

Operating dates of the event:

Organiser:

Organiser's address :

.....

Installer :

Name and surname of the head of assembly:

Address of the "installer" company:

.....

Documents and plans used for installation: references, dates, indexes, etc.:

.....

.....

.....

FEATURES OF THE MATERIALS AND REMOVABLE SETS

Manufactured by:

Summary description:

.....

.....

.....

I, the undersigned, (Surname, first name and job) M.
certify that I have assembled, or have had this equipment and removable sets assembled, in accordance with:

- the Labour Code;
- the Construction and Housing Code and the ERP regulations;
- the handbook "removable equipment and sets";
- the event plans;
- the manufacturer's plans and technical instructions for installation and use;
- the conclusion of the prospective calculation notes (scaffolding) (does not apply to OS1 and OP1);
- the model appraisal or technical record;

Signed at:

On:

In two original copies Signature:

THE SUMMARY DESCRIPTION SHALL INCLUDE AT LEAST

Stands:

- Manufacturer's name;
- Model designations;
- Number of seated places;
- Number of standing places;
- Number of rows;
- Opening;
- Depth;
- Height of the removable set (height of the last floor).

Stages:

- Manufacturer's name;
- Model designations;
- Opening;
- Depth;
- Height of the removable set;
- Permitted loads for the floor;
- Attached or unattached structures:
 - Extensions;
 - Management;
 - Towers, in particular: camera, tracking, delay, daylight screens, etc.;
 - Persons with reduced mobility platforms.

Covered stage (or stages with a built-in grid):

- Manufacturer's name;
- Model designations;
- Opening;
- Depth;
- Height of the removable set (OS and OP);
- Clearance height;
- Load capacity of the structure;
- Permitted loads for the floor;
- Attached or unattached structures:
 - Extensions;
 - Management;
 - Towers, in particular: camera, tracking, delay, daylight screens, etc.;
 - Persons with reduced mobility platforms.

Scaffolding:

- Manufacturer's name;
- Model designations;
- Opening;
- Depth;
- Height of the removable set (OS and OP);
- Load capacity of the scaffolding;
- Ballasts, anchorage or guying;
- Covering and/or cladding, and/or siding of the scaffolding.

Trusses;

- Manufacturer's name;
- Model designations;
- Function and dimensions:
 - Grid (specify the aperture and depth);
 - Boom (specify length);
 - Totem (specify height and possible offset);
 - Gantry (specify clearance and aperture);
 - Scenery;
 - etc.

Article 68 - [Inspection reports](#)

Article 68 - [§ 1 Inspection report regarding removable stand type removable sets](#)

1. INFORMATION ABOUT THE EVENT

Name of the event:

Type of event:

Event begins on: Event ends on:

Address of the assembly location:.....

Postcode:..... Town:

Type of ERP: Category:

Catégories d'ensembles démontables :

OP1		OP2		OP3	
-----	--	-----	--	-----	--

2. REFERENCE TEXTS

2.1. C.C.H. : Construction and Housing Code.

2.2. Decree 95-260 of 08/03/95 and the implementing circular of 22/06/95.

2.3. E.R.P. : safety regulations for fire and panic risks in the modified ERP of 25 June 1980 and particularly (the titles or chapters) GN, AM, L, T, X, CTS, SG & PA.

2.4. Structures calculation rules: Eurocodes or CM 66 and AL 76.

2.5. Calculation rules Snow and Wind: Eurocodes or NV 65 amended 2009.

2.6. Scaffolding:

2.6.1. Labour Code R 4323-69 to R 4323-88 (decree of 1 September 2004 and decree of 21 December 2004).

2.6.2. The following scaffolding standards: NF EN 12810-1 et 2, NF EN 12811-1, 2 et 3, NF EN 39, NF EN 74-1, NF EN 74 -2, NF EN P 93-521, NF EN P 93-522 et NF EN P 93-523*.

2.7. Railings: NF P 01-012 and NF P 01-013.

2.8. Manufacturer's installation and use technical requirements and technical instructions, model or technical record appraisal, etc.

2.9. "Handbook removable equipment and sets".

*delete as appropriate

2.11. Information about the participants

TYPE	COMPANY	ADDRESS	CONTACT DETAILS	
OPERATOR			landline	
			mobile	
			email	
ORGANISER			landline	
			mobile	
			email	
PREVENTION OFFICER			landline	
			mobile	
			email	
OWNER OF THE STRUCTURE			landline	
			mobile	
			email	
INSTALLER/FITTER			landline	
			mobile	
			email	
MANUFACTURER OF THE STRUCTURE			landline	
			mobile	
			email	
MANUFACTURER OF THE SEATS			landline	
			mobile	
			email	
SIGNATORY OF THE CONFIRMATION OF CORRECT ASSEMBLY			landline	
			mobile	
			email	
BODY IN CHARGE OF INSPECTION			landline	
			mobile	
			email	
INSPECTOR			landline	
			mobile	
			email	

*delete as appropriate

KEY

F Favourable **U/Obs** Unfavourable **N/A** Non Applicable

UA Unaudited

OS Outside scope

N° Obs Observation number

F: Appraisal F indicates the review's findings of the project's alignment with the technical reference documents, the visual inspection of the good condition of the installed components, the audit of the proper assembly of the frame and the adaptation to the ground or the framework.

It also indicates an appraisal of the safety components for spectators limited to the structure concerned.

U/Obs: Cases not subject to a favourable opinion (no model or technical record appraisals, finding of a fault with the equipment or the installation, failure of the safety components for spectators, etc.).

N/A: N/A is written when the equipment or a part of the removable set is not affected by certain provisions.

