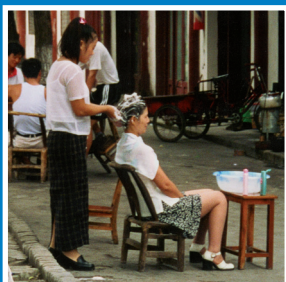




Safety and Health at Work

# SMALL ENTERPRISES



Identifying hazards and strains  
Implementing measures

English

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# SMALL ENTERPRISES

Identifying hazards and strains  
Implementing measures

English



## Foreword

Supporting small enterprises in the area of employee protection is a core task of the national prevention services.

The main responsibility for implementing the prevention lies in the hands of the entrepreneur. As the correct implementation of this task demands fundamental knowledge, it is essential that appropriate information material is available to the entrepreneur. This brochure is intended to contribute to this requirement.

As this brochure is drawn up in the form of checklists, it should facilitate entrepreneurs in small enterprises to determine hazards in their facilities and lay down measures to eliminate hazardous situations.

Typical hazards are shown and measures for their elimination proposed.

This brochure represents a procedural documentation compiled on an international level. It was jointly compiled by members of the Vereinigung der Metall-Berufsgenossenschaften, the Asociación para la Prevención de Accidentes and the Allgemeine Unfallversicherungsanstalt. The work was supported by members of the ISSA sections

- iron and metalworking industry,
- electricity, gas, distant heating, water, and
- machinery safety.

I would like to extend my sincere thanks to all those who contributed towards compiling this brochure.

I wish all readers every success and hope this brochure will support the implementation under the motto “Safety is entrusted to the boss”.

Generaldirektor Mag. Helmut Pichler  
Chairman of the Section Iron and Metalworking Industry

## Introduction

### **Initial situation:**

In small enterprises the entrepreneur is closely involved in all activities. He is the “key figure” and carries the responsibility for his enterprise – even for safety and health.

The entrepreneur is the addressee for the requirements regarding many legal standards. For this reason he is obliged to take care of the safety and health of his employees, as is mandatory according to the Framework Directive on Health and safety at Work\*) and the respective individual directives for all enterprises in the EU.

### **The challenge:**

Even if the entrepreneur – depending on the national regulations – is supported by internal and external experts in carrying out his duties regarding safety and health, it is in all cases important and essential for him to be well versed in the appropriate basic knowledge.

**This brochure affords an overview of possible hazards and strains in enterprises. It assists the entrepreneur in overcoming challenges he has to face.**

### **Objective of the brochure:**

Based on the as-is situation, all measures regarding safety and health are to be determined in the enterprise. Determining the as-is situation must be carried out systematically and cover all areas, if the objective “safe workplaces” is to be achieved. This brochure enables the entrepreneur to determine hazards and strains at individual workplaces of his enterprise, to recognise shortcomings and define the required measures. The brochure does not, of course, cover every hazard or strain that may occur in the enterprise. It depicts typical hazards and strains that occur in practice.

### **Assistance and consultation:**

One can not deal with all aspects of health and safety above. Certain tasks must be handled by external consultants. Experts from the fields of safety engineering and occupational medicine can be considered, as well as independent safety specialists and experts from the various individual professional fields. The results of the consultations are documented and implemented in the enterprise.

### **Documentation:**

The investigation and assessment of hazards which according to the frame directive is mandatory for every enterprise must be documented. For this purpose the varying requirements in the individual EU countries need to be considered.

### **Benefit:**

This brochure is meant to make the entrepreneur aware of how he can actively involve him-self in the improvement of health and safety in his enterprise.

When the entrepreneur of a small enterprise is convinced of the importance of his personal involvement regarding safety and health, then targeted necessary measures are implemented, employees motivated and positive effects regarding economic efficiency and competitiveness of the enterprise will materialise.

### **Experience:**

Safety and health and economic efficiency go hand in hand. Entrepreneurs having “invested” in safety and health for their workers confirm the importance of safety and health for the success of their enterprises. The effects of, for example, improvements in safety standards contribute directly towards lowering overheads by a reduction of employee absenteeism. And the performance of an employee privileged to work in a safe and healthy work environment is apt to be better – which, in turn, means higher profitability.

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\*) Council Directive 89/391/EEC “on the introduction of measures to encourage improvements in the safety and health of workers at work”

Working with the checklist – Example “Electrical safety”

- Questions and remarks** should help you recognise whether the hazards and strains named occur in your enterprise.
- Describe the situation precisely and amend where necessary.

**Measures**

- Insert cross where measures need to be undertaken.

**Notes**

e.g. workplaces or employees affected

**Electrical safety**

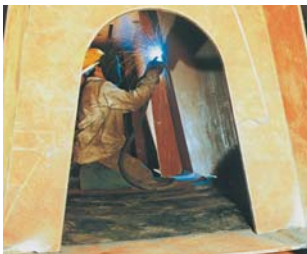
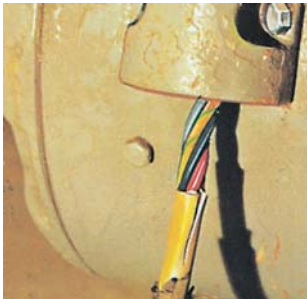
Checklist for division/workplace \_\_\_\_\_

Date of appraisal: 21.08.06

Action to be taken by: 23.08.06

In charge: Mr. Klein

**Faulty electrical installations and equipment**



**Hazards and strains:**

- Are there any electrical hazards? – e.g. through:**
  - damaged wiring, e.g. breaks, bare wires
  - damaged casings of equipment
  - damaged plugs and/or sockets
  - electrical appliances not used in compliance with safety regulations
  - use of moist electrical appliances or operation of electrical installations with wet hands or feet or with damp clothing
  - \_\_\_\_\_
- Must special safety measures be observed? – e.g.**
  - special environmental conditions (e.g. extreme heat, cold, wetness, chemical influences)
  - fire and explosive hazards areas
  - confined spaces (e.g. containers, steel construction)
  - special requirements at construction sites
  - \_\_\_\_\_

