

## Berufsgenossenschaft Regulation

# Accident-Prevention Regulation for Staging and Production Facilities for the Entertainment Industry

adopted on 1 April 1998

with related instructions

adopted in April 1998

Translation



**VBG**

Institution for Statutory Accident  
Insurance and Prevention in the  
Administrative Sector

Der vorliegende Text ist eine Übersetzung der deutschen BGV C1 in Englisch.

Rechtlich verbindlich ist die deutsche Originalversion.

This booklet is an English translation of the German BGV C1 document.

Only the German original is legally binding.

**Berufsgenossenschaft<sup>1</sup> Regulation on Health and Safety at Work**

**Berufsgenossenschaft Regulation**

**Accident-Prevention Regulation**

**for**

**Staging and Production Facilities for the Entertainment Industry**

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<sup>1</sup> Berufsgenossenschaft = Institution for Statutory Accident Insurance and Prevention

“Related instructions” principally describe how the protection objectives specified in the accident-prevention regulations can be achieved. They do not preclude other, at least equally safe solutions which may have been set out in technical rules issued by other member states of the European Union or other states which are party to the Agreement on the European Economic Area. The instructions also contain additional explanatory notes regarding accident-prevention regulations.

Test reports by test laboratories licensed in other member states of the European Union or in other states which are party to the Agreement on the European Economic Area are considered equal to German test reports, provided such bodies' test reports are based on tests, test methods and design requirements equal to those used by the German bodies. In particular, a body shall be deemed to meet these criteria if it fulfils the requirements set out in the EN 45 000 series of standards.

**Contents**

## **I. Scope**

### **1 Scope**

**(1) This accident-prevention regulation applies to**

- 1. the stage and performance areas of staging facilities and**
- 2. the production and performance areas of production facilities for film, television, radio and photographic use.**

**(2) This accident-prevention regulation does not apply to cinemas without stage areas or to fairground-entertainment or circus companies.**

#### **Instruction relating to Section 1, Paragraph (1)**

In specific cases, these may also include audience areas if production or performance activities occur in those areas or if audience members act in the same capacity as a person insured with a Berufsgenossenschaft (hereinafter referred to as an “insured person”).

## **II. Definitions**

### **2 Definitions**

**Within the meaning of this accident-prevention regulation,**

- 1. staging facilities are all workplaces in buildings or outdoors which have stages or performance areas, including the necessary equipment;**
- 2. production facilities for film, television, radio and photographic use are studios, acting areas and performance areas in the case of outdoor recording/filming, including the equipment required for them;**
- 3. safety equipment is all technical equipment used in staging and production facilities to avert immediate hazards; and**
- 4. mechanical equipment is all technical equipment used for operations in staging and production facilities.**

### **Instruction relating to Section 2, Items 1 and 2**

Staging and production facilities include, for example, enclosed and open-air theatres, multi-purpose halls, studios, acting and stage areas in concert halls, schools, cabarets, music halls, bars and discotheques.

Definitions are given in, for example:

DIN 56 920-1= "Theatre technics; nomenclature, different kinds of theatres and stages"

DIN 56 920-2= "Theatre technics; nomenclature, theatre buildings"

DIN 56 920-3= "Theatre technics; nomenclature, equipments for stages"

(Please note: All English titles of DIN standards referred to in this document are the official translations as provided by DIN.)

### **Instruction relating to Section 2, Item 3**

Safety equipment includes, for example:

- standby power-supply units and safety lighting,
- fire-alarm and extinguishing systems,
- hazard-warning systems,
- smoke extractors and
- safety curtains.

### **Instruction relating to Section 2, Item 4**

Mechanical equipment includes, for example:

- lighting bridges,
- powered lighting masts,
- lighting bars and batten lights,
- lighting towers,
- projection screens (manual and powered),
- tiltable stage floors,
- stage lifts and platforms,
- stage wagons,
- scenery battens (manual and powered),
- revolving stages and turntables,
- electrical and electronic equipment,
- flying systems,

- guiding gaps in the stage floor,
- cycloramas,
- hydraulic and pneumatic supply systems,
- camera cranes,
- holding devices for lighting,
- portable scaffolds,
- orchestra lifts,
- portable proscenium arches,
- scenery hoists,
- scenery-storage lifts,
- auditorium platforms,
- wing-stage and rear-stage shutters,
- stands,
- dividing curtains and
- wagon stages.

### **III. Equipment Design**

#### **3**

#### **General Provisions**

**The employer must ensure that equipment in staging and production facilities is designed in accordance with the provisions of Part III.**

#### **Instruction relating to Section 3**

In addition to the provisions of Part III of this accident-prevention regulation, the employer must adhere to any other applicable accident-prevention regulations as well as good safety and occupational-health practice with regard to equipment in staging and production facilities.

See in particular the Berufsgenossenschaft information sheet (“BG-Information”) entitled “Fernsehen, Hörfunk und Film - Arbeitssicherheit in Produktionsstätten” (“Television, Radio and Film - Occupational Safety in Production Facilities”) (SP 25.1/2 [BGI 810]).

Annex 1 of this accident-prevention regulation lists a selection of relevant standards and occupational-health rules.

## 4

### Stability and Load-Bearing Capacity

**Surfaces and sets must be dimensioned, designed, erected, supported, stiffened, suspended and anchored in such a way that they can absorb and transmit the static and dynamic loads which occur when they are used as intended. They must also be stable during set-ups and strikes and, if they are walked upon, they must be able to withstand the weight.**

#### **Instruction relating to Section 4**

This requirement is fulfilled if, for example, the design of

- stage platforms complies with the “Sicherheitsregeln für Versenkeinrichtungen in Bühnen und Studios” (“Safety Rules for Stage Platforms in Stages and Studios”) (ZH 1/219<sup>2</sup>) or DIN 56 940 “Theatre engineering, stage machinery - Stage platforms - Safety requirements and testing”,
- general platforms complies with DIN 15 920-11 “Stage and studio set up; safety regulations for practicals, ramps, steps, stairs and stage balustrades”,<sup>3</sup>
- boat-trucks complies with DIN 15 920-14 “ Stage and studio set up; practicals, safety regulations for boat-trucks”<sup>4</sup>,
- powered stage wagons with a fixed direction of travel complies with DIN 15 920-15 “Stage and studio sets; ramps; power operated stage wagons with a fixed direction of travel; safety requirements”,
- grids complies with DIN 15 560-47 “Projectors for film and television studios, stages and photographic use; safety regulations for fundamental holding devices<sup>5</sup>, construction and service” and
- stage floors, fly lofts, galleries and spectator stands complies with DIN 1055-3 “Action on structures - Part 3: Self-weight and imposed load in building” as far as their load-bearing capacity is concerned.

In the case of outdoor productions, the following must also be given special attention when considering the stability and load-bearing capacity of sets and surfaces: tendency to subside, e.g. in accordance with DIN 1054 “Soil - Verification of the safety of earthworks and foundations”, wind loads, e.g. in accordance with DIN 1055-4 “Design loads for buildings; imposed loads; wind loads on structures unsusceptible to vibration” and snow loads and ice loads, e.g. in accordance with DIN 1055-5 “Actions on structures - Part 5: Snowloads and ice loads”, as well as thermal influences.

