



**NSAI**  
Standards

Irish Standard  
I.S. EN 17206:2020

Entertainment technology - Machinery for stages and other production areas - Safety requirements and inspections

**I.S. EN 17206:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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*This document is based on:*

EN 17206:2020

*Published:*

2020-05-13

*This document was published under the authority of the NSAI and comes into effect on:*

2020-06-01

ICS number:

97.200.10

NOTE: If blank see CEN/CENELEC cover page

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## National Foreword

I.S. EN 17206:2020 is the adopted Irish version of the European Document EN 17206:2020, Entertainment technology - Machinery for stages and other production areas - Safety requirements and inspections

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EUROPEAN STANDARD

**EN 17206**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2020

ICS 97.200.10

Supersedes CWA 15902-1:2008

English Version

## Entertainment technology - Machinery for stages and other production areas - Safety requirements and inspections

Technologies du spectacle - Machinerie pour scènes et autres zones de production - Exigences et inspections relatives à la sécurité

Veranstaltungstechnik - Maschinen für Bühnen und andere Produktionsbereiche - Sicherheitstechnische Anforderungen und Prüfungen

This European Standard was approved by CEN on 7 March 2020.

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## **European foreword**

This document (EN 17206:2020) has been prepared by Technical Committee CEN/TC 433 “Entertainment Technology – Machinery, equipment and installations”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CWA 15902-1:2008.

This document differs from CWA 15902-1:2008 mainly as follows:

- a) evaluated and revised according to new European standards, Directives and Regulations;
- b) terms and definitions have been revised;
- c) updated examples and informative annexes;
- d) standard revised editorially.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## EN 17206:2020 (E)

### Introduction

The purpose of this document is to produce European specifications for the design, manufacture and installation of lifting and load bearing equipment within the entertainment industry. Apart from the Machinery Directive, the Council Directive 2009/104/EC of 16 September 2009 concerning the minimum safety and health requirements for the use of work equipment by workers at work states in Annex II:

“3.1.3.

*Measures must be taken to ensure that workers are not present under suspended loads, unless such presence is required for the effective operation of the work*

*Loads may not be moved above unprotected workplaces usually occupied by workers.*

*Where that is the case, if work cannot be carried out properly any other way, appropriate procedures must be laid down and applied.”*

This document considers situations that give rise to danger, such as moving or holding scenery or equipment:

- a) over persons and/or unprotected areas;
- b) in areas with low light conditions, limited visibility, for example while using stage fog and other masking effects.

These situations apply not only during performances, but also during rehearsals, technical set-up, preparations, installations and other situations. This document covers these hazards and suggests appropriate procedures to maintain safety.

Machinery installations are all technical installations and equipment used for operations in stage and production facilities in the entertainment industry. Such installations are used to lift, lower, suspend and carry loads (e.g. scenery, traverse systems, or lighting, film/video and sound equipment). They can also be used to move persons, and persons can stand under such equipment while the loads are at rest or in motion.

“Stages” are, for example, staging facilities and production areas in theatres, multipurpose halls, studios, production facilities for film, television or radio, concert halls, congress centres, schools, exhibition centres, trade-fair centres, museums, discotheques, amusement parks, sports facilities and open-air-theatres.

“Events” are, for example, concerts, shows, congresses, exhibitions, presentations, demonstrations, film or television recordings, etc.

This document considers permanently and temporarily installed lifting and movement equipment for stages and production areas within the entertainment industry.

This document does not consider the design or control of fire curtains.

Typical applications of this document include but are not limited to the following:

- acoustic doors;
- auditorium elevators;
- compensating elevators;
- cycloramas;
- fly bar systems (manual and motor driven);

- lighting bars;
- movable lighting towers;
- movable proscenium arches;
- orchestra elevators;
- performer flying systems;
- point hoists;
- revolving stages and turntables;
- scenery storage elevators;
- side stage and rear stage shutters;
- stage elevators;
- stage wagons;
- tiltable stage floors;
- trap elevators.

## EN 17206:2020 (E)

### 1 Scope

This document applies to machinery, machinery installations and machinery control systems used in places of assembly and in staging and production facilities for events and theatrical productions (stage machinery, for short). Such facilities include: theatres, multi-purpose halls, exhibition halls; film, television and radio studios; concert halls, schools, bars, discotheques, open-air stages and other rooms for shows and events.

The document applies to machinery installations with guided or unguided loads.

This document covers machinery used in the entertainment industry including machinery that is excluded from the Machinery Directive (2006/42/EC) specifically Article 1, 2(j) which excludes “*machinery intended to move performers during artistic performances*”.

This machinery includes controls, electrical and electronic control systems, electrical and electronic equipment, hydraulic and pneumatic power supplies.

The principles in this document also apply to machinery installations based on new technologies or specially designed installations which are not expressly mentioned here but which nevertheless operate in a similar manner or are meant for similar purposes to the equipment listed above.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 818-1, *Short link chain for lifting purposes — Safety — Part 1: General conditions of acceptance*

EN 818-7, *Short link chain for lifting purposes — Safety — Part 7: Fine tolerance hoist chain, Grade T (Types T, DAT and DT)*

EN 1090-2, *Execution of steel structures and aluminium structures — Part 2: Technical requirements for steel structures*

EN 1090-3, *Execution of steel structures and aluminium structures — Part 3: Technical requirements for aluminium structures*

EN 1993-1-10, *Eurocode 3: Design of steel structures — Part 1-10: Material toughness and through-thickness properties*

EN 1999-1-1, *Eurocode 9: Design of aluminium structures — Part 1-1: General structural rules*

EN 10204, *Metallic products — Types of inspection documents*

EN 12385-1, *Steel wire ropes — Safety — Part 1: General requirements*

EN 12385-2, *Steel wire ropes — Safety — Part 2: Definitions, designation and classification*

EN 12385-4, *Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications*

EN 12385-5, *Steel wire ropes — Safety — Part 5: Stranded ropes for lifts*

EN 13411 (all parts), *Terminations for steel wire ropes — Safety*

EN 13480-3, *Metallic industrial piping — Part 3: Design and calculation*

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