# Checklist for risk assessment of the work environment

Table of Contents

[Checklist for riskassessment of the work environment 1](#_Toc113885300)

[1. Introduction 2](#_Toc113885301)

[2. Noise 3](#_Toc113885302)

[3. Vibrations 4](#_Toc113885303)

[4. Solitary work 4](#_Toc113885304)

[5. Pregnant and breastfeeding women 5](#_Toc113885305)

[6. Laboratory equipment (Machines, devices, tools) 7](#_Toc113885306)

[7. Skyddsutrustning 9](#_Toc113885307)

[8. Gaser och trycksatta anordningar 9](#_Toc113885308)

[9. Joniserande strålning 12](#_Toc113885309)

[10. Elektromagnetiska fält 12](#_Toc113885310)

[11. Artificiell optisk strålning 14](#_Toc113885311)

[12. Kemiska ämnen 15](#_Toc113885312)

[13. Smittrisker 17](#_Toc113885313)

[14. Genetiskt modifierade vattenlevande organismer 18](#_Toc113885314)

[15. Arbete i explosionsfarlig miljö 19](#_Toc113885315)

[16. Medicinska kontroller 20](#_Toc113885316)

[17. Kvarts och stendamm 23](#_Toc113885317)

[18. Svetsning med och utan gas 24](#_Toc113885318)

[19. Truckar 26](#_Toc113885319)

[20. Lyftanordningar 26](#_Toc113885320)

[21. Stegar och arbetsbockar 27](#_Toc113885321)

[22. Arbetsskador och tillbud 27](#_Toc113885322)

[23. Arbetsställningar och arbetsrörelser 28](#_Toc113885323)

[24. Organisatorisk och social arbetsmiljö 29](#_Toc113885324)

[25. Ventilation 30](#_Toc113885325)

## Introduction

Risk assessments are an important part of systematic work environment work. A risk assessment is a process to determine how serious a risk is. The degree of severity is determined based on weighing both the probability of the risk and its consequences. The purpose is to determine which measures are needed.

The questions in the checklist are based on the legislation that applies to laboratory work and are to be used as an aid in carrying out risk assessments. The majority of the questions are directed at the employer but the checklist can also be used by employees, students and research leaders.

The checklist is only intended to be used as a foundation for the risk assessment itself and should therefore not be saved. A cross in the box means "yes" to the question. Feedback the question in the risk assessment template!

## Noise

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|  | 2.1 Do you suspect that the noise is too high? |
|  | 2.2 Is anyone experiencing noise exposure equal to or greater than any of the input values in the regulation? |
|  | 2.3 Is anyone exposed to noise levels above any of the limit values? |
|  | 2.4 Have measurements on the noise levels been carried out? |
|  | 2.5 Does anyone feel disturbed by noise? |
|  | 2.6 Is there someone who has difficulty communicating and needs to raise their voice because of noise? |
|  | 2.7 Have employees been fully informed that the noise exceeds the limit values ​​and what measures are being taken? |
|  | 2.8 Have employees been informed of the risk factors for hearing loss and when hearing protection should be used? |
|  | 2.9 Has the hearing protection been selected in consultation with employees? If necessary, is there access to good hearing protection with the right attenuation? |
|  | 2.10 Are hearing screenings offered to those subject to exposure from the upper input values? |
|  | 2.11 Is there sufficient competence within the company about noise risks? |
|  | 2.12 Is there a risk of accidents due to not being able to hear warning signals or other sounds? |
|  | 2.13 Have those who are exposed from the lower input values received information about risks, measures, use of hearing protection and about possible hearing examinations? |
|  | 2.14 Are there substances that can increase the risk of hearing loss? |
|  | 2.15 Is anyone exposed to vibrations that can increase the risk of hearing loss? |
|  | 2.16 Are noise data requested and/or are noise requirements set when purchasing machines and other equipment? |
|  | 2.17 Is there anyone who may be particularly sensitive to noise, for example pregnant women or hearing impaired people? |
|  | 2.18 Are noise sources shielded, built-in or placed in separate spaces to limit noise propagation? |
|  | 2.19 Are noisy and quiet workplaces separate? |

## Vibrations

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|  | 3.1 Is the work planned so that exposure to vibrations is as small as possible? |
|  | 3.2 Is work equipment chosen that produces as little vibration impact as possible for workers exposed to vibrations? |
|  | 3.3 Has it been investigated whether it is possible to completely avoid vibration using automation? |
|  | 3.4 Are vehicles driven on uneven surfaces? |
|  | 3.5 Are vehicles being driven with heavy loads? |
|  | 3.6 Is it ensured that machines and equipment are maintained according to plan? |
|  | 3.7 Is it ensured that machines and equipment are checked for wear? |
|  | 3.8 Is it ensured that machines and equipment are used with accessories intended for the equipment? |
|  | 3.9 Is it ensured that machines and equipment are used for the right type of tasks? |
|  | 3.10 Is there a possibility of regular breaks? |
|  | 3.11 Do burdensome work positions occur in combination with whole-body vibrations? |
|  | 3.12 Do workers exposed to vibration receive information and training about the risks and how to manage them? |
|  | 3.13 Are there particularly sensitive workers? (e.g. pregnant women) |
|  | 3.14 Are there workers who have medical conditions that can be caused by whole-body vibrations? |
|  | 3.15 Are the workers exposed to vibrations and cold at the same time? |
|  | 3.16 Is medical control arranged for workers who work with vibrating tools if the exposure exceeds the input value for hand and arm vibrations (2.5 m/s2)? |
|  | 3.17 Are medical checks arranged for workers working with vibrating tools if exposure is suspected of causing ill health? |
|  | 3.18 Is medical control arranged for workers who work with vibrating tools if the exposure has caused vibration induced health conditions in another worker who works in a similar way? |