**Measures:**

- visual control before work to check for perceptible faults
- regular check by qualified electrician
- only use tested equipment
- switch off current immediately in case of damage/dysfunction, disconnect plug, report damage and have repaired by a qualified electrician.
- mark and, if necessary, block electrical installations and switchgear
- \_\_\_\_\_
- select and use equipment according to application range (e.g. protection category, mechanical protection)
- use equipment with low voltage or fuse disconnection
- \_\_\_\_\_

**Notes:**

*Power drills*

# Mechanical safety 1

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

## Unprotected movable machine parts



Hazards and strains:	Measures:	Notes:
<p><input type="checkbox"/> <i>Are there machines with unprotected movable parts (e.g. circular saws, angle grinders, presses)?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>When operating equipment/machines are there dangerous areas that could cause injuries? – e.g.</i></p> <p><input type="checkbox"/> crushing (especially of hands)</p> <p><input type="checkbox"/> entanglement of hair or clothing</p> <p><input type="checkbox"/> shear zones</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Can hazardous areas emerge in special situations or operation conditions (e.g. cleaning, fault repair, tool change)?</i></p> <p><input type="checkbox"/> _____</p>	<p><input type="checkbox"/> when purchasing new equipment pay attention to safe equipment (CE marking), declaration of conformity</p> <p><input type="checkbox"/> separating protective fixtures (e.g. housing, covering, fencing)</p> <p><input type="checkbox"/> zone protection devices (e.g. two-hand control unit, safety shutdown mat)</p> <p><input type="checkbox"/> pullbacks and holdbacks (e.g. deflectors, brackets)</p> <p><input type="checkbox"/> presence-sensing devices (e.g. light barriers)</p> <p><input type="checkbox"/> check protective devices for effectiveness</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> observe safety distance</p> <p><input type="checkbox"/> mark hazardous areas</p> <p><input type="checkbox"/> no wearing of gloves when danger of entanglement prevails</p> <p><input type="checkbox"/> use personal protective equipment</p> <p><input type="checkbox"/> instruct on residual danger</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> instructions for use</p> <p><input type="checkbox"/> operating instructions</p> <p><input type="checkbox"/> _____</p>	




## Mechanical safety 2

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Parts with hazardous surfaces	Hazards and strains:		Measures:	Notes:
	<p><input type="checkbox"/> <i>Can injuries such as tears and cuts occur? – e.g. through:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> corners, sharp edges, points</li> <li><input type="checkbox"/> rough surfaces</li> <li><input type="checkbox"/> knives, blades</li> <li><input type="checkbox"/> broken glass</li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> housing, covering</li> <li><input type="radio"/> deburring of edges</li> <li><input type="radio"/> appropriate storage of pointed or sharp objects</li> <li><input type="radio"/> separate glass disposal</li> <li><input type="radio"/> protective gloves, if necessary protective clothing</li> <li><input type="radio"/> _____</li> </ul>	
<p><b>Movable transportation equipment, movable working appliances</b></p>  	<p><input type="checkbox"/> <i>Are there threats of danger? – e.g. through:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> overloading of a vehicle</li> <li><input type="checkbox"/> disfunctions and faults (e.g. brakes)</li> <li><input type="checkbox"/> unauthorised use of means of transportation</li> <li><input type="checkbox"/> indistinct traffic routes</li> <li><input type="checkbox"/> routes too narrow, unmarked</li> <li><input type="checkbox"/> storage on routes</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Are there threats emanating from loads? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> tilting over of transportation means</li> <li><input type="checkbox"/> limited view of driver due to bulky load</li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> observe manufacturer's instruction and type plate</li> <li><input type="radio"/> regular technical check</li> <li><input type="radio"/> assignment of suitable trained persons</li> <li><input type="radio"/> mark traffic routes and keep them free</li> <li><input type="radio"/> guarantee necessary width of routes</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> observe carrying capacity and tilt resistance</li> <li><input type="radio"/> correct placing and fastening of load</li> <li><input type="radio"/> obtain help of person for directing</li> <li><input type="radio"/> _____</li> </ul>	






### Mechanical safety 3

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Uncontrolled movable parts	Hazards and strains:		Measures:	Notes:
  	<p><input type="checkbox"/> <i>Can parts move in an uncontrolled manner? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> tilt (e.g. loads, stacks)</li> <li><input type="checkbox"/> swing (e.g. crane loads)</li> <li><input type="checkbox"/> roll (e.g. drums, rods)</li> <li><input type="checkbox"/> fall (e.g. tools or work material in case of roof or assembly work)</li> <li><input type="checkbox"/> fly (e.g. chippings and shavings)</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Can injuries occur? – e.g. through:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> media (e.g. gases) escaping under pressure</li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> observe carrying capacity of storage surface</li> <li><input type="radio"/> guarantee stability of storage and stacks, maintain permissible stacking heights</li> <li><input type="radio"/> maintain safety distance</li> <li><input type="radio"/> provide for protective devices and stoppers</li> <li><input type="radio"/> place load and tools safely; attach railings, catcher hoods, safety shackles</li> <li><input type="radio"/> use hardhat</li> <li><input type="radio"/> protection against chippings at the machine, suction</li> <li><input type="radio"/> selection of correct abrasive wheel; observe rotation speed; protection cover</li> <li><input type="radio"/> safety goggles, if necessary use face protection</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> safety valve for pressure control</li> <li><input type="radio"/> _____</li> </ul>	