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<sup>2</sup> Had been withdrawn at the time of translation.

<sup>3</sup> In this instance, the word “practical” appears not to have been used in the normal theatrical sense (i.e. objects handled by the performers). It is intended as the translation of the German word “Praktikabel”, which is usually translated as “rostrum”.

<sup>4</sup> Ditto

<sup>5</sup> In this instance “fundamental holding devices” refers to grids.

## 5 Safety Underfoot

**(1) Performance areas, sets and decorations must be designed in such a way that performers can work safely. In particular,**

- 1. stage floors must be even, free of splinters and have tight joints,**
- 2. it must be possible to cover any unavoidable gaps and openings which are more than 20 mm in width,**
- 3. sets consisting of several components must be secured so as to prevent them from coming apart,**
- 4. floor coverings must be secured so as to prevent them from slipping and**
- 5. it must not be possible to unknowingly move from a performance area to an adjacent surface which is not capable of bearing loads.**

**(2) Rooms which are darkened for operational reasons must be fitted with equipment which enables people to find their way safely.**

### **Instruction relating to Section 5, Paragraph (1)**

For information on workplace and passageway design, see the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1).

For information on access to and egress from stage platforms and orchestra pits, see “Sicherheitsregeln für Versenkeinrichtungen in Bühnen und Studios” (“Safety Rules for Stage Platforms in Stages and Studios”) (ZH 1/219<sup>6</sup>).

The reference value for the inclination of surfaces which can be walked upon is 8%.

### **Instruction relating to Section 5, Paragraph (2)**

This requirement is fulfilled if, for example, guide lights are installed or reflective/fluorescent markings provided.

See also the “Musterverordnung über den Bau und Betrieb von Versammlungsstätten” (“Model Ordinance on the Construction and Operation of Places of Assembly”).

## 6 Protection against Falls from a Height

**(1) Effective equipment to prevent persons falling from a height must be in place at workstations, performance areas, passageways and access points which are adjacent to hazardous areas or are more than 1 m above adjacent surfaces.**

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<sup>6</sup> Had been withdrawn at the time of translation.

**(2) If, for compelling staging reasons, equipment of the type described in Paragraph (1) cannot be used in specific cases, fall-arrest equipment must be in place instead. If such fall-arrest equipment cannot be used on performance areas for compelling staging reasons, the edge of the performance area must be marked and clearly visible in all lighting conditions.**

**(3) Clearly visible, permanent warning signs must be in place at openings in safety curtains and at stairs leading to the apron to indicate the fall hazard.**

#### **Instruction relating to Section 6, Paragraph (1)**

Effective equipment to prevent falls from a height includes, for example:

- protective equipment of the type specified in Section 33 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1),
- fixed rails as specified in DIN 1055-3 “Action on structures - Part 3: Self-weight and imposed load in building” and
- stage balustrades as specified in DIN 15 920-11 “Stage and studio set up; safety regulations for practicals<sup>7</sup>, ramps, steps, stairs and stage balustrades” or taut ropes, though both only on sets used by instructed persons.

Equipment to prevent falls from a height can also be necessary where the difference in height is less than 1 m, especially if the edge is not visible.

#### **Instruction relating to Section 6, Paragraph (2)**

Fall-arrest equipment includes, for example:

- safety nets; see also the Berufsgenossenschaft Rule on Safety and Health at the Workplace (“BG Rule”) entitled “Einsatz von Schutznetzen” (“Use of Safety Nets”) (BGR 179) and
- personal fall protection; see also the BG Rule entitled “Einsatz von persönlichen Schutzausrüstungen gegen Absturz” (“Use of Personal Protective Equipment against Falls from a Height”) (BGR 198) and the BG Rule entitled “Einsatz von persönlichen Schutzausrüstungen zum Halten und Retten” (“Use of Personal Protective Equipment for Arresting and Rescuing”) (BGR 199).

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<sup>7</sup> In this instance, the word “practical” appears not to have been used in the normal theatrical sense (i.e. objects handled by the performers). It is intended as the translation of the German word “Praktikabel”, which is usually translated as “rostrum”.

Stage lips facing the orchestra pit or the auditorium also count as edges.

Examples of items which are clearly visible in all lighting conditions include

- luminous or highly reflective tapes,
- light garlands or
- footlights.

### **Instruction relating to Section 6, Paragraph (3)**

This requirement is fulfilled if a W09 “Warnung vor einer Gefahrstelle” (“Warning - Hazardous Area”) warning sign and an additional sign as specified in the accident-prevention regulation entitled “Sicherheits- und Gesundheitsschutzkennzeichnung am Arbeitsplatz” (“Safety and Health Markings and Signs at the Workplace”) (BGV A 8) indicate the fall hazard.

## **7**

### **Protection against Falling Objects**

**(1) Measures must be taken to provide protection against objects falling onto workstations, passageways and performance areas.**

**(2) Where counterweights are stored on fly galleries, guards must be permanently installed.**

**(3) Counterweights must be secured to their arbour in such a way that they cannot fall out if they strike hard against the stop.**

**(4) Counterweight lines must be enclosed. There may be breaks in the enclosure, in the batten-operating areas, above a height of 2.30m from the ground.**

**(5) Fall-arrest equipment must be in place above passageways and workstations located beneath the adjustable counterweights’ path of travel.**

**(6) Portable luminaires, projection equipment and loudspeaker systems must be secured from falling by two devices which act independently of one another. If loose parts or parts which work themselves loose fall, it must be possible to arrest their fall using equipment.**

**Instruction relating to Section 7, Paragraph (1)**

For information on protection against falling objects, see Section 33 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1).

**Instruction relating to Section 7, Paragraph (2)**

This requirement is fulfilled if, for example, panels, protective grilles or safety nets are attached at the height of the counterweight stack but no less than 40 cm.

**Instruction relating to Section 7, Paragraph (3)**

See, for example, DIN 56 921-1 “Theatre engineering, stage machinery - Flying systems - Part 1: Manual counterweight flying systems for total loading up to 500 kg”.

**Instruction relating to Section 7, Paragraph (6)**

It is not permitted to use ropes and webbings made of natural or synthetic fibres for securing purposes. Wire ropes and chains must not be coated. For dimensions, see Section 9. Possible dynamic loads (jerk forces) must be taken into account.

See, for example, also

- Section 33, Paragraph 4 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1),
- DIN VDE 0711-217 “Luminaires; part 2: particular requirements; section seventeen: luminaires for stage lighting, television, film and photographic studios (outdoor and indoor)” and
- DIN VDE 0108-1 and -2 “Power installation and safety power supply in communal facilities”.

**8****Protection against Inadvertent Movements**

**(1) Moving parts of the above-stage and under-stage machinery and their loads must be equipped with devices to protect against inadvertent movements.**

**(2) To provide protection against inadvertent upward and downward movements by parts of the above-stage and under-stage machinery and their loads,**

- 1. suitable drive systems,**
  - 2. brakes**
- or
- 3. counterweights in conjunction with locking devices**

**must be in place.**

**(3) Equipment must be in place which can bring the moving loads to a standstill if a fault occurs.**

**(4) Notwithstanding Paragraph (3), safety equipment must be able to move as intended.**

#### **Instruction relating to Section 8, Paragraph (1)**

Inadvertent movements are, for example, unintended twisting, tipping, unhooking, falling, uncontrolled lowering, failure of the drive or the locking device as well as unintended moving apart of machinery parts bearing a joint load. Design-related play and permissible tolerances do not count as inadvertent movements.