## Solitary work

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|  | 4.1 Does solitary work occur? |
|  | 4.2 Does solitary work entail a greater risk of accidents or ill health than if the work is carried out by several people together? |
|  | 4.3 Is there a plan for how transport arrangements are to be arranged so that those who work alone can get help in the event of an accident or illness? |
|  | 4.4 Is solitary work that involves significant risk limited by principal investigator or others visiting/calling the person who works alone? |
|  | 4.5 Are the factors that involve significant risk always taken into consideration when working alone?  *How?* |
|  | 4.6 Is it safe to work alone on the premises in the evenings, nights or weekends?  *How is this ensured?* |
|  | 4.7 Does the employee, when working alone, have sufficient training, information and instruction? |
|  | 4.8 Does the employee have the physical and mental conditions to cope with solitary work? |
|  | 4.9 Is solitary work arranged so that the employee does not run a greater risk when working alone than if several people perform the work together? |
|  | 4.10 Is it possible for the employee to have direct contact with co-workers or other people when the solitary work is associated with high mental strain. |
|  | 4.11 Can the employee count on getting help from colleagues in a critical situation? Do the colleagues have sufficient training, information and instruction? |
|  | 4.12 If there is a significant risk of bodily harm through accidents during solitary work, has it been arranged so that the employee can receive quick help in an emergency? |
|  | 4.13 Is the safety representative informed in the case of solitary work where there is a significant risk of bodily harm or which involves high mental strain? |

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## Pregnant and breastfeeding women

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|  | Does exposure to hearing-damaging noise or disturbing noise occur?  *Environments where hearing protection is required should be avoided, especially during the latter part of pregnancy.* |
|  | 5.2 Is there a risk of exposure to ionizing radiation, e.g. from x-ray equipment or radioactive substances?  *Anyone who has announced that she is pregnant has the right to be reassigned to work that is not associated with ionizing radiation for the remainder of the pregnancy.* |
|  | 5.3 Is there a risk of exposure to non-ionizing radiation, e.g. from electromagnetic fields, lasers or UV lamps?  *It is advisable that pregnant workers are not exposed to higher fields than those recommended for the general public.* |
|  | 5.4 Does the work involve exposure to uncomfortably low or high temperatures? |
|  | 5.5 Is work carried out under water or where increased pressure may occur?  Pregnant workers may not be employed with these activities. |
|  | 5.6 Are work elements that include underground mining work included?  *Pregnant and breastfeeding women may not be employed in underground mining.* |
|  | 5.7 Does the work involve exposure to:   * dust, fumes or splashes arising from the burning and electrorefining of copper-nickel shards? * wood dust from hardwoods? |
|  | 5.8 Does the work include a process where strong acid is included in the production of isopropyl alcohol? |
|  | 5.9 Does the work involve exposure to cancer-causing polycyclic aromatic hydrocarbons (PAHs) found in soot, tar, pitch, smoke or dust? |
|  | 5.10 Are there heavy lifts, shocks, vibrations or heavy physical strain of another kind? |
|  | 5.11 Does the work involve prolonged walking or standing? |
|  | 5.12 Do equipment, workspace and work surfaces need to be adapted? |
|  | 5.13 Is there an opportunity for the worker to take a break and rest if needed? |
|  | 5.14 Is there work that entails a risk of infection from rubella or toxoplasma gondii?  *Pregnant women are prohibited to work when there is a risk of infection from rubella and toxoplasma gondii.* |
|  | 5.15 Does the work entail a risk of infection from the following infectious agents: parvovirus B19, tuberculosis bacteria, cytomegalovirus (CMV), hepatitis B virus, hepatitis C virus, herpes simplex virus, enterovirus, Listeria bacteria, influenza virus, Bordetella pertussis (whooping cough), measles virus, varicella virus (chicken pox) and zika virus?  *These infectious substances are listed as reproductive hazards and in some cases can have a harmful effect on the pregnancy and the nursing child.* |
|  | 5.16 Does work with experimental animals occur?  *Personal protective equipment must be used in all contact with animals and their cages.* |
|  | 5.17 Does work with CMR chemicals, i.e. carcinogenic, mutagenic or reproductive disruptors (e.g. carbon monoxide) occur? |
|  | 5.18 Is there work with:   * lead?   *All work with lead is prohibited for pregnant and breastfeeding women.*   * mercury or mercury compounds? * allergenic products or substances that are harmful when absorbed through the skin, e.g. organic substances? * substances that are lethal or highly toxic? * mitosis-inhibiting substances (e.g. certain cytostatics)? * Is there work with anesthetic gases?   *Knowledge of the effects of newer anesthetics is incomplete. As negative pregnancy effects cannot be completely excluded, the exposure of pregnant women should be minimized.* |
|  | 5.19 Is the handling of pesticides included in the work? |
|  | 5.20 Is the job considered to be a contributor to anxiety or exhaustion? |
|  | 5.21 Is the stress level at work perceived as high? |
|  | 5.22 Is there time for recovery between periods of intense work? |
|  | 5.23 Does solitary work occur? |
|  | 5.24 Is there a risk of threats and violence, offensive discrimination in the work? |
|  | 5.25 Does night work occur? |
|  | 5.26 Does the work involve irregular working hours? |