## Mechanical safety 4

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Falling on surfaces	Hazards and strains:	Measures:	Notes:
  	<p><input type="checkbox"/> <i>Can persons fall, slip, stumble, twist or miss their footing? – e.g. through:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> unsuitable surfacing</li> <li><input type="checkbox"/> soiling (e.g. oil, grease)</li> <li><input type="checkbox"/> slippery surface due to weather condition</li> <li><input type="checkbox"/> unevenness, differences in height (e.g. bumps)</li> <li><input type="checkbox"/> damaged surface</li> <li><input type="checkbox"/> objects lying around</li> <li><input type="checkbox"/> incorrect footwear</li> <li><input type="checkbox"/> lack of safety markings (e.g. floor markings)</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Are traffic routes and work surfaces soiled, cramped or obstructed??</i></p> <p><input type="checkbox"/> _____</p>	<p><input type="radio"/> use anti-slip surfacing</p> <p><input type="radio"/> remove soiling and stumbling blocks</p> <p><input type="radio"/> repair damaged flooring</p> <p><input type="radio"/> clear objects lying around and store correctly</p> <p><input type="radio"/> lay cables and wiring/ducts correctly</p> <p><input type="radio"/> mark remaining stumbling blocks</p> <p><input type="radio"/> use adequate footwear (work shoes, safety shoes)</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> clean traffic routes and work surfaces</p> <p><input type="radio"/> keep traffic routes free</p> <p><input type="radio"/> _____</p>	

# Mechanical safety 5

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

## Falling from heights



### Hazards and strains:

- Is there a danger of falling from heights? – e.g**
  - from ladders, steps, stairs (e.g. incorrect footwear, climbing over, badly placed)
  
  - from scaffoldings (e.g. exceeding carrying capacity, no safe entry, no lateral protection)
  
  - from elevated workplaces (e.g. elevated control platforms, working platforms, roofs)
  
  - at openings and recesses (e.g. in floors, assembly openings, hatches and pits, wall and roof openings)
  
  - at workplaces with vats, basins and receptacles with material where one could sink (e.g. liquids, sludge, grain, slurries)
  
  - \_\_\_\_\_

### Measures:

- secure ladders against sinking and tilting over
- observe angle of incline for ladders; Open stepladder completely and place firmly
- do not place in traffic routes
- \_\_\_\_\_
  
- assemble scaffoldings correctly
- \_\_\_\_\_
  
- cordon off fall risk zones
- provide for railings and protective devices
- use safety scaffoldings, safety nets
- \_\_\_\_\_
  
- secure openings (railing, coverings)
- at wall openings: provide grills, parapets or half doors
- \_\_\_\_\_
  
- if technical safety measures against falls or protective interception are not in place, use personal protective equipment against falls
- \_\_\_\_\_

### Notes:

# Electrical safety

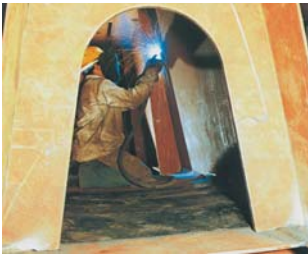
Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

## Faulty electrical installations and equipment



## Electrical overhead lines and other live installations



Hazards and strains:	Measures:	Notes:
<p><input type="checkbox"/> <b>Are there any electrical hazards? – e.g. through:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> damaged wiring, e.g. breaks, bare wires</li> <li><input type="checkbox"/> damaged casings of equipment</li> <li><input type="checkbox"/> damaged plugs and/or sockets</li> <li><input type="checkbox"/> electrical appliances not used in compliance with safety regulations</li> <li><input type="checkbox"/> use of moist electrical appliances or operation of electrical installations with wet hands or feet or with damp clothing</li> <li><input type="checkbox"/> _____</li> </ul>		
<p><input type="checkbox"/> <b>Must special safety measures be observed? – e.g.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> special environmental conditions (e.g. extreme heat, cold, wetness, chemical influences)</li> <li><input type="checkbox"/> fire and explosive hazards areas</li> <li><input type="checkbox"/> confined spaces (e.g. containers, steel construction)</li> <li><input type="checkbox"/> special requirements at construction sites</li> <li><input type="checkbox"/> working near electrical installations</li> <li><input type="checkbox"/> _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> visual control before work to check for perceptible faults</li> <li><input type="radio"/> regular check by qualified electrician</li> <li><input type="radio"/> only use tested equipment</li> <li><input type="radio"/> switch off current immediately in case of damage/dysfunction, disconnect plug, report damage and have repaired by a qualified electrician</li> <li><input type="radio"/> mark and, if necessary, block electrical installations and switchgear</li> <li><input type="radio"/> _____</li> </ul>	
<p><input type="checkbox"/> <b>Is the distance to overhead lines (e.g. erecting scaffoldings, swinging hoisting devices, swinging loads and/or overhead lines) below the required safety distance?</b></p> <p><input type="checkbox"/> _____</p>	<ul style="list-style-type: none"> <li><input type="radio"/> select and use equipment according to application range (e.g. protection category, mechanical protection)</li> <li><input type="radio"/> use equipment with low voltage or fuse disconnection</li> <li><input type="radio"/> work only under instruction of qualified electrician</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> switch current off from lines</li> <li><input type="radio"/> cover bare wiring with insulating rubber or plastic profiles</li> <li><input type="radio"/> erect shielding</li> <li><input type="radio"/> limit work areas of hoisting devices</li> <li><input type="radio"/> _____</li> </ul>	