UA: UA is written when the equipment or a part of the removable set cannot be inspected for operational inaccessibility reasons. It is reported and explained in the report.

OS: OS applies to provisions not inspected by a technician qualified to carry out inspections, an ERP-recognised inspection body or a CTS-authorized audit office.

Abnormalities found during inspections are followed by clearly formulated observations. If the inspector does not have a specific frame of reference, the appraisal given shall be the subject of a sufficiently explanatory comment. All these detailed abnormalities are the subject of a summary list drawn up at the end of the report, numbered in a single series, with the location of the installation parts in question. These observations must always be resolved before the operation.

The observation is the conclusion:

- either of an anomaly or a deviation from the original condition of the removable set or equipment in question;
- or a deviation from the regulations, standards or best practices. It is always resolved before admitting the public.

Areas for improvement of the annex:

- intended to be constructive;
- do not involve the predefined safety level;
- are likely to elaborate on possible improvements.

3. SUBMITTED DOCUMENTS

TYPE	YES	NO	N/A	OBS
3.1. Plans and sections:				
3.2. Technical data sheet(s)				
3.3. Technical, installation and usage instructions				
3.4. Calculation notes:				
3.5. Report on the fire rating of the seats				
3.6. Report on the fire rating of the floors				
3.7. Report on the fire rating of the floor coverings				
3.8. Report on the fire rating of the vertical walls				
3.9. (Model) appraisal by an approved inspection body (I. B.)*				
3.10. Technical record (several pieces of equipment) approved by an I. B.*				
3.11. Correct assembly certificate (Head of assembly)				

*delete as appropriate

REFERENCE OF SUBMITTED DOCUMENTS

.....

.....

.....

.....

.....

.....

4. DESCRIPTION OF TYPE & MODEL *

Make and model*	
Maximum headcount	
Number of rows	
Trusses and elevations*	
Trusses and scaffold base*	
Mixed system (describe)*	
Nature of the ground	
Nature of the load distribution plates: Without* Wood* Steel* Other*	
Type of wedge*: Without* Wood* Steel* Other*	
Height of the removable set	
If the number of trusses or links are staggered, specify	
Number of bays (in terms of the aperture)	
Number of trusses or links (in terms of the depth)	
Number and width of traffic flows in the terraces (in the stand)	
Number and width of stairs and vomitories	
Traffic flow under the stands Number and widths	
Number and width of stairs Rear and/or Side	
Walkway Width:	
Front passage Width:	
Starting height Height:	
Labelling/Numbering of the parts: yes or no	
Seats: Plastic shells/Seat bottom Wooden seats/others (specify)*	
Type of floors Wood/Metal/Other (specify)*	
Risers and stair passages*	
Possible floor covering and fire rating	
Anemometer or weather forecast subscription	

* delete as appropriate or N/A for Not Applicable

5. DESCRIPTION OF ATTACHED ASSOCIATED EQUIPMENT*

Places for persons with reduced mobility* Number:	
Access ramp(s) for persons with reduced mobility* Number:	
Management riser(s)* Number:	
Tracking riser(s)* Number:	
Camera riser(s)* Number:	
Emergency lighting and signs Vomitories*	
Emergency lighting and signs Traffic flow under stands*	
Horizontal anti-fall protection above traffic flows under stands*	
Vertical side protection of traffic flows under stands*	
Peripheral protection of the underside of the stand/description	

*delete as appropriate

6. FINDINGS

TYPE	F	D	N/A	UA	OS	N° Obs
Perpendicularity						
Alignment						
Level						
Ballasts						
Guy wires						
Anchoring						
Number of places between two traffic flows or stairs and between a traffic flow or staircase and railings						
Number of exit aisles and width of exit aisles						
Load distribution devices						
Wedges						
Jacks or footings						
Underfloor frames						
Bracing frames or triangles or locking mechanisms						
Floors						
Risk of tripping on the floor						
Seats						
Stair passages						
Risers						
Side railings						
Linking railings						
Rear railings						
Elevation of first row and Front railings						
Walkway						
Vomitories and stairs						
Additional access stairs (side or rear)						
Access ramps						
Integrated management platform						
Tracking platform(s) or integrated camera(s)						
Access protection under stands						
Lack of storage with heat potential under the stand						
Suitability and vacuity of the establishment's exit aisles						
Presence of equipotential bonding						

7. OBSERVATIONS

These observations must always be resolved before the operation.

N°	Observations	Resolved on By (name and occupation)	Signature

8. INSPECTOR'S APPRAISAL

Outdoor wind speed limit for evacuation of the stand:.....km/h

Appraisal: FAVOURABLE* UNFAVOURABLE* in operation.

*delete as appropriate

Inspection carried out on..... /..... /..... At..... at

This report comprisespages and..... appended documents.

Date of the inspection report:..... /..... /.....

The inspector (Name and occupation of the person who issued the report)

.....

Identification n° of the inspector's training.....

Surname, first name.....

Signature:

ANNEX: AREAS FOR IMPOROVEMENT FOR THE RECORD

These comments are intended to be constructive, they are not binding on the predefined safety level and are to clarify possible or recommended improvements.