## Laboratory equipment (Machines, devices, tools)

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|  | 6.1 Do the people working with the machine have a safety mindset? |
|  | 6.2 Is there sufficient knowledge of how dangerous the machine is when they are not handled correctly and when the protective devices are not used? |
|  | 6.3 Are there written procedures in case of incidents and accidents? |
|  | 6.4 Are there procedures for maintenance and cleaning? |
|  | 6.5 Are the machines regularly maintained according to the manufacturer's instructions? |
|  | 6.6 Do all workstations near the work equipment have good lighting? |
|  | 6.7 Can the operator work without assuming poor postures when working at the machines? |
|  | 6.8 Are vacuum cleaners or brushes used when cleaning machines? |
|  | 6.9 Is there a manual for installation and use, in Swedish? |
|  | 6.10 Are there procedures for disconnecting and locking energy to automated laboratory equipment? |
|  | 6.11 Are there instructions for machine operators that describe how automated work equipment is safely stopped or otherwise secured during temporary work in hazardous areas? |
|  | 6.12 Are protective gloves used near rotating tools? |
|  | 6.13 Where needed, are safety shoes available? |
|  | 6.14 If the noise level exceeds 85 dB (A), is there an action plan and is hearing protection used? |
|  | 6.15 Where required, are safety glasses with side shields available? |
|  | 6.16 Is the machine CE marked? |
|  | 6.17 Is audio data requested for the machine? |
|  | 6.18 Is laboratory equipment chosen because of their low vibration? |
|  | 6.19 Is the vibrating machine placed on vibration-insulated materials so that the floor does not vibrate? |
|  | 6.20 Is the machine equipped with undervoltage protection that prevents accidental restart in the event of, for example, a power cut? |
|  | 6.21 Is the machine equipped with protection against intervention if there is a risk of damage from moving parts? |
|  | 6.22 Are controls designed so that an inadvertent action does not affect operation? |
|  | 6.23 Does the staff participate in purchasing so that the maintenance of machines and equipment is discussed? |
|  | 6.24 Are there machines that must be certified, and if so, are they certified? |
|  | 6.25 Are the machines inspected according to current regulations and requirements? |
|  | 6.26 Do you have working procedures to follow up on what is allowed to change when rebuilding the machines? |
|  | 6.27 Does the staff participate in the remodeling of premises so that maintenance can take place smoothly? |
|  | 6.28 Are there instructions for maintenance and service personnel regarding disconnection, locking, signage and restarting? |
|  | 6.29 Are there instructions for how safety is maintained during troubleshooting and programming when the energy supply must be kept uninterrupted? |

## Personal protective equipment

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|  | 7.1 Does the personal protective equipment fit the individual working in the lab? |
|  | 7.2 Are there instructions for when and how the personal protective equipment should be used? |
|  | 7.3 Is special training/information required for the use of the personal protective equipment assigned? |
|  | 7.4 Is it possible to alter the conditions in the lab so that personal protective equipment is not needed? |
|  | 7.5 Are protective gloves of the right type and with the right protection against e.g. abrasion, penetration of chemical substances, used? |
|  | 7.6 Are hearing protection devices with the right noise attenuation available at the workplaces where there is a need? |
|  | 7.7 Is the right type of helmet used in case of risk, e.g. for falling objects or when climbing trees? |
|  | 7.8 Are the right types of protective clothing used? |
|  | 7.9 Are the right type of safety shoes used? |
|  | 7.10 Are the most appropriate safety glasses of a type that minimizes eye damage in the work, for example safety goggles, face shield etc. used? |
|  | 7.11 Do the workers follow the given instructions when using the personal protective equipment? |