# Mechanical safety 1

Checklist for area/workplace \_\_\_\_\_

Date of appraisal: \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Products used containing hazardous substances	Hazards and strains:	Measures:	Notes:
<p><b>Products used containing hazardous substances</b></p> <div>  </div> <div>  </div> <div>  </div> <div>  </div> <p><b>Hazardous substances released in work process</b></p> <div>  </div>	<p><b>Hazards and strains:</b></p> <p><input type="checkbox"/> <i>Are hazardous substances or hazardous preparations used (danger symbols on packaging, check safety data sheets)?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Are current safety data sheets incomplete, unavailable or unknown?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Are alternative substances possible?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Is the skin particularly strained (e.g. by disinfectants and cleaning agents, frequent washing of hands, moisture protection gloves)?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Can hazardous substances emerge? – e.g.</i></p> <p><input type="checkbox"/> gases, vapours (e.g. nitrous vapours when welding, from cooling lubricants, exhaust fumes, solvent vapours)</p> <p><input type="checkbox"/> aerosols (e.g. paint mist, welding fumes, swarf of highly alloyed steel, wood dust, flour dust)</p> <p><input type="checkbox"/> asbestos (from cleanup operations)</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Were preventive medical check-ups neglected?</i></p> <p><input type="checkbox"/> _____</p>	<p><b>Measures:</b></p> <p><input type="radio"/> use alternative substances</p> <p><input type="radio"/> request EU safety data sheets from manufacturer</p> <p><input type="radio"/> follow storage conditions according to safety data sheets</p> <p><input type="radio"/> compile operating instructions</p> <p><input type="radio"/> avoid contact with food and stimulants</p> <p><input type="radio"/> prepare products as instructed</p> <p><input type="radio"/> never mix different products</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> use of personal protective equipment according to instructions or safety data sheet</p> <p><input type="radio"/> skin protection plan (hand protection, adequate cleaning and care)</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> change work processes, use of alternative substances</p> <p><input type="radio"/> closed facilities and appliances</p> <p><input type="radio"/> spatial separation of hazard zone</p> <p><input type="radio"/> suction of contaminants where emission emerges</p> <p><input type="radio"/> ventilation of rooms</p> <p><input type="radio"/> respiratory protection</p> <p><input type="radio"/> skin protection plan</p> <p><input type="radio"/> notification of work processes to authorities</p> <p><input type="radio"/> compile work plan including measures for protection of persons</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> preventive medical checkups</p> <p><input type="radio"/> _____</p>	

# Protection against biological impact

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

## Virus, parasites, fungus, bacteria



### Hazards and strains:

- Are infected human beings, animals or materials handled? – e.g.*
  - working in hospitals, doctors' practices, laboratories
  - working with livestock (e.g. contact with animals and their excrements)
  - working in effluent or waste disposal installations
  - stay in tropical and subtropical areas
  - sewage workers
  - effluent treatment plants
  - \_\_\_\_\_

- Is there a danger through mould or germ formation? – e.g.*

- mould formation
- germ colonies (especially in aqueous solutions, such as cooling lubricants mixed with water)?
- \_\_\_\_\_

- Has the air conditioning been contaminated by bacteria, fungus spores?*

- \_\_\_\_\_

### Measures:

- avoid contact
- hygiene and cleanliness
- division into dirty/clean areas
- appropriate disposal of waste
- use of suitable body care products
- skin protection plan
- regular cleaning and (hand) disinfection
- masks
- healthcare (e.g. prevention checkups, inoculations)
- \_\_\_\_\_
- ventilation
- maintenance plan for cooling lubricants
- closed containers
- observe storage conditions (e.g. cooling)
- \_\_\_\_\_
- regular air conditioning maintenance
- \_\_\_\_\_

### Notes:




# Fire and explosion protection 1

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Fire hazard	Hazards and strains:	Measures:	Notes:
 	<p><input type="checkbox"/> <b>Are highly flammable substances handled? – e.g.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> flammable liquids (e.g. alcohol, benzene, heating oil)</li> <li><input type="checkbox"/> flammable solids (e.g. roofing cardboard, wood, paper)</li> <li><input type="checkbox"/> flammable dusts (metal dusts, e.g. aluminium dust, magnesium dust)</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <b>Are there ignition sources? – e.g.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sparks, e.g. from matches, cigarettes, open fire, electrical appliances, welding torches or friction</li> <li><input type="checkbox"/> heat conduction, e.g. when welding</li> <li><input type="checkbox"/> _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> substitute highly flammable substances</li> <li><input type="radio"/> remove unnecessary flammable material</li> <li><input type="radio"/> use working appliances made of flame resistant material</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> remove sources of ignition, such as open fires</li> <li><input type="radio"/> prohibit smoking</li> <li><input type="radio"/> markings (apparatuses or areas)</li> <li><input type="radio"/> welding work only with permission</li> <li><input type="radio"/> prohibition and information signs</li> <li><input type="radio"/> _____</li> </ul>	
<p><b>Explosion hazard</b></p> 	<p><input type="checkbox"/> <b>Are there explosive mixtures? – e.g.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> air and gases (e.g. uncontrolled escaping gas from equipment powered by liquefied gas)</li> <li><input type="checkbox"/> air and vapours (e.g. solvent vapours)</li> <li><input type="checkbox"/> air and dusts (e.g. metal dusts)</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <b>Are there areas exposed to the danger of explosion? – e.g.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> inside apparatus</li> <li><input type="checkbox"/> in constricted spaces, pits, ducts</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <b>Is an explosion protection document necessary?</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> substitute flammable substances</li> <li><input type="radio"/> natural or technical ventilation</li> <li><input type="radio"/> monitor concentration</li> <li><input type="radio"/> remove sources of ignition</li> <li><input type="radio"/> check gas pipes for leak tightness</li> <li><input type="radio"/> gas burners: cut gas supply when flame dies</li> <li><input type="radio"/> keep substances that produce explosive when mixed with air away from open fires, electrical appliances, sparks, etc</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> prohibit smoking</li> <li><input type="radio"/> observe explosion protection zones</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> compile explosion protection document</li> <li><input type="radio"/> _____</li> </ul>	







## Fire and explosion protection 2

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Explosive substances	Hazards and strains:	Measures:	Notes:
 	<p><input type="checkbox"/> <i>Are explosive substances handled?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Are pyrotechnical substances or igniters handled? – e.g.</i></p> <p><input type="checkbox"/> substance mixtures to produce light, sound, smoke, mist or movement effects</p> <p><input type="checkbox"/> work on airbag and safety belt pyrotechnical tensioning system</p> <p><input type="checkbox"/> detonation equipment (e.g. loading and mixing devices for explosive or potentially explosive substances)</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Do all persons handle these substances?</p> <p><input type="checkbox"/> _____</p>	<p><input type="radio"/> permission for explosive substances and detonation equipment</p> <p><input type="radio"/> permission for handling explosive substances (observe conditions for person in charge)</p> <p><input type="radio"/> execution of blasting only by person holding blasting permit</p> <p><input type="radio"/> execute special measures</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> to be handled by experts only</p> <p><input type="radio"/> _____</p>	
<p><b>Fire fighting</b></p>    	<p><input type="checkbox"/> <i>Is fire fighting not possible as there are no aids?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Were too few people instructed in fire fighting?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Was the posting of required markings forgotten?</i></p> <p><input type="checkbox"/> _____</p>	<p><input type="radio"/> fire extinguishers (choose according to flammable substance)</p> <p><input type="radio"/> extinguishing systems</p> <p><input type="radio"/> fire blankets</p> <p><input type="radio"/> smoke and heat exhaust systems</p> <p><input type="radio"/> regular maintenance of extinguishing system</p> <p><input type="radio"/> fire alarm installations</p> <p><input type="radio"/> fire doors</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> instruct people</p> <p><input type="radio"/> carry out drills</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> mark escape routes</p> <p><input type="radio"/> post alarm and escape route plans</p> <p><input type="radio"/> _____</p>	