Moving parts of the above-stage machinery are, for example, manual counterweight flying systems, flybar extensions, scenery hoists, flying systems, cycloramas and curtain-operating systems, light holders, batten lights, lighting bridges, telescopes, barrel hoists and pantographs.

For information on holding devices (telescopes, barrel hoists and pantographs), see, for example:

- DIN 15 560-45 "Projectors for film, television studios, stage and photographic use; holding devices and fundamental parts for spotlights; definitions" and
- DIN 15 560-46 "Spotlights for film and television studios, stages and photographic use - Part 46: Holding devices; safety regulations and testing".

For information on manual counterweight flying systems, see, for example:

- DIN 56 921-1 = "Theatre engineering, stage machinery - Flying systems - Part 1: Manual counterweight flying systems for total loading up to 500 kg" and
- DIN 56 921-11 = "Theatre engineering, stage machinery - Flying systems - Part 11: Safety requirements and testing".

For information on scenery hoists, see, for example, DIN 56 925 “Theatre engineering, stage machinery - Scenery hoist - Safety requirements and testing”.

For information on stands, see, for example, DIN 15 560-27 “Projectors for film, television, stages and photography - Part 27: Hand-operated stands, safety requirements and testing”.

If guided loads on lines, e.g. ropes or webbings, are moved by mechanical drives, precautions must be in place to ensure that the drives shut down if the lines slacken; this applies, for example, to telescopes but not, for example, to safety equipment.

Moving parts of the under-stage machinery are, for example, orchestra lifts, stage lifts and platforms, scenery-storage lifts, auditorium platforms, tiltable stage floors, wagon stages, stage wagons, revolving stages and turntables and guiding gaps in the stage floor.

For information on stage platforms, see “Sicherheitsregeln für Versenkeinrichtungen in Bühnen und Studios” (“Safety Rules for Stage Platforms in Stages and Studios”) (ZH 1/219<sup>8</sup>) or DIN 56 940 “Theatre engineering, stage machinery - Stage platforms - Safety requirements and testing”.

For information on stage wagons, see DIN 15 920-14 “Stage and studio set up; practicals<sup>9</sup>, safety regulations for boat-trucks” and DIN 15 920-15 “Stage and studio sets; ramps; power operated stage wagons with a fixed direction of travel; safety requirements”.

#### **Instruction relating to Section 8, Paragraph (2)**

Suitable drive systems and brakes and combinations thereof are listed in, for example, DIN 56 925 “Theatre engineering, stage machinery - Scenery hoist - Safety requirements and testing”.

In the case of manually operated hoists, the counterbalancing can also be done by hand provided the load on the hoists does not exceed 200N.

#### **Instruction relating to Section 8, Paragraph (3)**

See DIN EN 292 “Safety of machinery - Basic concepts, general principles for design”.

#### **Instruction relating to Section 8, Paragraph (4)**

Safety equipment is, for example, safety curtains or smoke extractors.

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<sup>8</sup> Had been withdrawn at the time of translation.

<sup>9</sup> In this instance, “practicals” could mean “general platforms”.

## 9

### Load-Bearing Lines and Attachment Gear

**Load-bearing lines and attachment gear must be designed and sufficiently dimensioned to cope with the special hazards and loads which occur during operation.**

#### **Instruction relating to Section 9**

A special hazard exists if, for example, operational reasons require persons to be situated beneath suspended loads.

Load-bearing lines are elements which are fixed to the stage machinery and serve the purpose of carrying the load.

Attachment gear comprises the parts (e.g. screw links, shackles, ropes, slings made of synthetic fibres) which connect the load-bearing line and the load. Use of plastic-coated wire ropes is not permitted. Attachment gear made of synthetic fibres is not suitable for use near spotlights.

See also the BG Rules entitled “Merkblatt für den Gebrauch von Anschlag-Drahtseilen” (“Instruction Sheet on the Use of Wire Ropes for Attachment Purposes”) (BGR 151) and “Merkblatt für den Gebrauch von Anschlag-Faserseilen” (“Instruction Sheet on the Use of Fibre Ropes for Attachment Purposes”) (BGR 152).

A further part of this requirement is that a steel rope must be used as a safety line when mobile lifting equipment or trusses are attached with ropes or webbings made of natural or synthetic fibres.

The requirement for sufficient dimensioning is fulfilled if the load on

- load-bearing lines, such as ropes and webbings, is no higher than a tenth of the breaking strength calculated taking into account the dynamic processes during operation

and

- attachment gear, such as ropes and webbings, is no higher than a twelfth of the calculated breaking strength. The load on other attachment gear must not exceed half of the load capacity specified by the manufacturer.

See also, for example, DIN 15 560-46 “Spotlights for film and television studios, stages and photographic use - Part 46: Holding devices; safety regulations and testing”.

Load-bearing rope terminations fitted with wire-rope grips may not be used; instead, rope terminations must meet the requirements of E DIN 56 921-11 “Theatre engineering, stage machinery - Flying systems - Part 11: Safety requirements and testing”.

Wire-rope eyes are only suitable if they are fitted with a thimble.

The load on rope clamps and turnbuckles must only be applied in the directions for which the equipment is designed, and the clamps and turnbuckles must be secured against inadvertent loosening. Turnbuckles must be secured against inadvertent unscrewing.

## 10

### Equipment in Motion for Operational Reasons

**(1) Protection measures must be in place at hazardous points on equipment which is in motion for operational reasons.**

**(2) If, in specific cases, protection at hazardous points is not possible due to compelling reasons, measures must be in place to ensure that**

**- there is a sufficient gap between fixed and moving parts**

**or**

**- visual or verbal communication is guaranteed between the persons at the control unit and at the moving parts.**

**(3) It must be possible to indicate by unmistakable and clearly discernible signals at the access points to stage-floor components, bridges or sets that they are about to move or are in motion.**

**(4) Moving equipment and parts which are walked upon for operational reasons must be equipped with protective equipment of such a nature that it is possible without hazard to walk onto, work on and egress from them as well as to install and remove scenery.**

**(5) The iron curtain separating the stage from the auditorium must be equipped with mains-independent, acoustic signal devices which signal the closing movement in a clearly discernible way in all operating modes.**

**Instruction relating to Section 10, Paragraph (2)**

For information on sufficient gaps, see DIN EN 292 “Safety of machinery - Basic concepts, general principles for design”, DIN EN 294 “Safety of machinery; safety distances to prevent danger zones from being reached by the upper limbs” and DIN EN 349 “Safety of machinery; minimum gaps to avoid crushing of parts of the human body”.

**Instruction relating to Section 10, Paragraph (4)**

Moving parts are, for example, revolving stages, turntables, stage wagons, treadmills and stage platforms. Part of this requirement is that steps or ramps must be installed where the difference in height between the stage floor and the turntable, stage wagon or treadmill is more than 20cm.

See also Section 26.