N°	Comments

Article 68 - § 2 - Inspection report on the attached or unattached stages, podiums and frames types of removable sets installed indoors

9. INFORMATION ABOUT THE EVENT

Name of the event:
 Type of event:
 Event begins on: Event ends on:
 Address of the assembly location:.....
 Postcode:..... Town:
 Type of ERP: Category:

Categories of removable sets:

OP1		OP2		OP3	
OS1		OS2		OS3	

10. REFERENCE TEXTS

- 10.1. C.C.H. : Construction and Housing Code.
- 10.2. Decree 95-260 of 08/03/95 and the implementing circular of 22/06/95.
- 10.3. E.R.P. : safety regulations for fire and panic risks in the modified ERP of 25 June 1980 and particularly (the titles or chapters) GN, AM, L, T, X, CTS, SG & PA.
- 10.4. Structures calculation rules: Eurocodes or CM 66 and AL 76.
- 10.5. Calculation rules Snow and Wind: Eurocodes or NV 65 amended 2009.
- 10.6. Scaffolding:
 - 10.6.1. Labour Code R 4323-69 to R 4323-88 (decree of 1 September 2004 and decree of 21 December 2004).
 - 10.6.2. The following scaffolding standards: NF EN 12810-1 et 2, NF EN 12811-1, 2 et 3, NF EN 39, NF EN 74-1, NF EN 74 -2, NF EN P 93-521, NF EN P 93-522 et NF EN P 93-523*.
- 10.7. Railings: NF P 01-012 and NF P 01-013.
- 10.8. Manufacturer’s installation and use technical requirements and technical instructions, model or technical record appraisal, etc.
- 10.9. “Handbook removable equipment and sets”.

*delete as appropriate

10.10. Information about the participants

TYPE	COMPANY	ADDRESS	CONTACT DETAILS	
OPERATOR			landline	
			mobile	
			email	
ORGANISER			landline	
			mobile	
			email	
PREVENTION OFFICER			landline	
			mobile	
			email	
OWNER OF THE STRUCTURE			landline	
			mobile	
			email	
INSTALLER/FITTER			landline	
			mobile	
			email	
MANUFACTURER OF THE STRUCTURE			landline	
			mobile	
			email	
MANUFACTURER OF THE SEATS			landline	
			mobile	
			email	
SIGNATORY OF THE CONFIRMATION OF CORRECT ASSEMBLY			landline	
			mobile	
			email	
BODY IN CHARGE OF INSPECTION			landline	
			mobile	
			email	
INSPECTOR			landline	
			mobile	
			email	

*delete as appropriate

KEY

F Favourable **U/Obs** Unfavourable **N/A** Non Applicable

UA Unaudited

OS Outside scope

N° Obs Observation number

F: Appraisal F indicates the review's findings of the project's alignment with the technical reference documents, the visual inspection of the good condition of the installed components, the audit of the proper assembly of the frame and the adaptation to the ground or the framework.

It also indicates an appraisal of the safety components for spectators limited to the structure concerned.

U/Obs: Cases not subject to a favourable opinion (no model or technical record appraisals, finding of a fault with the equipment or the installation, failure of the safety components for spectators, etc.).

N/A: N/A is written when the equipment or a part of the removable set is not affected by certain provisions.

UA: UA is written when the equipment or a part of the removable set cannot be inspected for operational inaccessibility reasons. It is reported and explained in the report.

OS: OS applies to provisions not inspected by a technician qualified to carry out inspections, an ERP-recognised inspection body or a CTS-authorized audit office.

Abnormalities found during inspections are followed by clearly formulated observations. If the inspector does not have a specific frame of reference, the appraisal given shall be the subject of a sufficiently explanatory comment. All these detailed abnormalities are the subject of a summary list drawn up at the end of the report, numbered in a single series, with the location of the installation parts in question. These observations must always be resolved before the operation.

The observation is the conclusion:

- either of an anomaly or a deviation from the original condition of the removable set or equipment in question;
- or a deviation from the regulations, standards or best practices. It is always resolved before admitting the public.

Areas for improvement of the annex:

- intended to be constructive;
- do not involve the predefined safety level;
- are likely to elaborate on possible improvements.

11. SUBMITTED DOCUMENTS

TYPE	YES	NO	N/A	OBS
11.1. Plans and sections				
11.2. Technical data sheet(s)				
11.3. Technical, installation and usage instructions				
11.4. Calculation notes				
11.5. Plan of permitted loads for the structure of the building				
11.6. Plans of grid(s) and/or trusses loads				
11.5. Loads charts				
11.6 Audit reports on the motors				
11.7. Report on the fire rating of the floors				
11.8. Report on the fire rating of the floor coverings				
11.9. Report on the fire rating of the stage skirting or cladding				
11.10. Report on the fire rating of the roof tarpaulins				
11.11. Report on the fire rating of the side tarpaulins				
11.12. Report on the fire rating of the stage curtains				
11.13. Report on the fire rating of the scenery and advertising canvases				
11.14. Model appraisal by an approved inspection body (I. B.)*				
11.15. Technical record appraisal approved by an I. B.*				
11.16. Correct assembly certificate (Head of assembly)				

*delete as appropriate

REFERENCE OF SUBMITTED DOCUMENTS

.....

.....

.....

.....

.....

.....

12. DESCRIPTION OF TYPE & MODEL *

STAGE

Make and model of the stage*	
Stage aperture	
Stage depth	
Operational loads	
Nature of the ground	
Nature of the load distribution plates: Without* Wood* Steel* Other*	
Type of wedge* Without* Wood* Steel* Other*	
Ballasts, anchorage or guying	
Type Ballasts* Without* Concrete* Water* Other*	
Type of stairs Number:	
Full height of the stage (from the ground)	

TECHNICAL GRID

Aperture and depth of the technical grid	
Makes and models of trusses	
Poles and/or sub-poles	
Clearance height (between stage and trusses)	
Lifting towers* Walls in scaffolding* Suspended to the existing one*	
Type of hangers in the existing one	
Number of grid or truss lifting devices: electric cable winches* *electric chain winches* hydraulic jacks*	
Label, model and SWL (safe working load) of grid lifting devices	
Lifting devices under grids: manual chain hoist* manual wire rope hoist or tackle* electric cable winches* electric chain winches*	
Number of lifting devices under grids	
Label, model and SWL (safe working load) of under grid lifting devices	