### Fire and explosion protection 3

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

#### Fire fighting



#### Hazards and strains:

- Is escape not possible as escape routes blocked?*  
 \_\_\_\_\_
- Is fire fighting not possible as the routes are not wide enough?*  
 \_\_\_\_\_
- Is the escape hampered as escape routes are too narrow?*  
 \_\_\_\_\_
- Are there highly flammable objects on the escape route?*  
 \_\_\_\_\_

#### Measures:

- keep escape routes free
- \_\_\_\_\_
- sufficiently wide routes
- \_\_\_\_\_
- adjust escape route width according to number of persons
- \_\_\_\_\_
- do not store highly flammable objects
- avoid storing on escape route as far as possible
- \_\_\_\_\_

#### Notes:



## Protection against hot and cold objects

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Contact with hot objects	Hazards and strains:	Measures:	Notes:
	<p><input type="checkbox"/> <i>Is there a danger of burning? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> at open fires</li> <li><input type="checkbox"/> on hot surfaces of equipment, work pieces, furnaces, pipes</li> <li><input type="checkbox"/> from hot liquids (e.g. hot bitumen)</li> <li><input type="checkbox"/> through superheated steam</li> <li><input type="checkbox"/> through splashes from hot materials</li> <li><input type="checkbox"/> _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> shielding, separation of the hazard area</li> <li><input type="radio"/> insulate items against heat</li> <li><input type="radio"/> post the required markings</li> <li><input type="radio"/> protective gloves</li> <li><input type="radio"/> eye protection</li> <li><input type="radio"/> safety shoes</li> <li><input type="radio"/> protective clothing</li> <li><input type="radio"/> _____</li> </ul>	
	<p><input type="checkbox"/> <i>Is there contact with cold materials? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> refrigerant agents, cooling agents, dry ice</li> <li><input type="checkbox"/> cold pipes, metal parts</li> <li><input type="checkbox"/> cold equipment</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Is work executed in cold rooms? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> cooling chambers</li> <li><input type="checkbox"/> refrigerated storage houses</li> <li><input type="checkbox"/> _____</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> remove refrigerant/cooling agents before maintenance work</li> <li><input type="radio"/> use protective gloves and adequate body protection</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> work in cool rooms only with protective clothing against cold (observe time of exposure)</li> <li><input type="radio"/> compile operating instructions for refrigerating and cooling plants</li> <li><input type="radio"/> monitoring of the persons working in the cold rooms (e.g. reporting system)</li> <li><input type="radio"/> post the required markings</li> <li><input type="radio"/> _____</li> </ul>	



# Protection against specific physical impact 1

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Noise	Hazards and strains:	Measures:	Notes:									
 	<p><input type="checkbox"/> Are there sources of noise (e.g. hammer drill, circular saw, angle grinder)?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Does the soundscape interfere with mental work?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Is communication at normal sound level impossible?</p> <p><u>Information for assessment:</u></p> <table border="1"> <thead> <tr> <th>distance</th> <th>communication</th> <th>level</th> </tr> </thead> <tbody> <tr> <td>1 m</td> <td>not possible with normal speaking voice</td> <td>85 dB(A) or higher</td> </tr> <tr> <td>0,5 m</td> <td>only possible when speaking loudly</td> <td>95 dB(A) or higher</td> </tr> </tbody> </table> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Do painful bursts of sound occur (e.g. erection work)?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Do sounds from the operation drown out acoustic danger signals?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Is no hearing protection worn?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Were preventive medical check-ups neglected?</p> <p><input type="checkbox"/> _____</p>	distance	communication	level	1 m	not possible with normal speaking voice	85 dB(A) or higher	0,5 m	only possible when speaking loudly	95 dB(A) or higher	<p><input type="radio"/> in case of new acquisitions: compare the noise level of machines offered</p> <p><input type="radio"/> change of process: e.g. flame levelling instead of hand levelling, suction instead of exhaust</p> <p><input type="radio"/> low-noise tools and machines</p> <p><input type="radio"/> reduce operation times</p> <p><input type="radio"/> spatial separation of sources of loud noise (e.g. dividing wall), shield, encapsulate</p> <p><input type="radio"/> noise absorbing wall and ceiling panelling</p> <p><input type="radio"/> mark noise areas</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> use hearing protection (ear plugs, noise reduction ear muffs)</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> preventive medical check-ups</p> <p><input type="radio"/> _____</p>	
distance	communication	level										
1 m	not possible with normal speaking voice	85 dB(A) or higher										
0,5 m	only possible when speaking loudly	95 dB(A) or higher										


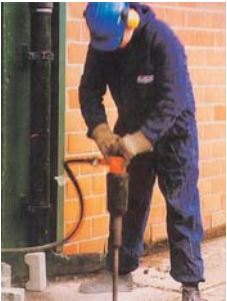
## Protection against specific physical impact 2