## **11 Workshops**

**(1) If insured persons produce costumes or furnishings, such as sets, scenery or props, sufficiently dimensioned workshops with the necessary equipment must be provided.**

**(2) Noise zones in workshops must be physically separated from the assembly area. The structural acoustics must be designed in such a way as to reduce the noise.**

**(3) In workshops where hazardous substances can enter the air, effective extraction equipment must be installed.**

**Instruction relating to Section 11, Paragraphs (1) and (2)**

The workshops include, for example, the make-up studio.

The size of the workshop must be in line with the largest structural components and objects that can be expected, the method of work, the machinery and equipment necessary for processing, the number of workers, the work areas and the areas of passage.

For requirements concerning the general design of workshops, see the “Arbeitsstättenverordnung” (“Workplaces Ordinance”) and the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1).

For information on noise reduction, see the “Arbeitsstättenverordnung” (“Workplaces Ordinance”), the accident-prevention regulation entitled “Noise” (BGV B3), and DIN EN 31 690-1 “Akustik; Richtlinien für die Gestaltung lärmarmen Arbeitsstätten; Teil 1: Allgemeine Grundlagen” and DIN EN 31 690-2 “Akustik; Richtlinien für die Gestaltung lärmarmen Arbeitsstätten; Teil 2: Lärminderungsmaßnahmen”.<sup>10</sup>

### **Instruction relating to Section 11, Paragraph (3)**

This applies both to hazardous substances as described in the “Gefahrstoffverordnung” (“Hazardous Substances Ordinance”) and hazardous substances which occur in the form of decomposition products during production.

See also Section 45, Paragraph 2 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1), “Schweißen, Schneiden und verwandte Verfahren” (“Welding, Cutting and Related Procedures”) (BGV D 1) and “Verarbeiten von Beschichtungsmaterialien” (“Processing of Coating Materials”) (BGV D 25).

## **12 Storage Spaces**

**Sufficiently dimensioned spaces and suitable rooms must be available for storing objects and materials. The permissible floor load must be indicated in a clearly visible and permanent fashion.**

### **Instruction relating to Section 12**

See

- Section 34 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1) and
- “Richtlinien für Lagereinrichtungen und -geräte” (“Guidelines for Storage Equipment”) (ZH 1/428).

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<sup>10</sup> These standards have since been renamed as follows:

DIN EN ISO 11690 Acoustics - Recommended practice for the design of low-noise workplaces containing machinery - Part 1: Noise control strategies (ISO 11690-1:1996); Part 2: Noise control measures (ISO 11690-2:1996) and Part 3: Sound propagation and noise prediction in workrooms (ISO/TR 11690-3:1997);

Rooms are suitable if, for example, in addition to the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1), in particular for

- pyrotechnic products the rules on structural fireproofing and the “Sprengstoffgesetz” (“Explosives Act”),
- pointed weapons and firearms the “Waffengesetz” (Weapons Act),
- flammable liquids the “Verordnung über brennbare Flüssigkeiten” (Ordinance on Flammable Liquids),
- gases the accident-prevention regulation entitled “Gases” (BGV B6) and
- hazardous substances the Hazardous Substances Ordinance

are observed.

### 13

#### **Orchestra Pits, Rehearsal Rooms and Tuning Rooms**

**(1) Orchestra pits must be designed in such a way that the insured persons who work in them are not exposed to preventable health hazards.**

**(2) Orchestra pits must be equipped with at least two escape routes which exit the pit in opposite directions.**

**(3) Rehearsal and tuning rooms must be designed in such a way that the insured persons who work in them are not exposed to preventable health hazards.**

#### **Instruction relating to Section 13, Paragraph (1)**

The reference value for the area of an orchestra pit is 1.3 m<sup>2</sup> per musician. See also the accident-prevention regulation entitled “Noise” (BGV B3) and “Sicherheitsregeln für Versenkeinrichtungen in Bühnen und Studios” (“Safety Rules for Stage Platforms in Stages and Studios”) (ZH 1/219<sup>11</sup>).

#### **Instruction relating to Section 13, Paragraphs (1) and (3)**

Seating for musicians should also be ergonomically designed.

#### **Instruction relating to Section 13, Paragraph (2)**

For information on escape-route design, see Section 30 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1).

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<sup>11</sup> Had been withdrawn at the time of translation.

Step irons and similar equipment do not fulfil this requirement.

**Instruction relating to Section 13, Paragraph (3)**

With regard to noise exposure, this requirement is fulfilled if small rooms are clad with sound-absorbing material; see, for example, DIN EN 31 690-1 and -2.

**IV. Operation**

**14**

**General Provisions**

**Unless otherwise provided, the provisions of Section IV are directed at employers, insured persons and subcontractors.**

**15**

**Management and Supervision**

**(1) The employer may only assign the management and supervision of work in staging and production facilities to qualified stage and studio workers.**

**(2) The employer must ensure that responsibility for management and supervision is determined before performances by outside performers, outside recording/filming or third-party use of the staging or production facilities.**

**(3) Performances, recordings and rehearsals may only begin once the supervising person has approved the performance areas.**

**Instruction relating to Section 15, Paragraph (1)**

Management and supervision means, for example, monitoring and, where necessary, overseeing the work and the workers. The overseeing can also be assigned to a suitable person (supervising person). The qualification required depends on the hazard level during operation. This also applies to stages in schools and amateur theatres. See Section 13 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1).

Management and supervision also include the ordering, conducting and inspecting of the safety measures required for the task in hand including the provision of safety equipment.

The tasks include maintenance, setting-up and striking of scenery, technical installation, recording/filming, rehearsals and performances.

A qualified stage or studio worker is deemed to be someone who, as a result of his or her training, knowledge and experience as well as their knowledge of the relevant rules and regulations, can assess the tasks assigned to them and identify possible hazards. Such persons include, in particular, event engineers and technicians or those holding the equivalent of a "Meister" qualification in staging, stage-lighting, studio-lighting or hall facility management.

Proof of suitability is deemed to be, for example, a certificate of competence obtained in accordance with federal-state regulations.

**Instruction relating to Section 15, Paragraph (2)**

Determining the person responsible for management and supervision also means making that person known to the insured persons.

See Sections 6 and 13 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1).

**Instruction relating to Section 15, Paragraph (3)**

The supervising person is the person whose duty it is to monitor the execution of the work and to ensure that it is done in a safe manner. He or she must have adequate knowledge and experience to do this and must also be authorised to give instructions.

**16**

**Occupational Restrictions**

**(1) The employer may assign the task of independently operating and maintaining mechanical equipment only to insured persons who have reached the age of 18 and are familiar with the equipment and procedures.**

**(2) Paragraph (1) does not apply to young persons above the age of 16 if such employment is necessary in order for them to achieve the aim of their training and their protection is ensured by a supervising person.**

### **Instruction relating to Section 16, Paragraph (1)**

Part of this requirement is that the insured persons must be instructed on how to perform the tasks assigned to them and that they can be expected to fulfil the tasks assigned to them reliably.

## **17 Instruction**

**(1) The employer must ensure that the insured persons assigned to operate and maintain mechanical equipment independently are instructed on how to do so before commencing their work and that such instruction is of a nature which ensures they can fulfil the tasks assigned to them reliably.**

**(2) Before the rehearsals for a stage performance or a production begin, the employer must instruct all persons involved as to the necessary accident-prevention measures.**

**(3) In the case of hazardous staging processes which necessitate a certain type of behaviour, the instructions must be repeated at appropriate intervals.**

### **Instruction relating to Section 17, Paragraph (2)**

Persons involved are both artistic and technical staff as well as all other persons participating in the performance/production.