SIDING

Presence and colour of back curtains	
Presence and colour of side curtains	
Report on the fire rating of the curtains	
Report on and nature of the skirting fire rating*	
Type of cladding*	
Report on and nature of the carpet fire rating	
Report on and nature of the fire rating of the advertising banners	
Report on and nature of the fire rating of the screens	

OTHER INFORMATION

delete as appropriate or N/A for Not Applicable

13. DESCRIPTION OF ATTACHED ASSOCIATED EQUIPMENT*

Access stairs* Number:	
Access ramps* Number:	
Unloading dock*	
Elizabethan spur*	
Sound wings*	
Proscenium*	
Extension(s) (management, dressing rooms, backstage, etc.)* Number:	
Camera riser(s) * Number:	
Proscenium extension with select audience*	
Accompanying lateral riser(s)* Number:	
Protection device against the risk of falls or railings	
Presence of equipotential bonding	

*delete as appropriate

14. DESCRIPTION OF SEPARATE EQUIPMENT

Management	
Towers, in particular: camera, tracking, delay, daylight screens, etc.	
Persons with reduced mobility platforms	
Others	

15. FINDINGS

TYPE	F	D	N/A	UA	HM	N° Obs
Perpendicularity						
Alignment						
Level						
Ballasts						
Anchorage						
Guy wires						
Load distribution devices						
Wedges						
Jacks or footings						
Underfloor frame						
Bracing						
Floor						
Risk of tripping on the floor						
Stage skirting						
Stage cladding						
Access stairs						
Access ramp						
Unloading dock						
Proscenium						
Elizabethan spur						
Management						
Camera(s) or tracking riser(s)*						
Riser(s) or sound wing(s)*						
Lack of storage with heat potential under stage						
Presence of equipotential bonding						
Towers, in particular: camera, tracking, delay, daylight screens, etc.						
Persons with reduced mobility platforms						
Liaison and safety horizontal trusses/towers						
Lifting equipment						
Audit of lifting equipment						
Safety slings or descent control devices* (in + of motors) OU Redundancy* OU Division of the SWL by two*						
Horizontal frame (grid(s) and/or trusses)						
Lifting foot or mast						
Totems						
Fire rating report						
Suitability and vacuity of the establishment's exit aisles						

16. OBSERVATIONS

These observations must always be resolved before the operation.

N°	Observations	Resolved on By (name and occupation)	Signature

17. INSPECTOR'S APPRAISAL

Under CTS and SG, wind speed limit for evacuation of the establishment:.....km/h

Appraisal: FAVOURABLE* UNFAVOURABLE* in operation.

*delete as appropriate

Inspection carried out on..... /..... /..... At..... at

This report comprisespages and..... appended documents.

Date of the inspection report:..... /..... /.....

The inspector (Name and occupation of the person who issued the report)

.....

Identification n° of the inspector's training.....

Surname, first name.....

Signature:

ANNEX: AREAS FOR IMPOROVEMENT FOR THE RECORD

These comments are intended to be constructive, they are not binding on the predefined safety level and are to clarify possible or recommended improvements.

N°	Comments

ARTICLE 68 - § 3 - [Inspection report on the attached or unattached stages, podiums and frames types of removable sets installed outdoors](#)

18. INFORMATION ABOUT THE EVENT

Name of the event:
 Type of event:
 Event begins on: Event ends on:
 Address of the assembly location:.....
 Postcode:..... Town:
 Type of ERP: Category:

Categories of removable sets:

OP1		OP2		OP3	
OS1		OS2		OS3	

19. REFERENCE TEXTS

- 19.1. C.C.H. : Construction and Housing Code.
- 19.2. Decree 95-260 of 08/03/95 and the implementing circular of 22/06/95.
- 19.3. E.R.P. : safety regulations for fire and panic risks in the modified ERP of 25 June 1980 and particularly (the titles or chapters) GN, AM, L, T, X, CTS, SG & PA.
- 19.4. Structures calculation rules: Eurocodes or CM 66 and AL 76.
- 19.5. Calculation rules Snow and Wind: Eurocodes or NV 65 amended 2009.
- 19.6. Scaffolding:
 - 19.6.1. Labour Code R 4323-69 to R 4323-88 (decree of 1 September 2004 and decree of 21 December 2004).
 - 19.6.2. The following scaffolding standards: NF EN 12810-1 et 2, NF EN 12811-1, 2 et 3, NF EN 39, NF EN 74-1, NF EN 74 -2, NF EN P 93-521, NF EN P 93-522 et NF EN P 93-523*.
- 19.7. Railings: NF P 01-012 and NF P 01-013.
- 19.8. Manufacturer’s installation and use technical requirements and technical instructions, model or technical record appraisal, etc.
- 19.9. “Handbook removable equipment and sets”.

*delete as appropriate

10.10. Information about the participants

TYPE	COMPANY	ADDRESS	CONTACT DETAILS	
OPERATOR			landline	
			mobile	
			email	
ORGANISER			landline	
			mobile	
			email	
PREVENTION OFFICER			landline	
			mobile	
			email	
OWNER OF THE STRUCTURE			landline	
			mobile	
			email	
INSTALLER/ FITTER			landline	
			mobile	
			email	
MANUFACTURER OF THE STRUCTURE			landline	
			mobile	
			email	
MANUFACTURER OF THE SEATS			landline	
			mobile	
			email	
SIGNATORY OF THE CONFIRMATION OF CORRECT ASSEMBLY			landline	
			mobile	
			email	
BODY IN CHARGE OF INSPECTION			landline	
			mobile	
			email	
INSPECTOR			landline	
			mobile	
			email	

*delete as appropriate

KEY

F Favourable **U/Obs** Unfavourable **N/A** Non Applicable

UA Unaudited

OS Outside scope

N° Obs Observation number

F: Appraisal F indicates the review's findings of the project's alignment with the technical reference documents, the visual inspection of the good condition of the installed components, the audit of the proper assembly of the frame and the adaptation to the ground or the framework.