## Gases and pressurized devices

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|  | 8.1 Does the employee have sufficient knowledge about the gas, about the risks its use can entail and how these are to be avoided?  *Work with gas may only be managed or carried out by someone who has sufficient knowledge of the gas.* |
|  | 8.2 How is it ensured that the ventilation is such that the oxygen concentration in the air does not fall below 20% or alternatively exceeds 22%, in premises where gas is handled?  *If the oxygen concentration is below 18 percent by volume, breathing apparatus must be used when working in the premises.* |
|  | 8.3 Are there written procedures for working with gas? |
|  | 8.4 How is the work with oxidizing gases handled?  *Oxidizing gases must be handled in such a way that the risk of ignition of clothing or flammable substances and objects in the vicinity is counteracted.* |
|  | 8.5 Are there written procedures for which personal protective equipment is suitable for working with gas?  *Work with condensed gas must be planned and carried out so that direct contact with the gas is prevented. If the risk of splashing or other contact cannot be excluded, personal protective equipment that provides adequate protection must be used.* |
|  | 8.6 Are there written procedures for gas storage?  *For the storage of gas in containers other than gas bottles, there must be a prepared place. The outdoor storage location for health-hazardous gas must be located within a fenced area and the gas containers must be well protected from events outside the storage location.* |
|  | 8.7 Is the gas in the gas cylinder chemically unstable?  *There must be procedures to prevent the gas bottle from exploding.* |
|  | 8.8 Have all pressurized devices in the workplace been identified? |
|  | 8.9 Are there procedures for regular inspections by the user of the equipment? |
|  | 8.10 Are there procedures for controls of the equipment carried out by an expert, accredited body, engineer, technician or similar? |
|  | 8.11 Does the assessment of risk associated with the use of pressurized equipment include:   * experiences from using the device? * information on the remaining life of the device? * performed repairs and modifications? * accidents and incidents? * possible deviation reports and results from controls of the pressurized devices? |
|  | 8.12 Does the risk assessment that determines where a pressurized device should be located, include the following:   * that it is possible to carry out maintenance, ongoing supervision and control in a simple and safe way? * the preventive measures that prevent the device from being damaged by works or other activities carried out in the vicinity? * that the consequences of an accident are aggravated by those in the workplace being exposed to harmful pressure waves or being hit by parts of the device within an area where they normally work? * those in the workplace cannot switch off the device? * those who are at the workplace can't get out of the place? * buildings or structures load-bearing parts are damaged? |
|  | 8.13 Do employees know that before a pressurized device is assembled to another device, disassembled or taken apart, it must be depressurized and drained safely? |
|  | 8.14 Are there written procedures for mounting a pressurized device to another device that contains:   * the method by which the assembly is carried out? * which persons may carry out the installation? * how a control plan should be drawn up for each individual assembly? * how big the risk area is that the risk assessment shows that the assembly gives rise to?   *Applies to pipelines.* |
|  | 8.15 Have risk assessments been carried out for all pressurized devices in the workplace? |
|  | 8.16 Do all pressurized devices have instructions for use and handling and safety instructions? |
|  | 8.17 Are there documented procedures for regular inspections and controls of all pressurized equipment that is either classified in class A or B? |
|  | 8.18 Is there a designated person responsible for planning and coordinating work on class A or B pressurized devices? |
|  | 8.19 Are all classified class A and B pressurized devices listed? |
|  | 8.20 If there is a class A or B container, is it monitored at all times by an operator on site at the container?  *(Container = a pressurized device that is not a pipeline.)* |
|  | 8.21 Is a record kept of the remaining service life of class A or B pressure devices? |
|  | 8.22 Is a deviation report written if a pressurized device in class A or B has been repaired, for example due to damage? |
|  | 8.23 Are pressurized devices in class A or B used within the time, pressure and temperature ranges specified by an external control body during regulatory controls? |
|  | 8.24 Have all class A or B pressurized devices been controlled by an external inspection body before being put into service for the first time?  *(This also applies when stationary devices are relocated)* |
|  | 8.25 Is recurring controls of pressurized devices in class A or B carried out when required by the legislation? |
|  | 8.26 Are all pressurized devices in class A or B regularly inspected by an external control body? |
|  | 8.27 Are conditions for the operation and monitoring of class A or B boilers established by a control body in place and complied with? |
|  | 8.28 Is continuous monitoring of class A or B boilers carried out at start-up? |
|  | 8.29 Does at least one of those monitoring the boiler meet the boiler operator requirements?  *The assessment is made by a certification body.* |
|  | 8.30 Is there documentation of the boiler operator's tasks? |
|  | 8.31 Do all boilers have valid certificates from a control body? |

## Ionizing radiation

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|  | 9.1 Are there written procedures for the work that include radioactive sources? |
|  | 9.2 Is there a management system for the workplace? (SSMFS 2018:1, 4§) |
|  | 9.3 Is there a radiation protection expert linked to the workplace? |
|  | 9.4 Are the personnel handling radioactive sources categorized into category A or category B? |
|  | 9.5 Have radiation and activity levels been estimated by measurement, calculation or assessment? |
|  | 9.6 Do personnel who work with radiation receive training in radiation protection and handling that is adapted to the tasks? |