See also Section 7 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1).

### **Instruction relating to Section 17, Paragraph (3)**

Part of the requirement for repeat instructions is that a briefing might be necessary before each rehearsal or performance.

See also Section 20.

## **18 Personal Protective Equipment, Implements**

**(1) In the case of work activities where technical or organisational measures are not able to prevent the risk of injury or damage to health, the employer must provide suitable personal**

**protective equipment and implements. The insured persons must use said equipment and implements.**

**(2) When on high-altitude workstations, insured persons must not carry tools, small parts or other objects in their clothing. Suitable implements must be used to carry these objects.**

**Instruction relating to Section 18, Paragraph (1)**

Part of this requirement is that suitable foot protection (safety, protective, occupational footwear) must be worn during work on fly lofts and grids; see the BG Rule entitled “Benutzung von Fuß- und Beinschutz” (“Use of Foot and Leg Protection”) (BGR 191).

See also Sections 4 and 14 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1).

**Instruction relating to Section 18, Paragraph (2)**

Tools and small parts must be carried in, for example, tool bags with seamless bottoms or other suitable tool-carrying articles.

## **19 Exclusion Zones**

**(1) It is forbidden to be unnecessarily present in the vicinity of moving surfaces, on lighting bridges, under high-altitude workstations or in other hazard areas during set-ups, changeovers and strikes.**

**(2) It is forbidden to be present beneath moving, motorised pit-fillers.**

**Instruction relating to Section 19**

Exclusion zones must be enforced by the facility in question, e.g. by means of

- installing prohibitory signs as described in Annex 2 of the accident-prevention regulation entitled “Sicherheits- und Gesundheitsschutzkennzeichnung am Arbeitsplatz” (“Safety and Health Markings and Signs at the Workplace”) (BGV A 8),
- barriers or

- clear warning signals.

**Instruction relating to Section 19, Paragraph (1)**

Authorised persons who do not have any tasks to perform are also considered unnecessarily present.

**20**

**Hazardous Staging Processes**

**(1) Hazardous staging processes must be conducted using protective measures and must be adequately rehearsed.**

**(2) The employer must ensure that only persons with the appropriate skills and physique are deployed in hazardous staging processes.**

**(3) Artistic requirements concerning the scenery and performance must not be implemented if the qualified stage and studio worker in charge raises objections to them on the grounds of safety.**

**Instruction relating to Section 20, Paragraph (1)**

Hazardous staging processes are, for example, scene changes on the open stage, staging processes involving mechanical movement (movement by the stage or studio floor and scenery battens), extraordinary staging processes without mechanical movement (persons jumping from a height, elements collapsing, handling of weapons and pyrotechnic articles and wearing of restrictive costumes).

Part of this requirement is that final rehearsals must always be conducted under the same conditions as the performance or productions and that clear signals and signs must be agreed. Possible protective measures are, for example, safety nets, safety lines, safety mats, chain mail or crotch protectors.

See also instruction relating to Section 17, Paragraph (3).

**Instruction relating to Section 20, Paragraph (2)**

See Section 36 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1).

Whether a person has the required physique can be determined, for example, by an examination conducted by an occupational-health service provider. See also the accident-prevention regulation entitled “Arbeitsmedizinische Vorsorge” (“Occupational Healthcare”) (BGV A 4).

## 21

### Performances by Speciality Artistes

**Equipment for performances by speciality artistes may only be set up and dismantled by the artiste him- or herself or by a person they appoint to do so. The artistes themselves must check that the equipment is safe before each use.**

#### **Instruction relating to Section 21**

Artistes include, e.g. stunt performers.

See also the accident-prevention regulation entitled “Schausteller- und Zirkusunternehmen” (“Fairground-Entertainment and Circus Companies”) (BGV C 2).

## 22

### Storage of Objects

**No objects and materials apart from those required on the given day may be stored on stages, performance areas or work surfaces.**

#### **Instruction relating to Section 22**

Placing objects and materials in position for immediate use is not considered storage.

For information on keeping passageways and escape routes clear, see also Sections 24 and 30 of the accident-prevention regulations entitled “Allgemeine Vorschriften” (“General Regulations”) (BGV A 1).

Scenery for repertoire performances can be placed on side stages for immediate use.

## 23

### Handling of Objects

**Insured persons must not be put at risk by objects and materials being placed in position, stacked, moved or transported.**

### **Instruction relating to Section 23**

Part of this requirement is that

- objects and materials must not be thrown from a height,
- scenery, fittings and furnishings must not impair the effectiveness of safety equipment,
- objects and materials must only be placed on high surfaces in such a way that they cannot fall and
- an adequate amount of transport and assembly equipment must be available.

## **24**

### **Condition of Surfaces and Sets**

**(1) Surfaces and sets must be kept in flawless, clean condition. Their stability and load-bearing capacity must not be impaired.**

**(2) A passageway at least 1 m in width must be kept clear between the external walls and the cyclorama or the scenery if the cyclorama or scenery is not directly attached to the external walls.**

### **Instruction relating to Section 24, Paragraph (1)**

Part of this requirement is that

- the permissible load in line with the given interpretation must not be exceeded,
  - unavoidable gaps and openings must be cordoned off or covered,
  - entrances, exits and passageways behind the set must not contain any hazardous areas, must be adequately wide and illuminated (see also the Workplaces Ordinance); where an audience/spectators are present, the requirements of the "Versammlungsstättenverordnung" ("Ordinance on Places of Assembly") must also be observed
- and

- where, as described in Section 6, Paragraph (2), edges are marked instead of fall-arrest equipment being used, instructions must be repeated periodically, safety zones must be marked or warning signs/posts installed. Details of such instructions are given in the instruction relating to Section 17, Paragraph (3).

#### **Instruction relating to Section 24, Paragraph (2)**

See also the current version of the “Landesverordnung über den Bau und Betrieb von Versammlungsstätten” (“Federal-State Ordinance on the Construction and Operation of Places of Assembly”).

## **25**

### **Use of Mechanical Equipment as Intended**

**Mechanical equipment may only be operated as intended and specified by the manufacturer and must not be overloaded.**

#### **Instruction relating to Section 25**

Part of the requirement for operation as specified by the manufacturer is, for example, that

- where rope pulleys are used, the permitted deflection angles must not be exceeded,
- the resulting forces must be taken into account,
- counterweights must not be adjusted in such a way that the load-bearing lines are overloaded and
- rope damage must be avoided.

If above-stage machinery is used to carry persons, e.g. if manual counterweight flying systems or scenery hoists are used for flying, the following must be observed:

- the BG Rule entitled “Einsatz von persönlichen Schutzausrüstungen gegen Absturz” (“Use of Personal Protective Equipment against Falls from a Height”) (BGR 198) and
- the BG Rule entitled “Einsatz von persönlichen Schutzausrüstungen zum Halten und Retten” (“Use of Personal Protective Equipment for Arresting and Rescuing”) (BGR 199).

It is also possible to use decorated cages to protect persons being conveyed by above-stage machinery.

Flying equipment must be fitted with an emergency lowering device.