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Whole-body vibration	Hazards and strains:		Measures:	Notes:
	<p><input type="checkbox"/> <i>Are vehicles and other means of transport used often or over long periods, where distinct vibrations can be felt? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> forklifts, electric trolleys</li> <li><input type="checkbox"/> lorries, tractors, excavators</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Does strain in form of alternating shocks occur?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Is driving done in unfavourable or twisted body posture?</i></p> <p><input type="checkbox"/> _____</p>		<ul style="list-style-type: none"> <li><input type="radio"/> pay attention to low vibration values when acquiring new vehicles and mobile working appliances</li> <li><input type="radio"/> use vehicles with vibration absorbing seats</li> <li><input type="radio"/> selection of a vibration-absorbing tyre equipment</li> <li><input type="radio"/> guarantee level and even carriage ways (if possible adjusted, slow way of driving)</li> <li><input type="radio"/> reduce operation times</li> <li><input type="radio"/> _____</li> </ul>	
<p><b>Hand-arm vibration</b></p> 	<p><input type="checkbox"/> <i>Are hand-operated working appliances and tools used which lead to strong hand-arm strain? e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> pneumatic tools, motor saws</li> <li><input type="checkbox"/> hammer drills, impact screwdrivers, chisels, milling cutters, grinders</li> <li><input type="checkbox"/> hammer, picaxe</li> <li><input type="checkbox"/> tamper and vibratory plates</li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> change of process</li> <li><input type="radio"/> use of vibration-reduced working appliances</li> <li><input type="radio"/> handles with attenuations or spring suspension</li> <li><input type="radio"/> reduce operation times</li> <li><input type="radio"/> use equipment with handle heating</li> <li><input type="radio"/> _____</li> </ul>	




### Protection against specific physical impact 3

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Radiation	Hazards and strains:	Measures:	Notes:
 	<p><input type="checkbox"/> Does <b>UV radiation</b> occur (e.g. when hardening or drying materials, when welding)?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Does <b>infra-red radiation</b> occur (e.g. in steel production)?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Is <b>laser</b> used (e.g. in material processing, in medicine)?</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> Is work undertaken with <b>x-rays or radioactive radiation</b>?</p> <p><input type="checkbox"/> _____</p>	<p><input type="radio"/> close openings tightly from where radiation can escape</p> <p><input type="radio"/> use special safety goggles and protective gloves; Heat protective clothing against infra-red radiation</p> <p><input type="radio"/> operating instructions</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> use safety goggles with laser protection filter</p> <p><input type="radio"/> handling of lasers classes 3 R, 3 B and 4 by specially trained employees only</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> undertake protective measures according national rules and regulations</p> <p><input type="radio"/> Use personal protective equipment</p> <p><input type="radio"/> appoint radiation protection technician</p> <p><input type="radio"/> _____</p>	
<p><b>Electromagnetic fields</b></p> 	<p><input type="checkbox"/> Are employees exposed to <b>electromagnetic fields</b>? – e.g.</p> <p><input type="checkbox"/> in the vicinity of high tension overhead power lines</p> <p><input type="checkbox"/> industrial installations</p> <p><input type="checkbox"/> high frequency fields</p> <p><input type="checkbox"/> _____</p>	<p><input type="radio"/> maintain limit values for electrical and magnetic field strengths</p> <p><input type="radio"/> mark hazard areas</p> <p><input type="radio"/> admittance for trained personnel only</p> <p><input type="radio"/> inform those wearing pacemakers</p> <p><input type="radio"/> _____</p>	





# Workplace design 1

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Room climate	Hazards and strains:	Measures:	Notes:
 <p><b>Bad weather conditions when working in the open</b></p> 	<p><input type="checkbox"/> <i>Do aggravating conditions occur? – e.g. through:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> too warm/too cold room temperature</li> <li><input type="checkbox"/> too dry air</li> <li><input type="checkbox"/> occurrence of draught</li> <li><input type="checkbox"/> heat radiation</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Is work often executed under bad weather conditions? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> heat/solar radiation</li> <li><input type="checkbox"/> cold</li> <li><input type="checkbox"/> precipitation</li> <li><input type="checkbox"/> _____</li> </ul>	<p><input type="radio"/> temperature regulation (heating, air conditioning) according to activity and individual requirements</p> <p><input type="radio"/> heat and humidity insulation</p> <p><input type="radio"/> humidify ambient air</p> <p><input type="radio"/> free or enforced airing at intervals, prevent draught</p> <p><input type="radio"/> adequate breaks for hard physical work under heat impact</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> protective clothing (winter and rain clothing)</p> <p><input type="radio"/> use sunscreen</p> <p><input type="radio"/> in case of inclement weather allocate tasks not affected by weather</p> <p><input type="radio"/> _____</p>	
<p><b>Beleuchtung</b></p>  <p><b>Optische Signale</b></p> 	<p><input type="checkbox"/> <i>Are workplaces in the enterprise badly lit (too dark, sources of glare)?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Are there dark areas, e.g. entrances to halls, passageways, stairways and gates?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Are notices/optical signals difficult to recognise?</i></p> <p><input type="checkbox"/> _____</p>	<p><input type="radio"/> change lighting installation</p> <p><input type="radio"/> remove or shield off sources of glare</p> <p><input type="radio"/> regular cleaning of lights</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> eliminate dark areas</p> <p><input type="radio"/> _____</p> <p><input type="radio"/> signal configuration (arrangement, enlargement)</p> <p><input type="radio"/> _____</p>	



## Workplace design 2

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Work with a visual display unit	Hazards and strains:		Measures:	Notes:
	<p><input type="checkbox"/> <i>Do following problems occur when working with a VDU? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> insufficient size and sharpness of characters</li> <li><input type="checkbox"/> poor character contrast and character brightness</li> <li><input type="checkbox"/> flickering of the screen</li> <li><input type="checkbox"/> glare and reflection on table and screen surfaces</li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> purchase only CE-tested products</li> <li><input type="radio"/> clean screen surfaces regularly</li> <li><input type="radio"/> minimum character size 3.2 mm</li> <li><input type="radio"/> use glare-free lights and low-reflection screens; arrange lights parallel to main direction of viewing</li> <li><input type="radio"/> have regular breaks</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> place screen correctly <u>note:</u> <ul style="list-style-type: none"> <li>– direction of screen view parallel to window</li> <li>– top line of screen text not higher than eye level</li> <li>– distance keyboard to table edge min. 10 cm</li> <li>– viewing distance to screen, keyboard and working document min. 50 cm</li> </ul> </li> <li><input type="radio"/> _____</li> </ul>	
<p><b>Required space/ traffic routes</b></p> 	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Are workplaces arranged so that employees cannot move without being hindered?</i></li> <li><input type="checkbox"/> _____</li> <li><input type="checkbox"/> <i>Are there hazards for users due to wrong dimensioning of traffic routes or storage of material on traffic routes?</i></li> <li><input type="checkbox"/> _____</li> <li><input type="checkbox"/> <i>Are escape routes blocked?</i></li> <li><input type="checkbox"/> _____</li> <li><input type="checkbox"/> <i>Are emergency exits and escape routes difficult to open?</i></li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> provide space for free movement</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> provide adequately wide traffic routes</li> <li><input type="radio"/> no storage of material on traffic routes</li> <li><input type="radio"/> keep traffic routes free</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> provide escape routes</li> <li><input type="radio"/> keep escape routes free</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> check doors for manageability</li> <li><input type="radio"/> _____</li> </ul>	