It also indicates an appraisal of the safety components for spectators limited to the structure concerned.

U/Obs: Cases not subject to a favourable opinion (no model or technical record appraisals, finding of a fault with the equipment or the installation, failure of the safety components for spectators, etc.).

N/A: N/A is written when the equipment or a part of the removable set is not affected by certain provisions.

UA: UA is written when the equipment or a part of the removable set cannot be inspected for operational inaccessibility reasons. It is reported and explained in the report.

OS: OS applies to provisions not inspected by a technician qualified to carry out inspections, an ERP-recognised inspection body or a CTS-authorized audit office.

Abnormalities found during inspections are followed by clearly formulated observations. If the inspector does not have a specific frame of reference, the appraisal given shall be the subject of a sufficiently explanatory comment. All these detailed abnormalities are the subject of a summary list drawn up at the end of the report, numbered in a single series, with the location of the installation parts in question. These observations must always be resolved before the operation.

The observation is the conclusion:

- either of an anomaly or a deviation from the original condition of the removable set or equipment in question;
- or a deviation from the regulations, standards or best practices. It is always resolved before admitting the public.

Areas for improvement of the annex:

- intended to be constructive;
- do not involve the predefined safety level;
- are likely to elaborate on possible improvements.

20. SUBMITTED DOCUMENTS

TYPE	YES	NO	N/A	OBS
20.1. Plans and sections				
20.2. Technical data sheet(s)				
20.3. Technical, installation and usage instructions				
20.4. Calculation notes				
20.6. Plans of grid(s) and/or trusses loads				
20.5. Loads charts				
20.6 Audit reports on the motors				
20.10. Report on the fire rating of the roof tarpaulins				
20.11. Report on the fire rating of the side tarpaulins				
20.12. Model appraisal by an approved inspection body (I. B.)*				
20.13. Technical record appraisal approved by an I. B.*				
20.14. Correct assembly certificate (Head of assembly)				

*delete as appropriate

REFERENCE OF SUBMITTED DOCUMENTS

.....

.....

.....

.....

.....

.....

21. DESCRIPTION OF TYPE & MODEL *

STAGE

Type of covering*	
Number of closed sides*	
Stage aperture	
Stage depth	
Operational loads	
Nature of the ground	
Nature of the load distribution plates: Without* Wood* Steel* Other*	
Type of wedge* Without* Wood* Steel* Other*	
Ballasts, anchorage or guying	
Type Ballasts* Without* Concrete* Water* Other*	
Type of stairs Number:	
Full height of the stage (from the ground)	

TECHNICAL GRID

Aperture and depth of the technical grid	
Makes and models of trusses	
Poles and/or sub-poles	
Clearance height (between stage and trusses)	
Lifting towers* Scaffold walls*	
Number of grid or truss lifting devices: electric cable winches* *electric chain winches* hydraulic jacks*	
Label, model and SWL (safe working load) of grid lifting devices	
Lifting devices under grids: manual chain hoist* manual wire rope hoist or tackle* electric cable winches* electric chain winches*	
Number of lifting devices under grids	
Label, model and SWL (safe working load) of under grid lifting devices	

SIDING

Presence and colour of back curtains	
Presence and colour of side curtains	
Type of valance*	
Type of cladding*	
Type of cladding*	

VARIOUS

Anemometer or weather forecast subscription	

delete as appropriate or N/A for Not Applicable

22. DESCRIPTION OF ATTACHED ASSOCIATED EQUIPMENT*

Access stairs* Number:	
Access ramps* Number:	
Unloading dock*	
Elizabethan spur*	
Sound wings*	
Proscenium*	
Extension(s) (management, dressing rooms, backstage, etc.)* Number:	
Camera riser(s) * Number:	
Proscenium extension with select audience*	
Accompanying lateral riser(s)* Number:	
Protection device against the risk of falls or railings	
Presence of equipotential bonding	

*delete as appropriate

23. DESCRIPTION OF SEPARATE EQUIPMENT

Management	
Towers, in particular: camera, tracking, delay, daylight screens, etc.	
Persons with reduced mobility platforms	
Others	

24. FINDINGS

TYPE	F	D	N/A	UA	OS	N° Obs
Perpendicularity						
Alignment						
Level						
Ballasts						
Anchorage						
Guy wires						
Load distribution devices						
Wedges						
Jacks or footings						
Underfloor frame						
Bracing						
Floor						
Risk of tripping on the floor						
Stage skirting						
Stage cladding						
Access stairs						
Access ramp						
Unloading dock						
Proscenium						
Elizabethan spur						
Management						
Camera(s) or tracking riser(s)*						
Riser(s) or sound wing(s)*						
Lack of storage with heat potential under stage						
Presence of equipotential bonding						
Towers, in particular: camera, tracking, delay, daylight screens, etc.						
Persons with reduced mobility platforms						
Liaison and safety horizontal trusses/towers						
Lifting equipment						
Audit of lifting equipment						
Safety slings or descent control devices* (in + of motors) OU Redundancy* OU Division of the SWL by two*						
Horizontal frame (grid(s) and/or trusses)						
Lifting foot or mast						
Totems						
Fire rating reports						
Suitability and vacuity of the establishment's exit aisles						

25. OBSERVATIONS

These observations must always be resolved before the operation.