## **26**

### **Movements by Mechanical Equipment**

**(1) Movements which can cause hazards may only be conducted if their speed is appropriate to the situation and**

- 1. equipment is in place to provide protection against the hazardous points or**
- 2. the hazardous points are monitored by the machine operator and**
- 3. the hazardous points are indicated in a clearly visible and permanent fashion.**

**(2) Instructions to initiate movements must be given in an easily discernible and unambiguous manner.**

**(3) Only persons who are suitable, have practice and have been appropriately instructed may access and egress from surfaces which are in motion.**

**(4) Notwithstanding Paragraph (3), accessing and egressing from stage platforms is not permitted while the platforms are in motion.**

**(5) The employer must ensure that those parts of the stage floor which can slide against each other are only built over together if they have been secured against inadvertent movements.**

**(6) Safety switches and similar devices must not be used for normal operation.**

#### **Instruction relating to Section 26, Paragraph (1)**

The persons assigned to operate the machinery must ensure that they do not put themselves or others at risk during any of the movements of the mechanical equipment.

Stage platforms may be built over together if they are secured against inadvertent movements.

Stage-platform movements must not be initiated until the start of the movement has been indicated by a signal of sufficient length; the signalling devices must remain activated during the movement. The movement must be observed from the control unit and with warning signs/posts or aids being used if necessary. In particular, the crushing and shearing points must be observed. This also applies to such crushing and shearing points which the stage platform can form in conjunction with parts of the stage sets.

During stage-platform movements, handholds or any other covers must be opened to a sufficient extent. Once the movement has come to an end, the cover must be closed and bolted and a check done to ensure that it is properly bolted.

Persons who use the stage platforms must be informed as to the purpose and meaning of the signals.

Guest performers must be familiarised with the nature of the moving equipment before their first performance and the supervising person or the person appointed by the supervising person must oversee and assist them during use of such equipment.

If the relative speed of opposing movements by adjacent stage platforms exceeds 0.7 m/s, special protective measures must be taken for the persons situated in the hazard area.

It is forbidden to be unnecessarily present in the range of movement of mechanical equipment; see Section 37, Paragraph 2 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1).

The reference values for suitable maximum speeds for mechanical equipment are:

- without people: 1.2 m/s
- with people:
  - 1 m/s in general,
  - 0.7 m/s on stage platforms and
  - 0.3 m/s in the case of access and/or egress during the movement (however, see Paragraphs (3) and (4)).

Uncontrolled movement of sets and scenery during raising or lowering must be avoided.

**Instruction relating to Section 26, Paragraph (2)**

If there is no visual contact, equipment such as, for example, light signals or voice-communication devices must be used.

**Instruction relating to Section 26, Paragraph (6)**

Part of this requirement is that emergency limit switches must not be used as ordinary limit switches. If an ordinary limit switch fails during a performance or production, the machinery may continue to be operated, with special care, until the end of said performance or production, on the basis of the operator's view or instruction.

**27****Electrical Equipment**

**(1) Portable electrical music systems, props and lights, plus any components thereof, which are intended to be handled by performers, may only be operated if special protective measures are taken against shock.**

**(2) In the case of outdoor productions, the electricity feed-in must be checked to ensure it is free of defects before the electricity supply is set up.**

**(3) Lighting, image-projection and film-projection devices plus any other heat-emitting equipment may only be positioned and installed in such a way that the light and heat energy they emit can dissipate without hazard and the temperature of scenery, furnishings and other equipment does not reach an unacceptably high level.**

**Instruction relating to Section 27, Paragraph (1)**

Special protective measures are

- safety extra-low voltage,
  - safety separation,
  - fault-current protective devices with a rated fault current  $\leq 30$  mA
- or
- protective insulation in dry environments.

See, for example, DIN VDE 0100-410 “Erection of power installations with nominal voltages up to 1000 V - Part 4: Protection for safety; Chapter 41: Protection against electric shock”.

#### **Instruction relating to Section 27, Paragraph (2)**

“Free of defects” primarily means that the protective measures are adhered to.

Qualified electricians or, when a suitable testing device is used, persons who have received instruction on electrical-engineering aspects can check plug circuits to ensure that they are free of defects.

See also the Berufsgenossenschaft information sheet (“BG-Information”) entitled “Fernsehen, Hörfunk und Film - Arbeitssicherheit in Produktionsstätten” (“Television, Radio and Film - Occupational Safety in Production Facilities”) (SP 25.1/2 [BGI 810]).

## **28**

### **Firearms and Pyrotechnics**

**(1) Firearms with explosive propellants may only be used if they have been type-tested and approved and bear appropriate markings. Additionally, firearms with a calibre of more than 4 mm must be proof-tested and bear a valid proof-tested mark. Only permitted blank cartridges may be used.**

**(2) If, notwithstanding Paragraph (1), Sentence 3, blank cartridges cannot be used in film and television productions for compelling staging reasons, firearms may only be used at licensed shooting ranges under the supervision of a weapons expert.**

**(3) Class I, II, III as well as T1 and T2 pyrotechnic articles and kits must be tested and approved. Where pyrotechnic articles and kits are used to create effects, the employer must ensure that the regulations on explosives are complied with.**

#### **Instruction relating to Section 28, Paragraph (1)**

Type tests and approvals for weapons which do not require a permit are carried out by the “Physikalisch-Technische Bundesanstalt” (a national metrology institute which provides scientific and technical services).

The “Staatliche Beschussämter” (state proof-testing houses) carry out the proof-testing and award the proof-tested marks.

Blank cartridges are cases which contain a charge but no projectile.

### **Instruction relating to Section 28, Paragraph (2)**

For more information on firearms and shooting ranges, see the “Waffengesetz” (“Weapons Act”) and the ordinances relating to that act.

### **Instruction relating to Section 28, Paragraph (3)**

Testing and approval are conducted by the “Bundesanstalt für Materialforschung und -prüfung” (“Federal Institute for Materials Research and Testing”). European Union regulations remain unaffected.

For indoor productions, only approved class I, II, T1 and T2 pyrotechnic articles and kits as described in the “Sprengstoffgesetz” (“Explosives Act”) are permitted.

Pyrotechnic articles and kits may only be used under the supervision of an authorised person within the meaning of the Explosives Act. This does not include class 1 and T1 articles and kits. Class II pyrotechnic articles and kits require an exemption permit from the relevant authority. Specially tested class T1 and T2 pyrotechnic articles and kits are available for stages.

Section 19 of the Explosives Act provides that authorised persons are persons who are responsible for safety measures and have an official permit of the type described in Section 7 of the Act or an official certificate of competence of the type described in Section 20 of the Act.

One of the requirements for being granted authorisation is completion of the course entitled “Grundlehrgang für den Umgang - ausgenommen das Herstellen und das Wiedergewinnen - mit pyrotechnischen Gegenständen und pyrotechnischen Sätzen in Theatern oder vergleichbaren Einrichtungen” (“Foundation course on the handling - with the exception of production and recycling - of pyrotechnic articles and kits in theatres or similar establishments”).

For outdoor productions, only approved class I, II, III, T1 and T2 pyrotechnic articles and kits are permitted. Class III and T2 pyrotechnic articles and kits may only be used under the supervision of an authorised person within the meaning of the Explosives Act. This also applies to class IV articles, which do not have to be approved.