## Electromagnetic fields,

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|  | 10.1 Is the exposure of the workers to electromagnetic fields below the limit values, as specified in AFS 2016:3? |
|  | 10.2 Are the input values below the values ​​specified in AFS 2016:3? |
|  | 10.3 Have measurements or calculations been carried out on the electromagnetic fields to which the workers are exposed?  *The assessments, measurements and calculations must be planned and carried out at appropriate intervals by competent bodies or persons, taking into account the guidance of the European Commission.* |
|  | 10.4 Has the following been included in the risk assessment:   * limit values ​​for health effects and sensory effects and action levels specified in the appendices of AFS 2016:3? * the frequency, level, duration and type of exposure, including distribution over the worker's body and variation across the workplace. * all direct biophysical effects? * all indirect effects? * any effects on the health and safety of workers who are particularly vulnerable, in particular workers who have active or passive medical devices implanted in their bodies, such as pacemakers, wear medical devices on their bodies, such as insulin pumps, or are pregnant? * replacement equipment intended to reduce the level of exposure to electromagnetic fields, adequate information from the medical examinations? * information from the manufacturer of the equipment? * other relevant health and safety related information? * multiple sources of exposure? * simultaneous exposure to fields with multiple frequencies? |
|  | 10.5 Are known risks arising from electromagnetic fields in the workplace reduced or eliminated? |
|  | 10.6 Are there alternative work methods that reduces exposure to electromagnetic fields or equipment that gives rise to less intense electromagnetic fields? |
|  | 10.7 Has it been investigated whether there are other technical measures to reduce the emission of electromagnetic fields, including the use of blocking devices, shielding or similar health protection mechanisms when required? |
|  | 10.8 Are procedures in place to deal with spark discharges and contact currents using technical methods and worker training? |
|  | 10.9 Are there routines for maintenance, regular inspections and controls of the equipment? |
|  | 10.10 Has the design and planning of workplaces been considered? |
|  | 10.11 Are there written procedures for personal protective equipment? |
|  | 10.12 Are there limits to the duration and intensity of exposure? |
|  | 10.13 Has an individual risk assessment been carried out for workers who:   * have stated that they have an active or passive medical device implanted in their body, such as pacemakers? * have medical devices worn on the body, such as insulin pumps? * are pregnant? |
|  | 10.14 Have the workers received instructions and training for the work? |
|  | 10.15 Are there written handling and safety instructions for the work? |
|  | 10.16 Has the employee undergone a medical examination?  *The medical examination is most conveniently carried out at:*   * *unwanted or unexpected health effect for exposures that exceed the limit values ​​in AFS 2016:3.* * *Pregnant women and workers with active or passive inoperable medical devices or devices worn on the body for exposures below the limit values ​​AFS 2016:3.* |

## Artificial optical radiation

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|  | 11.1 Are the written handling and safety instruction needed for the work available at the workplace? |
|  | 11.2 Are user manuals with safety information in Swedish? Are the user manuals available at the workplace? |
|  | 11.3 Is there a risk that workers are exposed to optical radiation that exceeds the limit values ​​specified in AFS 2009:7? |
|  | 11.4 Is the radiation source sufficiently shielded (stained glass, draperies, plates)? |
|  | 11.5 Are other employees or visitors protected from optical radiation that exceeds the limit values? |
|  | 11.6 Are there areas where limit values ​​risk being exceeded? |
|  | 11.7 Is the personal protective equipment adapted to the work? |
|  | 11.8 Is the personal protective equipment CE-marked with reference to the correct requirement standard? |
|  | 11.9 Do the workers have knowledge of the correct use of the personal protective equipment? |
|  | 11.10 Do temporary visitors have the right personal protective equipment? |
|  | 11.11 Do the workers have knowledge of the risks associated with the work with artificial optical radiation? |
|  | 11.12 Are workers offered a medical examination if exposure exceeds the limit values, or if a worker suffers a disease or other harmful effect due to exposure? |
|  | 11.13 Is the risk assessment updated in the event of changes in the workplace? |
|  | 11.14 Has an assessment been made of the total exposure to artificial optical radiation to which the workers may be exposed? |
|  | 11.15 Is assessment of exposure planned and carried out at appropriate intervals in consultation with affected workers and by an expert? |
|  | 11.16 Is it ensured that workers are not exposed to laser radiation that exceeds the limit values ​​specified in AFS 2009:7? |
|  | 11.17 Are the workers informed about the risks associated with the laser class? |
|  | 11.18 Do laser operators and other personnel at risk of exposure have the required knowledge? |
|  | 11.19 Is there a special person appointed to supervise laser safety at the workplace when working with laser class 3B and 4? |
|  | 11.20 Is the person appointed to monitor the workplace when working with class 3B and 4 lasers well acquainted with how the equipment is used, risks and applicable regulations? |
|  | 11.21 Is the laser controlled area, when working with class 3B and 4 lasers, designed to take into account reflections (e.g. shiny surfaces) and the use of radiation-collecting optics (e.g. lenses)? |
|  | 11.22 May the laser controlled area only be entered by those who need to be there to work with, maintain the laser, or assist with the work? |
|  | 11.23 Is the path of the laser beam encapsulated or shielded? |
|  | 11.24 If laser protective glasses are used, are the glasses adapted to the current laser? |