N°	Observations	Resolved on By (name and occupation)	Signature

26. INSPECTOR'S APPRAISAL

Under CTS and SG, wind speed limit for evacuation of the establishment:.....km/h

Appraisal: FAVOURABLE* UNFAVOURABLE* in operation.

*delete as appropriate

Inspection carried out on..... /..... /..... At..... at

This report comprisespages and..... appended documents.

Date of the inspection report:..... /..... /.....

The inspector (Name and occupation of the person who issued the report)

.....

Identification n° of the inspector's training.....

Surname, first name.....

Signature:

ANNEX: AREAS FOR IMPOROVEMENT FOR THE RECORD

These comments are intended to be constructive, they are not binding on the predefined safety level and are to clarify possible or recommended improvements.

N°	Comments

GLOSSARY

ATTACHMENT POINT

An attachment point denotes any support (truss, ring, framework component etc.) intended for suspension or lifting.

BASE

The part of the removable set structure that rests on the ground.

BGV

In German best practices (BGV and VPLT SR) there are three categories of chain hoists (motors):

- Category D8 indicates hoists that are capable of holding a load but require the addition of a secondary safety (safety sling according to Article 57 paragraph 4);
- Category D8+ indicates hoists that are capable of holding a static load and do not require the addition of a secondary safety (safety sling according to L57 paragraph 4). These hoists have an emergency brake and have been downgraded to a payload of 50% (doubled load factor in the sense of the Machine Directive);
- Category C1 indicates hoists similar to the D8+ ones that allow movements to be carried out above people. These hoists also have a device for load limitation and electronic management of movements by groups of hoists. NB: The motor which is unable to hold a static load requires load transfer after lifting and is classified outside of the three categories below.

BRITISH STANDARD INSTITUTE (BSI)

Institutional standardisation body in the United Kingdom: BSI is the equivalent of AFNOR.

CLAMPS

Assembly of fixings by connectors or collars (forming a clamp) that, by clamping, block a metal profile on a framework or grid part.

CLEARANCE

Free height between the grid trusses and the floor of the stage.

COMPONENT

Any component, constituent component, that is part of the removable set (trusses, connectors, axles and pins, guy wires, cables, shackles, collars, etc.).

CONNECTING SLEEVE

A connecting part for putting together two socket trusses.

DOUBLE MEMBER

Horizontal component connecting two jambs or poles.

EXIT AISLE

Any area that can be used for evacuating occupants: doors, exits, ways out, traffic flows, traffic flow area, stairs, vomitories, corridors, ramps...

EXTERNAL COMPANY (EC)

The external company provides its staff to another company to carry out an operation, whatever its nature, whether industrial or not, in a company (known as the user company). The following are excluded from this definition: workmen working in private homes and employees of private employers.

FITTING

Length of interlocking between the jack, base plate or footing and the part that it supports.

FOOTING OR BASE PLATE

Base without adjustment jack.

FRAME

A structure that can be used to accommodate people or lighting, sound and video equipment, scenery and curtains.

FRONT OF THE STAGE OR PODIUM

Front of the stage means one or more sides facing the spectators.

HIGH POINT OF THE REMOVABLE SET

- OP: maximum vertical distance between the highest floor level accessible to the public and the ground.
- OS: longer vertical distance between the highest point of the structure and the ground.

HIGH POINT OF THE GROUND

Location of the removable structure from which any slope is negative.

INSTALLER

Natural person or corporation who performs the assembly and disassembly operations.

JACK

Footing consisting of a metal rod with screw thread.

LIFTING ACCESSORY

A lifting accessory is a component or piece of equipment that is not attached to the machine and is placed between the machine and the load or between the machine and its support, for example, slings, shackles, links and chains.

LIFTING DEVICE

A lifting device is a machine where at least one of its functions is to move a load, for example a motor, winch or hoist.

LOAD DISTRIBUTION PLATE

Plate placed between the jack, base plate, footing or wedging, and the ground. It enables the transfer of the load on the ground.

MANUFACTURER

Natural person or corporation who designs and manufactures the removable set in compliance with the applicable legal and normative texts, with a view to putting it on the French and/or international market, and any other person presenting themselves as the manufacturer by affixing their name, label or any other distinctive sign to the product.

MODEL

Structure for creating removable sets by juxtaposition or assembly of base modules.

MODEL APPRAISAL

Appraisal of the construction principle of the model, prior to the technical inspections operations.

The model appraisal is limited to the module assembly configurations foreseen by the manufacturer and clearly listed in the technical instructions. It specifies the maximum conditions of use of the system.

The constitutive file for the issuance of the model appraisal comprises in particular:

- The references of the equipment used;
- The plans for manufacturing and the entire model;
- The calculation notes specific to each model;
- The test reports, if applicable, and their interpretative documents;
- Description of the operating procedures for the assembly of the components;
- The technical, installation and usage instructions.

This model appraisal is issued by a technical controller recognised by the ministry in charge of the construction. The appraisal has no time limit, with the exception of the release of new legislative or regulatory texts, or total or partial modification of the model.

Installations that support equipment, the effect of which has not been taken into account in the study of model, are subject to an appraisal of the technical record.

OPERATOR

Natural person or corporation who operates the removable sets implemented.

ORGANISER

Natural person or corporation who initiates the event and coordinates its technical and logistical progress.

OWNER

Natural person or corporation who is the owner of the removable set and who puts it at the disposal of an organiser.