## Reduction of physical strain and work intensity

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Lifting and carrying of loads	Hazards and strains:	Measures:	Notes:
 <p><b>work under unfavourable body posture</b></p> 	<p><input type="checkbox"/> <i>Are heavy loads often lifted and carried?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Are loads of 50 kg or more sometimes carried?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Is an unfavourable body posture necessary to lift and carry (e.g. very bent, twisted)?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Must the following unfavourable body postures often be taken up? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> lengthy standing without the opportunity to sit</li> <li><input type="checkbox"/> sitting continuously without the opportunity to stand or walk occasionally</li> <li><input type="checkbox"/> very bent, extremely bent trunk</li> <li><input type="checkbox"/> crouching, kneeling</li> <li><input type="checkbox"/> lying</li> <li><input type="checkbox"/> overhead work</li> <li><input type="checkbox"/> forced body posture due to constricted space (e.g. very low rooms, shafts, containers)</li> <li><input type="checkbox"/> one-sided burden</li> <li><input type="checkbox"/> _____</li> </ul>	<p><b>Measures:</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> use transportation aids and lifting devices (e.g. trolleys, cranes, lifting table, gripper)</li> <li><input type="radio"/> consider age and gender of specific personnel groups</li> <li><input type="radio"/> reduce loads</li> <li><input type="radio"/> carry load with upright backbone and close to body</li> <li><input type="radio"/> get additional employees to help</li> <li><input type="radio"/> instruction</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> allow for change in body posture (e.g. vary between sitting and standing, provide seating)</li> <li><input type="radio"/> adjust working height individually (e.g. height and inclination of table)</li> <li><input type="radio"/> seated work: provide adequate chairs (well-formed high backrest) Adjust seat height to body height (thighs, lower arms horizontal, arm and leg angle minimum 90°)</li> <li><input type="radio"/> arrange working equipment to be within reach</li> <li><input type="radio"/> guarantee sufficient leg space</li> <li><input type="radio"/> _____</li> </ul>	



# Protection against miscellaneous hazards 1

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

## Hazards through human beings



- Hazards and strains:**
- Are the employees suited for their tasks? – e.g. qualification, experience, age
    - \_\_\_\_\_
  - Did dangerous situations ever arise due to inadvertent behaviour of employees or wrong behaviour due to overestimation of one's own capabilities?
    - \_\_\_\_\_
  - Were the employees informed as to all hazards of the work?
    - \_\_\_\_\_
  - Can a hazard emerge in joint working activities (e.g. on different levels of scaffoldings)?
    - \_\_\_\_\_

- Measures:**
- Select employees according to requirements
  - \_\_\_\_\_
  - instruct employees regularly and encourage safety-conscious behaviour
  - \_\_\_\_\_
  - organise workflow correctly
  - \_\_\_\_\_

**Measures:**

## Hazards through animals



- Are you or the employees in contact with diseased animals (e.g. rabies, ornithosis, toxoplasmosis)?
  - \_\_\_\_\_
- Can employees be endangered by animals kicking, prodding or biting?
  - \_\_\_\_\_
- Do you suffer from insects while working?
  - \_\_\_\_\_

- avoid contacts with animals
- introduce veterinary measures
- disinfection
- \_\_\_\_\_
- provide for barriers and post caution signs
- \_\_\_\_\_
- provide for fly screens
- set up insect traps
- \_\_\_\_\_

**Measures:**


## Protection against miscellaneous hazards 2

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Hazards through plants and vegetable products	Hazards and strains:		Measures:	Notes:
	<p><input type="checkbox"/> <i>Are employees allergic against certain plants (e.g. against pollen dust)?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Do employees come into contact with poisonous plants?</i></p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> <i>Can injuries through cuts or stings occur?</i></p> <p><input type="checkbox"/> _____</p>		<p><input type="radio"/> deploy only suitable employees</p> <p><input type="radio"/> use suitable gloves and working gear</p> <p><input type="radio"/> _____</p>	

# Work organisation

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

## Poor work organisation



### Hazards and strains:

- Do conditions which lead to stress occur frequently or for longer periods of time? – e.g.**
  - work time (frequently exceeds time agreed upon)
  - workflow is often interrupted unexpectedly, working continuously not possible
  - frequent working under time pressure
  - work tasks are not announced in time and cannot be adequately planned
  - important decisions must be taken at short notice without manager; necessary information is not always on hand
  - \_\_\_\_\_
  
- Are employees overstrained regarding equipment, appliances or software?**
  - \_\_\_\_\_
  
- Can stress and hectic rush evolve through undeliber-tated work processes?**
  - \_\_\_\_\_
  
- Can hazards evolve for the employees due to lack of notification on possible endangerment at work?**
  - \_\_\_\_\_

### Measures:

- employment of temporary staff when pressed for time
- timely communication of duty rosters
- maintain recreation, off duty days and rest periods be-tween two consecutive working days
- establish clear and direct information systems; make entire operational processes transparent
- include employees in planning of work processes
- make timely agreements with other co-workers
- provide working tools in time
- industrial psychology guidance, organisational counselling
- \_\_\_\_\_
  