## Chemical substances

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|  | 12.1 How dangerous is the chemical substance if one is exposed to it by inhalation? |
|  | 12.2 How easily does the chemical substance become airborne? |
|  | 12.3 How dangerous is the chemical substance if absorbed through the skin? |
|  | 12.4 How dangerous is it if chemical substances enter the mouth and are swallowed? |
|  | 12.5 How flammable or explosive is the chemical substance? |
|  | 12.6 Is there a possibility that the chemical substance react violently with other substances under certain conditions (e.g. heat, radiation)? |
|  | 12.7 Does the chemical substance react with certain materials? |
|  | 12.8 Does the properties of the chemical substance pose a risk in handling? |
|  | 12.9 Are there unplanned events that could have dangerous consequences? |
|  | 12.10 Is there a list of all chemical risk sources? (Keep in mind that chemical risks can form in the workplace or occur naturally) |
|  | 12.11 Are there safety data sheets for all hazardous chemicals? |
|  | 12.12 Have all chemical risk sources been risk assessed? |
|  | 12.13 Has it been investigated whether it is possible to replace or reduce the amount of chemicals that contain chemical substances which are hazardous to health? |
|  | 12.14 Has everyone concerned been informed about the health and accident risks when handling the chemicals? |
|  | 12.15 Has everyone concerned received information about handling and protective measures for the chemical risks in the workplace? |
|  | 12.16 Are there written instructions for work involving serious chemical risks? |
|  | 12.17 Are there routines to ensure that medical checks are carried out when required? (E.g. when handling lead, cadmium, thermosetting plastics or fibrosis-inducing dusts such as asbestos, quartz and some synthetic inorganic fibers). |
|  | 12.18 Are there routines to ensure that pregnant and breastfeeding women are not exposed to harmful chemical substances? |
|  | 12.19 Is a work permit issued for work where there are fire, explosion or reaction risks? |
|  | 12.20 Is there permission from the Swedish Work Environment Authority for the use of chemical substances that belong to group A or B in AFS 2011:19, appendix 1? |
|  | 12.21 Is there a contingency plan for accidents and emergencies? |
|  | 12.22 When using respirators, are they individually tested, equipped with functioning filters and properly stored? |
|  | 12.23 Is eye protection used where there is a risk of splashes, fumes or mist? |
|  | 12.24 When using chemical protective gloves, is it checked that they are made of the right material and how long can they be used? |

## Biological agents

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|  | 13.1 Which infectious agents can occur? |
|  | 13.2 When, where and how can you come into contact with infection? |
|  | 13.3 Are there personnel who are particularly sensitive to infection, e.g. pregnant or people with a weakened immune system? |
|  | 13.4 Is there a risk that the staff will be exposed to infectious diseases that require special procedures? |
|  | 13.5 Are there reports of ill health and incidents within the business? |
|  | 13.6 Do the staff know that they should report incidents and accidents that may be related to infection? |
|  | 13.7 Have the workers (including supervisors) received appropriate training and sufficient information about the risks of infection at work? |
|  | 13.8 Are there routines for the introduction of new employees and substitutes? |
|  | 13.9 Are there instructions on contagion that are adapted to the workplace? |
|  | 13.10 Are there hygiene routines at the workplace? |
|  | 13.11 Is there access to personal protective equipment? |
|  | 13.12 Is it possible to store personal protective clothing separately from other clothing? |
|  | 13.13 Are there instructions for how sharps waste and biohazardous waste should be taken care of? |
|  | 13.14 Are there routines for the safe transport and disposal of infectious waste? |
|  | 13.15 Is an investigation of the risk of infection included in the systematic work environment work? |
|  | 13.16 Which activities are there that may involve a risk of infection? |
|  | 13.17 How can the infectious agent cause infection (route of transmission)? |
|  | 13.18 What are the consequences for the staff in case of infection? |
|  | 13.19 For how long are the staff at risk of being exposed to infection? |
|  | 13.20 Are there special cleaning procedures in labs that handle infectious agents? |
|  | 13.21 Are the routines followed by the cleaning staff? |
|  | 13.22 Are the staff offered vaccinations? |
|  | 13.23 Do the employees receive training about the risks of infection and how they can be avoided? |
|  | 13.24 Do the employees receive training on how to protect themselves against sharps injuries? |
|  | 13.25 Do the employees receive training on how to comply with the special hygiene requirements? |
|  | 13.26 Is there someone responsible for the procedures for how the personal protective clothes are disposed of at the end of the working day? |

## Genetically modified aquatic organisms

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|  | 14.1 Has an application for permission to use the facility been submitted? |
|  | 14.2 Has a notification of activity for contained use been submitted? |
|  | 14.3 Has permission from the animal ethics committee been granted for the production of genetically modified laboratory animals and breeding? |
|  | 14.4 Are non-invasive methods or leftover tissue from labeling approved by the Animal ethics committee used for gene determination of genetically modified laboratory animals? |
|  | 14.5 Are the fishes sufficiently supervised? |
|  | 14.6 Are dead fish removed from the enclosure on the same day? |
|  | 14.7 Does the killing of fish take place according to current regulations and without unnecessary suffering for the fish? |
|  | 14.8 Is there artificial lighting so that supervision and care can take place without difficulty? |
|  | 14.9 Are automatic systems and devices adequately supervised? |
|  | 14.10 Are the requirements regarding group keeping or that fish must be kept separate, met? |
|  | 14.11 Are the fishes bodyfat acceptable? |
|  | 14.12 Does the enclosure for fishes comply with the size and water volume according to current regulations? |
|  | 14.13 Do fish kept in spherical aquariums meet the requirement for volume, oxygenation and decor? |
|  | 14.14 Are the fish kept in a climate that is adapted to the needs of each fish? |
|  | 14.15 Are the fish given the opportunity for a calm and natural intake of feed? |
|  | 14.16 Are the fish given feed that guarantees a sufficient, versatile and well-balanced nutritional supply? |
|  | 14.17 Are the requirements regarding breeding met? |
|  | 14.18 Are operative interventions performed by a veterinarian? |
|  | 14.19 Is a manager for the welfare and care of the animals, for information and for training and competence available and has insight into the operations? |
|  | 14.20 Is a laboratory animal veterinarian or expert available and has the training and skills needed for the operation? |
|  | 14.21 Are there enough personnel and resources so that the tasks can be carried out in accordance with the current regulations? |
|  | 14.22 Does the staff have the training and skills required for the task? |
|  | 14.23 Is there an animal welfare body within the workplace that consists of the right competencies? |
|  | 14.24 Does the animal welfare body fulfill its tasks and keep records of advice and decisions? |
|  | 14.25 Is documentation such as records, permits, work routines and written plans kept easily accessible to the staff? |
|  | 14.26 Are work instructions for remedying deficiencies and emergency measures available? |
|  | 14.27 Are there handling and safety instructions for the work? |