PERSON

Natural person present on the site of a show or event in any capacity, notably: the public, performers, technicians, volunteers, visitors.

PIN

A 01 pin, also called a clip pin, is used to lock the axle in the interlocking of the male/female clevis.

PODIUM

Raised floor.

PREVENTION PLAN (PP)

In light of the information and facts gathered during the joint preliminary inspection, the heads of the user and external companies carry out a joint analysis of risks that may result from the interference between the activities, installations and equipment. Where these risks exist, the employers shall adopt, by mutual agreement, and before the work begins, a prevention plan defining the measures taken by each company to prevent these risks. This prevention plan is established in writing: for hazardous work (list defined by the decree of 19 March 1993); and if the expected duration of the work undertaken by the company is longer than 400 hours over a period of 12 months (whether that work is continuous or intermittent).

PREVENTION OFFICER

The prevention officer specialises in prevention. Two areas:

- In an ERP, they are considered to be the “Prevention officer”, the specialist in analysing the risks of “fire and panic” in the company. They are often referred to as a “preventionist”. They are able to write an event safety record and to draft ERP safety instructions before work or at the construction. In a type T, the safety officer holds a PRV2 or SSIAP3.
- In a company, for the health and safety of the individual at work, they are considered to be “Prevention officer”, the specialist in analysing risks at work. They are able to draw up a single document or a prevention plan for situations where there are concurrent activities. They are a prevention leader and/or IPRP [Occupational risk prevention facilitator].

PROSCENIUM

Riser parallel to the proscenium opening.

QUALIFIED TECHNICIAN

Person trained in the inspection of removable equipment and sets in accordance with Article 20.

RAILINGS

A railing is a piece of equipment whose function is to protect people standing or moving around in the vicinity of the void against the risk of falling from a height, but does not prohibit them from voluntary climbing.

RIGGING

Hooks and the establishment of hooking points to a primary grid, to the framework of the venue or a covered stage.

RING

Curved truss of a flat, triangular or square section in the form of a circle.

RISER

Term originally used to describe a construction composed of wooden trusses and floors, forming part of the show’s scenery and accessible to performers and technicians. Today, this term refers to freestanding stages, adjustable in height, by calipers or by changing the legs, to get elevated surfaces.

SAFETY PROTOCOL

Written document that specifies the particular prevention rules in order to take into account the specifics of the loading and unloading operations conducted by the haulier of an external company in a host company.

SCAFFOLDING

- Modular metal structure used in the show and event as a frame that makes it possible to create removable sets (stages, stands, towers, scenery supports, etc.).
- Modular metal structure made from a collection of components which can be assembled together, usually specially designed for a structural system for undertaking volumes.

SECONDARY SAFETY

Safety device in the form of a safety sling, descent control device or by redundancy.

STABILITY

The ability of the removable set to resist soil settlement, upthrust, sliding and tipping.

STACK

Stacking of parts made integral, arranged in crossed layers to provide support, wedging and distribution of loads.

STAGE

Space allotted to performers in the public performance.

STAND

Terraced removable set constructed from standardised components that can be assembled and disassembled, moved and deployed in different configurations inside or outside to provide seated and standing places to spectators.

STRENGTH

The ability of the removable set to withstand the effects caused by permanent loads, operational loads, weather effects and differential settlements of support.

SUPPORT

The ground or any work area for receiving “removable sets” supporting materials.

SUPPORT OR PILLAR WITH OR WITHOUT ADJUSTMENT

Machine-welded metal part to compensate for differences in level.

SUSPENDED TECHNICAL EQUIPMENT

Equipment for receiving installations, lighting, sound and video equipment, scenery and curtains, etc. (For example: grids, trusses, flat trusses, booms, etc.)

TECHNICAL RECORD APPRAISAL

Appraisal of the construction principle of the removable set, prior to the technical inspections operations. It is created for removable sets for which there is no model appraisal or for which the model appraisal does not take into account the configuration(s) of the event (monotype interaction (non-independent), assembly of materials with different manufacturing, specific parts, addition of materials such as extensions of covered stages on wheels, tarpaulins, covers, masts, billboards...).

The technical record is limited to an identical installation (which can be repeated at the same place), an event or a tour configuration for example.

The technical record includes:

- The technical instruction(s);
- The assembly and detailed plans;
- The calculation notes referred to by a technical controller recognised by the ministry in charge of the construction, ensuring the sturdiness and the stability of the removable set and its components, in the configuration outlined in the organiser’s safety record;
- In the absence of calculation notes, justification by testing;
- Model appraisals, if there are any;
- In all cases, the technical instructions and/or loads charts of the removable set’s components.

TECHNICAL INSTRUCTIONS

The technical instructions: written by the manufacturer, they make it possible to identify parts, identify risks and to get familiar with the process of safe assembly and disassembly (cf. Article 20).

TECHNICAL GRID

Upper structure, usually horizontal, that makes it possible to create a frame of hooks intended to support various scenographic equipment (sound, lighting, video, curtains, scenery, etc.).

TERRACE

Each of the levels of a removable set which are in an elevated position and indented.

THEATRE MACHINERY HOISTS

Devices for lifting people, installed permanently or temporarily in theatres, which permit the movement of people, whether actors or stagehands, from the stage to adjacent areas (cellar, loft, backstage area, orchestra box, sets) and vice versa.

TRACEABILITY

Identification of a product by a code or a serial number, from its production to its use. This identification information is included in the manufacturer's technical instructions.

TRAFFIC FLOW

Any part where people can move around. Traffic flows may be on or under the removable sets.

TREAD

Horizontal distance between the nosing of two consecutive steps.