One of the requirements for being granted authorisation is completion of the courses entitled “Sonderlehrgang für den Umgang - ausgenommen das Herstellen und das Wiedergewinnen - mit explosionsgefährlichen Stoffen in Film- oder Fernsehproduktionsstätten” (“Special course on the handling - with the exception of production and recycling - of explosive

substances in production facilities for film or television”) and “Grundlehrgang für das Verwenden von pyrotechnischen Gegenständen - Abbrennen von Feuerwerken” (“Foundation course on the use of pyrotechnic articles - fireworks”) (classes III and VI).

Where pyrotechnic articles are to be used for entertainment purposes, notice must be given in writing at least two weeks in advance and approval must be obtained from the local authorities responsible for fire safety and public safety and order as designated in the law of the federal state in question; see Section 22, Paragraphs 4 and 5 of the “Erste Verordnung zum Sprengstoffgesetz” (“First Ordinance on the Explosives Act”).

See also the Berufsgenossenschaft information sheet (“BG-Information”) entitled “Pyrotechnik in Veranstaltungs- und Produktionsstätten für szenische Darstellung” (“Pyrotechnics in Staging and Production Facilities for the Entertainment Industry”) (SP 25.1/4 [BGI 812]).

## **29**

### **Fire Prevention**

**(1) Smoking, fire and open flames are forbidden in stage, performance and production areas.**

**(2) With the exception of furniture and props, sets and scenery may only be used if they are at least fire-resistant.**

**(3) Deviations from Paragraphs (1) and (2) are only permissible if staging reasons make such deviations unavoidable and the employer has taken special fire-safety measures.**

#### **Instruction relating to Section 29, Paragraph (1)**

The non-smoking sign (P01 “Rauchen verboten”) is specified in the accident-prevention regulation entitled “Sicherheits- und Gesundheitsschutzkennzeichnung am Arbeitsplatz” (“Safety and Health Markings and Signs at the Workplace”) (BGV A 8).

#### **Instruction relating to Section 29, Paragraph (2)**

The term “fire-resistant” is defined in, for example, DIN 4102-1 “Fire behaviour of building materials and building components - Part 1: Building materials; concepts, requirements and tests”.

### **Instruction relating to Section 29, Paragraph (3)**

Special fire-safety measures must be agreed with the local fire brigade. This is also necessary if fuel tanks for combustion engines are situated in staging and production facilities.

Special fire-safety measures include the presence of a water-spray extinguishing system; see, for example, DIN 14 494 "Water spray systems, fixed, with open nozzles".

For information on escape routes and emergency exits, see Section 30, Paragraph 2 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1); for information on fire-extinguishing equipment, see Section 43, Paragraph 5 of said accident-prevention regulations.

## **30**

### **Furnishings, Costumes and Effects**

**The employer must ensure that scenery, costumes, furniture, props and effects are of such a design and nature that injuries and damage to health are avoided when they are used as intended.**

#### **Instruction related to Section 30**

This requirement is fulfilled if

- electrical equipment complies with the relevant VDE rules;
- the Hazardous Substances Ordinance is complied with, e.g. when using chemical mists, adhesives, solvents, impregnating agents or plastic foam;
- glass with anti-shatter film is used or transparent plastic is used instead of glass;
- lasers comply with the accident-prevention regulation entitled "Laserstrahlung" ("Laser Radiation") (BGV B 2) and DIN 56 912 "Safety requirements for lightshow lasers and laser lightshow systems";
- weapons with sharp edges, blades and points are not used for fight scenes; and

- exhaust gases from combustion engines are immediately conducted outside or it is not possible for harmful concentrations of constituents of such gases to enter the air which is inhaled.

See Sections 45 and 46 of the accident-prevention regulations entitled "Allgemeine Vorschriften" ("General Regulations") (BGV A 1).

### **31 Animals**

**Where animal participation occurs, safety measures in line with the animals' characteristics must be taken during transport, performance and for their accommodation.**

#### **Instruction relating to Section 31**

Part of this requirement is that the use of animals is only permitted in the presence of a minder who is familiar with the animal.

Where persons with whom the animals are not familiar are present, measures must be taken to deal with possible dangerous reactions by the animals. Such measures include suitable first-aid facilities.

### **32 Maintenance, Cleaning**

**(1) The employer must ensure that safety and mechanical equipment is regularly maintained.**

**(2) Maintenance work on safety and mechanical equipment may only be carried out when it has been ensured that no inadvertent movements can be triggered.**

**(3) Staging and production facilities and their fittings and furnishings must be kept as dust-free as possible and must be cleaned thoroughly at least once a year.**

#### **Instruction relating to Section 32, Paragraph (1)**

Maintenance includes preventive maintenance, inspection and corrective maintenance. See also, for example, DIN 31 051 "Fundamentals of maintenance".

## V. Testing

### 33

#### Testing Prior to First Use and after Substantial Changes

**(1) The employer must ensure that safety and mechanical equipment is tested by an expert before it is put into operation for the first time (“testing prior to first use”) and before it is put back into operation after substantial changes.**

**(2) The testing specified in Paragraph (1) consists of a pre-test, structural testing, acceptance test and - if necessary - a re-test.**

**(3) In the case of safety and mechanical equipment for which a type-examination certificate or an EC declaration of conformity has been supplied, the testing prior to first use specified in Paragraph (1) includes testing to ensure proper installation, equipping and operational readiness.**

**(4) The testing prior to first use specified in Paragraph (1) is not necessary for safety and mechanical equipment which is delivered ready for operation and for which a type-examination certificate or an EC declaration of conformity has been supplied.**

#### **Instruction relating to Section 33**

See the “Berufsgenossenschaftlicher Grundsatz” (“Berufsgenossenschaft Principle”), including the related test logs and test certificates, entitled “Prüfung von sicherheitstechnischen und maschinentechnischen Einrichtungen in Veranstaltungs- und Produktionsstätten für szenische Darstellung” (“Testing of Safety and Mechanical Equipment in Staging and Production Facilities for the Entertainment Industry”) (BGG 912).

In cases of doubt, the Berufsgenossenschaft shall decide the type and scope of testing.

An expert is a person who, by virtue of his or her professional training and experience, has special knowledge in the field of safety and mechanical equipment and is familiar with the relevant state occupational health and safety regulations, accident-prevention regulations, directives and good engineering practice (e.g. DIN standards, VDE rules, technical rules issued by other European Union member states or

other states which are party to the Agreement on the European Economic Area). The expert must be able to test the safety of the safety and mechanical equipment and produce an assessment thereof.

For information on authorisation of experts, see the instruction relating to Section 36.

### **34** **Periodic Testing**

**(1) The employer must ensure that safety and mechanical equipment is tested by an expert at least every four years to the same extent covered by the acceptance test.**

**(2) The employer must ensure that safety and mechanical equipment is tested by a competent person at least once a year.**

**(3) The employer must ensure that flying systems are tested by a competent person before each use. The testing must comprise a visual inspection and load tests when the system is in motion.**

**(4) The employer must ensure that load tests as specified in Paragraph (3) using people are only conducted at low heights.**

#### **Instruction relating to Section 34, Paragraph (2)**

For information on competent persons and the scope of the testing by competent persons, see the "Berufsgenossenschaft Principle" entitled "Prüfung von sicherheitstechnischen und maschinentechnischen Einrichtungen in Veranstaltungs- und Produktionsstätten für szenische Darstellung" ("Testing of Safety and Mechanical Equipment in Staging and Production Facilities for the Entertainment Industry") (BGG 912).