## Work in flammable and explosive environment

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|  | 15.1 Are the following included in the risk assessment and are they maintained:   * equipment * installations * protection system * components * devices * tools and materials * handling with associated instructions and routines |
|  | 15.2 Has the risk assessment been carried out by someone who has the appropriate training and knowledge to carry out explosive atmosphere risk assessments? |
|  | 15.3 The following must be included in the risk assessment:   * explosiveness of the mixture. * existing sources of ignition. * the probability that an explosive atmosphere will occur and its duration. * the probability of an explosive atmosphere igniting and the consequences of the explosion. * as well as about spaces, equipment, installations, materials or the like that have been deemed to be significant for the explosion risk. * routines for safe handling in explosive environments. * required protective equipment and safety measures for each risk source. * areas that through openings have or can be connected to areas where an explosive atmosphere can occur. * routines for the safe handling of spills and leaks as well as   suitable extinguishing agent and extinguishing procedure in case of fire to prevent explosion.  *The risk assessment must cover both normal work and operation as well as expected deviations and errors.* |
|  | 15.4 Is it ensured that anyone who stays in an explosive environment or performs work that can affect explosion safety must have appropriate training, knowledge of explosion risks and protective measures, as well as skills in safe handling? |
|  | 15.5 Have explosive areas or premises been classified into zones? |
|  | 15.6 Is a work permit issued before work begins in a classified area?  *A work permit must contain the conditions and instructions required for safe handling.* |
|  | 15.7 Are there routines for safe shutdown and operational readiness verification?  *They are applied during maintenance work or temporary stops on equipment and devices in or for explosive atmospheres.* |
|  | 15.8 Has an explosion protection document been drawn up? |

## Medical check-ups and health assessment

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|  | 16.1 Are medical check-ups and health assessments arranged according to AFS 2019:03 § 2 by the employer:   * when working where the workers are exposed to vibrations? * when the input value for hand and arm is exceeded? * in case of suspicion of exposure that may cause ill health? * when there is a vibration damage or suspicion of it? |
|  | 16.2 Have medical check-ups for manual intensive work been carried out for the employee? |
|  | 16.3 Does night work occur? |
|  | 16.4 Have medical checks been carried out for newly hired workers who serve under the rules on night work? |
|  | 16.5 Have workers who switched from day work to night work undergone a medical check-up? |
|  | 16.6 Has the employee undergone a medical check-up before handling any of the following:   * epoxy plastic? * formaldehyde resins? * methacrylates? * acrylates? * products containing H317? * products containing H334? |
|  | 16.7 Are there workers who have already started work and who show allergic symptoms such as respiratory disease, skin disease or allergy? |
|  | 16.8 Are medical check-ups and health assessments carried out at work where a risk assessment according to AFS 2001:1 shows that it is justified? |
|  | 16.9 Are medical check-ups carried out if a worker shows symptoms suspected to be due to exposure to carcinogens or mutagenic substances? |
|  | 16.10 Is assessment of medical ability carried out with the issuance of a medical certificate when working with allergenic chemical products, classification H334? |
|  | 16.11 Is an assessment of medical ability carried out with the issuance of a medical certificate:   * Before the employee is employed? * 3-6 months after the start of work? * Recurring at maximum two-year intervals? |
|  | 16.12 Is an assessment of medical ability carried out with the issuance of a medical certificate when exposed to:   * asbestos more than 50 hours per calendar year? * refractory ceramic fibers, special fibers, crystalline fibers more than 50 hours per calendar year? * quartz where the content exceeds half the limit value? * quartz more than 20 hours per week? |
|  | 16.13 Is an assessment of medical ability carried out with the issuance of a medical certificate when working with lead:   * before the employee is employed? * at most three year intervals between the assessments? |
|  | 16.14 For work with lead, has the blood lead concentration been measured:   * before the employee is employed in the work? * recurring at 3 month intervals after the work has started? |
|  | 16.15 Have workers exposed to cadmium undergone medical check-ups with the issuance of a medical certificate:   * before the employee is employed? * recurring at maximum 3 year intervals after the work has begun? |
|  | 16.16 For work with cadmium, has the blood cadmium concentration been measured:   * before the employee is employed? * recurring every 6 months? |
|  | 16.17 Have workers who are exposed to any form of mercury undergone medical check-ups with the issuance of a medical certificate:   * before the employee is employed in the work? * recurring at maximum 3 year intervals? |
|  | 16.18 For work with mercury, has the blood mercury concentration been measured:   * before the employee is employed? * recurring every 6 months? |
|  | 16.19 Have workers who are employed in work involving climbing with a level difference of more than 13 meters undergone medical check-ups with the issuance of a medical certificate:   * before the employee is employed? * recurring no more than 12 months apart? |
|  | 16.20 Have employees who are employed in work involving smoke or chemical diving undergone medical check-ups with the issuance of a medical certificate:   * before the employee is employed? * recurring no more than 12 months apart? |
|  | 16.21 Have workers employed in diving undergone medical check-ups with the issuance of a medical certificate:   * before the employee is employed? * recurrent for workers under 40 years of age, with a maximum of 5 year intervals? * recurring for workers who have reached the age of 40, with a maximum of 2 years apart? |