- briefing, qualification, training
- \_\_\_\_\_
  
- note when planning workflow:
  - who works with whom?
  - what exactly does he/she do?
  - which means are used for work?
  - was the exact schedule communicated?
  - who is in charge and who is responsible in case of unclarity and failure?
  - what is the procedure in case of failure? Have all participants understood the work task respectively work instruction?
- \_\_\_\_\_
  
- increase of safety
- instruction
- Communication of technical, organisational and personally related measures to employees
- Instruction on important rules of behaviours
- \_\_\_\_\_

### Notes:




# Safety and health at the workplace 1

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Personal protective equipment	Hazards and strains:		Measures:	Notes:
 	<p><input type="checkbox"/> <i>Are there shortcomings in the protective equipment? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> holes in gloves</li> <li><input type="checkbox"/> wrong footwear, broken safety shoes</li> <li><input type="checkbox"/> ear muffs with brittle foam sealing</li> <li><input type="checkbox"/> incorrect respirators or filters</li> <li><input type="checkbox"/> unsuitable skin protection</li> <li><input type="checkbox"/> exceeding the duration of use of personal protective equipment or parts of it (e.g. filters)</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Is the personal protective equipment used unsuitable for the purpose?</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> no consistent or correct usage</li> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> select correct personal protective equipment and provide for sufficient numbers</li> <li><input type="radio"/> exchange defective protection equipment</li> <li><input type="radio"/> check functionality before each use</li> <li><input type="radio"/> suitable storage (e.g. hygiene clothing)</li> <li><input type="radio"/> regular cleaning and care of personal protective equipment</li> <li><input type="radio"/> regular exchange of wear and tear parts</li> <li><input type="radio"/> _____</li> </ul>	
<p><b>Motivation for safety and health/instructions</b></p> 	<p><input type="checkbox"/> <i>Do employees have problems maintaining protective measures? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> protective installations are bypassed</li> <li><input type="checkbox"/> hazards are dealt with carelessly</li> <li><input type="checkbox"/> personal protective equipment is carelessly done without (e.g. no wearing of hearing protection)</li> <li><input type="checkbox"/> the consequences of some dangers are unknown</li> <li><input type="checkbox"/> acoustic or optical warning signals are either not or barely recognisable</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>When did the last instruction take place and when is the next instruction planned?</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> _____</li> </ul>		<ul style="list-style-type: none"> <li><input type="radio"/> conduct regular instruction measures</li> <li><input type="radio"/> encourage employees towards safety-conscious and responsible behaviour</li> <li><input type="radio"/> inform on consequential damages due to non-use of personal protective equipment</li> <li><input type="radio"/> mark dangers</li> <li><input type="radio"/> mark requirement for personal protective equipment</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> _____</li> </ul>	


## Safety and health at the workplace 2

Date of appraisal: \_\_\_\_\_

Checklist for area/workplace \_\_\_\_\_

Action to be taken by: \_\_\_\_\_

In charge: \_\_\_\_\_

Behaviour in emergencies	Hazards and strains:		Measures:	Notes:
	<p><input type="checkbox"/> <i>Are there no or inadequate rules of conduct in case of emergency? – e.g.</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> alarm plan</li> <li><input type="checkbox"/> instructions on possible dangers in the enterprise</li> <li><input type="checkbox"/> fire extinguishing drills</li> <li><input type="checkbox"/> _____</li> </ul> <p><input type="checkbox"/> <i>Are there sufficient (completely stocked) first aid boxes available?</i></p> <p><input type="checkbox"/> _____</p>		<ul style="list-style-type: none"> <li><input type="radio"/> instruct employees in first aid measures and installations</li> <li><input type="radio"/> provide necessary markings</li> <li><input type="radio"/> comply with rules of conduct</li> <li><input type="radio"/> appoint and train first aiders</li> <li><input type="radio"/> provide medical dressing material</li> <li><input type="radio"/> _____</li> <li><input type="radio"/> _____</li> </ul>	

**Hazard/strain assessments** should be carried out:

as a first assessment at existing workplaces

- at regular intervals
- in case of extension, rebuilding and change of use of installations
- before acquiring new machines or work substances and production equipment
- in case of change of the work organisation
- after occurrence of accidents, near-accidents and illnesses

The analysis sheets can also serve as basis for any instruction necessary.

Company/department/workplace:	
Assessment conducted on:	
By:	
Persons present:	
Follow up regarding:	
<input type="checkbox"/> Mechanical safety	latest by _____
<input type="checkbox"/> Electrical safety	latest by _____
<input type="checkbox"/> Protection against hazardous substances	latest by _____
<input type="checkbox"/> Protection against biological impact	latest by _____
<input type="checkbox"/> Fire and explosion protection	latest by _____
<input type="checkbox"/> Protection against hot and cold objects	latest by _____
<input type="checkbox"/> Protection against specific physical impact	latest by _____
<input type="checkbox"/> Workplace design	latest by _____
<input type="checkbox"/> Reduction of physical strain and work intensity	latest by _____
<input type="checkbox"/> Protection against miscellaneous hazards	latest by _____
<input type="checkbox"/> Work organisation	latest by _____
<input type="checkbox"/> Safety and health at the workplace	latest by _____
Next analysis on:	

**Notes**

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The International Social Security Association (ISSA) was founded in 1927. Its aim is the promotion and development of social security world wide, in order to improve the social and economic condition of people on the base of social justice.

Within the Special Commission on Prevention of the ISSA, 11 International Sections implement international and regional tasks in the field of the prevention of occupational risks. They exchange information and experiences, organise conferences, round table discussions and symposia, chair working groups, implement international studies and surveys and publish their findings.

You will find more information on the activities of the Special Commission on Prevention and the ISSA Sections under:

**<http://prevention.issa.int>**

The following partners were involved in the brochure. They are also available for further information:



**International Section of the  
ISSA for the Iron and Metal  
Industry**

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Unfallversicherungsanstalt  
Office for International  
Relations  
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**International Section of  
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Water**

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<http://metal.prevention.issa.int/>

<http://electricity.prevention.issa.int/>

<http://machine-and-system-safety.prevention.issa.int/>