A competent person is a person who, by virtue of his or her professional training and experience, has adequate knowledge in the field of safety and mechanical equipment and is familiar with the relevant state occupational health and safety regulations, accident-prevention regulations, directives and good engineering practice (e.g. DIN standards, VDE rules, technical rules issued by other European Union member states or other states which are party to the Agreement on the European Economic Area)

to such an extent that he or she can assess whether safety and mechanical equipment is safe.

**Instruction relating to Section 34, Paragraph (4)**

Heights of less than 1 m are deemed to be low.

**35  
Test Records**

**(1) The employer must ensure that the results of the tests specified in Sections 33 and 34 are recorded in a test log.**

**(2) The employer must confirm in the test log that he or she has taken note of the identified faults and the fact that they have to be eliminated. He or she must ensure that such faults are rectified. If, in view of the nature and extent of the faults, there are reservations about putting the equipment into operation for the first time, putting it into operation again or continuing operation, the employer must ensure that the equipment is put out of operation. He or she may only put the equipment into operation or continue operation when the faults have been rectified and any necessary re-tests, which he or she must arrange, have been carried out.**

**(3) If the result of the expert's test necessitates re-tests, the employer must advise the authority responsible for occupational health and safety and the relevant Berufsgenossenschaft of the result of the test.**

**Instruction relating to Section 35**

An example test-log layout is given in the annex to the "Berufsgenossenschaft Principle" entitled "Prüfung von sicherheitstechnischen und maschinentechnischen Einrichtungen in Veranstaltungs- und Produktionsstätten für szenische Darstellung" ("Testing of Safety and Mechanical Equipment in Staging and Production Facilities for the Entertainment Industry") (BGG 912).

**36  
Experts**

**Only experts authorised by the Berufsgenossenschaft can act as experts for testing of safety and mechanical equipment.**

### **Instruction relating to Section 36**

The following organisations can be engaged to conduct the preliminary assessment for authorisation applications:

- Bundesverband der Unfallkassen (BUK),  
Fachgruppe Theater,  
Fockensteinstraße 1,  
81539 Munich
  
- Unfallkasse Berlin,  
Culemeyerstraße 2,  
12277 Berlin
  
- Fachausschuss Verwaltung des Hauptverbandes der gewerblichen  
Berufsgenossenschaften,  
Deelbögenkamp 4,  
22297 Hamburg.

The preliminary assessment is carried out jointly by the two organisations above.

Authorisation is granted in accordance with the “BG Principle” entitled “Ermächtigung von Sachverständigen für die Prüfung von sicherheitstechnischen und maschinentechnischen Einrichtungen in Veranstaltungs- und Produktionsstätten für szenische Darstellung” (“Authorisation of Experts for Testing of Safety and Mechanical Equipment in Staging and Production Facilities for the Entertainment Industry”) (BGG 912-1).

In general, a person must satisfy the following criteria in order to be authorised as an expert for the testing:

- a) must have completed a course of study in engineering  
and
- b) must have at least three years’ experience in the design, construction or maintenance of safety and mechanical equipment.

For more information on experts, see also the instruction relating to Section 33.

## **VI. Regulatory Offences**

### **37**

#### **Regulatory Offences**

**Within the meaning of Section 209, Paragraph 1, Item 1 of the Seventh Book of the “Sozialgesetzbuch” (“Code of Social Law”), it is an offence to wilfully or negligibly contravene the provisions of**

- **Section 3 in conjunction with  
Section 5 and Section 6, Paragraph (3),  
Section 7, Paragraph (1), Paragraph (2), Paragraph (4), Sentence 1, Paragraph  
(5) or (6)  
Section 8, Paragraphs (1) to (3),  
Section 10, Paragraph (3) or (5),**

**Section 12, Sentence 2 or  
Section 13, Paragraph (2);**

**- Section 14 in conjunction with  
Section 15, Section 16, Paragraph (1),  
Section 17, Paragraph (1),  
Section 20, Paragraph (3),  
Section 22, Section 24, Paragraph (2),  
Section 25, Section 26, Paragraph (4) or (5),  
Section 27, Section 28, Section 29, Paragraph (1) or (2),  
Section 31 or  
Section 32, Paragraph (2) or (3);**

**- Section 33, Paragraph (1),  
Section 34  
or  
Section 35.**

## **VII. Transitional and Implementing Provisions**

### **38**

#### **Transitional and Implementing Provisions**

**(1) Those requirements within this accident-prevention regulation which refer to equipment and extend beyond the previously applicable requirements do not apply, save as provided in Paragraph (2), to equipment which was installed before this accident-prevention regulation came into force or which had begun to be installed before this accident-prevention regulation came into force.**

**(2) The Berufsgenossenschaft can stipulate that changes must be made to equipment in line with this accident-prevention regulation if insured persons' lives or health would be at risk without the change.**

## VIII. Coming into Force

### 39 Coming into Force

**This accident-prevention regulation shall come into force on 1 April 1998. At the same time, the accident-prevention regulation entitled “Bühnen und Studios” (“Stages and Studios”) of 1 December 1974, as amended on 1 January 1997, shall cease to have effect.**

### Notice of Approval

The above accident-prevention regulation, “**Staging and Production Facilities for the Entertainment Industry**” (BGV C 1), is hereby approved.

Bonn, 15 January 1998  
Ref. III b 2-34 58-3-(1)-34 124-2

The Federal Ministry of Labour  
and Social Affairs

(Stamp)

By order  
(Wilmerstadt)

Publication in Federal Gazette no. 42 on 3 March 1998.

## **Annex 1**

### **Standards and Occupational-Health Rules**

Examples relevant to staging and production facilities

## **Annex 2**

### **Required Presence of Qualified Technical Workers**

See also Section 68 of the Model Ordinance on the Construction and Operation of Places of Assembly.<sup>12</sup>

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<sup>12</sup> The table shown at this point in the German version of these regulations is not included in this translation as it comes from the old version of the Model Ordinance and is thus no longer relevant.

## **Annex 3**

### **Documentation Suppliers**

The following is a list of the suppliers from which the rules and regulations mentioned in the instructions can be obtained.

#### **1. Acts/Ordinances**

Supplier: Bookshops or  
Carl Heymanns Verlag KG,  
Luxemburger Straße 449,  
50939 Cologne

#### **2. Accident-prevention regulations**

Supplier: Berufsgenossenschaft or  
Carl Heymanns Verlag KG,  
Luxemburger Straße 449,  
50939 Cologne

#### **3. Berufsgenossenschaft safety rules, principles, information sheets and instruction sheets**

Supplier: Berufsgenossenschaft or  
Carl Heymanns Verlag KG,  
Luxemburger Straße 449,  
50939 Cologne

#### **4. DIN standards/VDE rules**

Supplier: Beuth Verlag GmbH,  
Burggrafenstraße 6,  
10787 Berlin  
or  
VDE-Verlag GmbH,  
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