USER

Any person or company working in or on the removable set to put on a show or an event. This removable set is likely to be completed without changing its structural and safety features, except with written agreement from the installer.

USER COMPANY (UC)

The user company is the company where an operation is carried out by personnel belonging to another or other companies.

VIEWING SPACE

Space where the spectators attend the event.

VOMITORIUM

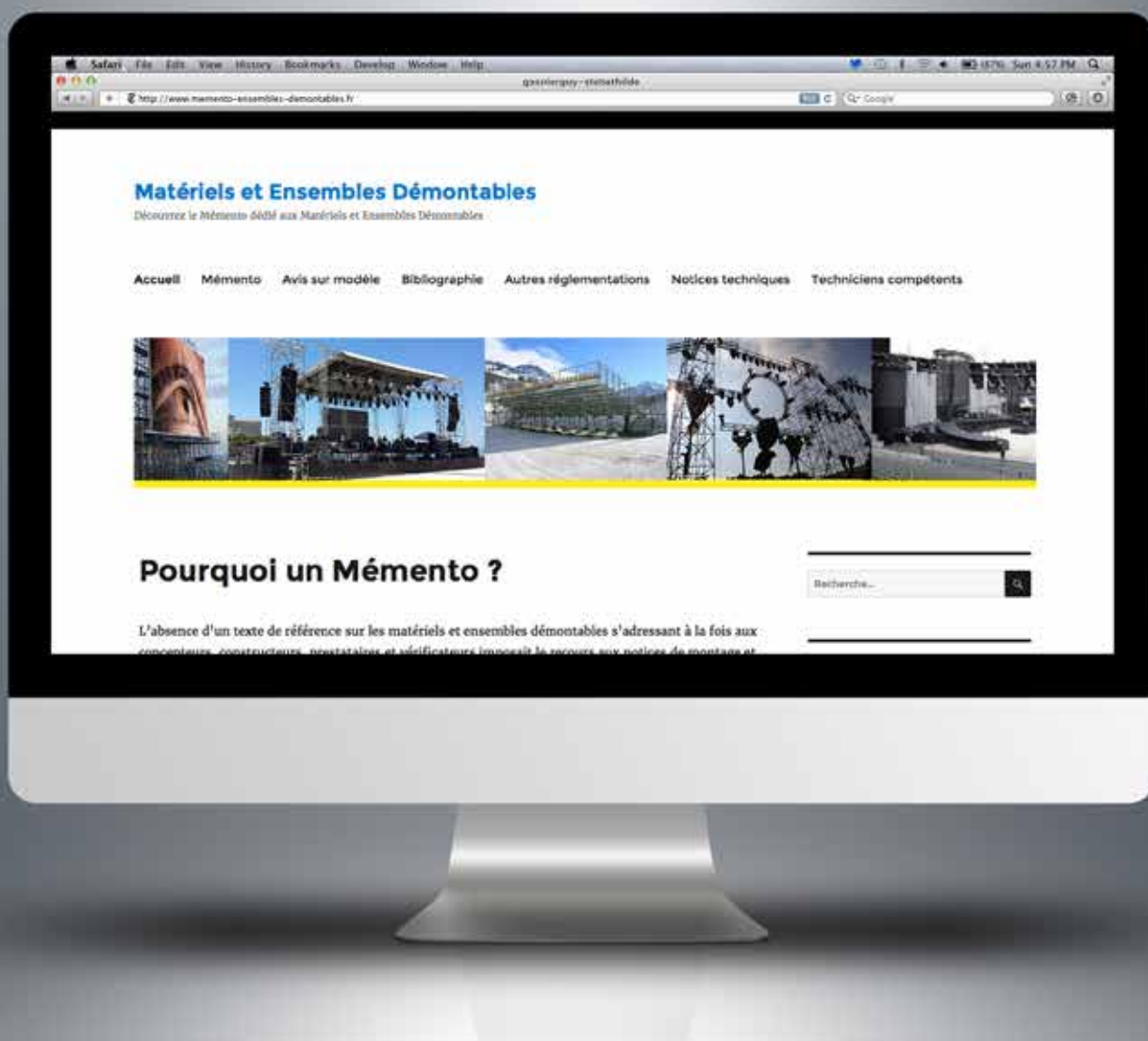
Path laid out in the slope of a stand that directly connects the spectators' places to the traffic flow paths or exit aisles.

WEDGE

A part for rectifying differences in level.

BIBLIOGRAPHICAL LINKS

- Handbook Removable Equipment and Sets Internet site:
<https://memento-ensembles-demontables.fr/accueil/>
- INRS sling specialist handbook:
www.inrs.fr/dms/inrs/CataloguePapier/ED/TI-ED-6178/ed6178.pdf
- SFECE professional guide for the assembly and use of the scaffolding:
<http://www.echafaudage-coffrage-etaiement.org/actualites/guide-professionnel-de-montage-et-d-utilisation-des-echafaudages>
- Involvement of INRS external companies:
<http://www.inrs.fr/dms/inrs/CataloguePapier/ED/TI-ED-941/ed941.pdf>
- Hors les murs handbook for the design and manufacture of circus apparatus:
<http://horslesmurs.fr/wp-content/uploads/2014/04/Memento-agres.pdf>
- Frame of reference for technical professions for live performances by CPNEF-SV:
<http://www.cpnefsv.org/node/53>
- Safety regulations against the risk of fire and panic in establishments admitting members of the public (amended 25 June 1980), known as ERP regulations:
<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=LEGITEXT000020303557>
- Legal text of October 15th concerning prevention measures to be taken in the production of films and audiovisuals movies:
<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000033313034&categorieLien=id>



CONTRIBUTORS

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