## Quartz and stone dust

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|  | 17.1 Is material containing more than three weight percent quartz handled on several occasions? |
|  | 17.2 Is the work planned where quartz-containing dust can arise or spread so that exposure is as low as possible throughout the work process? |
|  | 17.3 Is it possible to replace the quartz-containing material with non-hazardous or less hazardous material? |
|  | 17.4 Is the occupational exposure limit exceeded for:   * respirable quartz dust, 0,1 mg/m3? * respirable cristobalite, 0,05 mg/m3?   in the workplace? |
|  | 17.5 Are working conditions investigated with regard to exposure to quartz-containing dust at the workplace before work with quartz begins? |
|  | 17.6 Are medical check-ups with an issuance of a medical certificate arranged, for workers who will be employed or are employed in a job where the concentration of respirable dust of quartz or cristobalite in the air amounts to at least half the limit value, and the work continues for more than 20 hours per week for a total of at least 3 months per year? |
|  | 17.7 Are medical check-ups with issuance for medical certificate arranged and carried out before the employee is employed?  and recurring at maximum 3 year intervals after the work has begun? or earlier if it appears from the medical certificate? |
|  | 17.8 Is work equipment chosen so that quartz-containing dust is spread as little as possible? |
|  | 17.9 Are there routines for regular cleaning in the workplace and does it appear in the routine how, how often and by whom cleaning is to be carried out? Cleaning must be carried out so that dust is not stirred up or spread, for example with the help of a central vacuum cleaner with HEPA filter class 13. |
|  | 17.10 Are there handling and safety instructions for the work? |
|  | 17.11 Should respiratory protection be used? |
|  | 17.12 Are there routines for fitting, checking, maintaining and storing respiratory protection? |
|  | 17.13 Is there a follow-up of implemented measures at least once a year? |
|  | 17.14 Do workers/managers have sufficient knowledge of health risks associated with handling quartz-containing material and how these risks are to be prevented? |
|  | 17.15 Have measurements of respirable quartz dust or respirable cristobalite dust been carried out? |

## Welding with and without gas

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|  | 18.1 Are there safety data sheets for all chemical products used in the workplace that are marked with hazard pictograms/hazard symbols? |
|  | 18.2 Do the welders have sufficient knowledge and a training certificate? |
|  | 18.3 Is there a written welding permit issued by work management, responsible safety manager? |
|  | 18.4 If there are work and safety instructions to follow, do the welders know and follow them? |
|  | 18.5 Do all welders know the risks when welding in particular materials? |
|  | 18.6 Are all welders aware of the risks when welding of/in containers that have contained e.g. chlorinated solvents or other places where chlorinated hydrocarbons may be present? |
|  | 18.7 Do all welders know the risks when welding surface-treated or oily workpieces and if possible that the heated surface must be sanded clean before welding? |
|  | 18.8 Do workers who grind and slag know how long they can work with/be exposed to noise/vibration above the limit value? |
|  | 18.9 If tools are used, e.g. hoe, hand hoe or sander, is a vibration-damped sander available and used that also has a vibration-damped support handle? |
|  | 18.10 At high noise levels, do the hearing protectors have sufficient attenuation? |
|  | 18.11 When purchasing machines, tools and other equipment that make noise and vibrate, are the machines chosen that make the least noise and vibration? |
|  | 18.12 Is the welding gun easy to grip, e.g. does it fit well in the hand and is it easy to handle? |
|  | 18.13 Are self-glaring welding visors used that reduce the strain on the neck? |
|  | 18.14 Are aids available and used for handling and transporting the equipment? |
|  | 18.15 Is the workplace safe to carry out the work - free of explosive gases/materials? |
|  | 18.16 Have ventilation (applies only to work in sensitive environments) and fire alarms switched off before the start of work? |
|  | 18.17 Are the clothes airy enough so that they don't get too hot due to the heat radiation? |
|  | 18.18 Is the protective clothing fully covering so that the skin is protected against UV radiation from the electric arc? |
|  | 18.19 Are protective clothing made of non-flammable material? |
|  | 18.20 If any welder wears glasses, is the use of reading glasses avoided when welding? |
|  | 18.21 Is there a need for medical control for employees who are exposed to noise above the limit value or if there is a risk of hearing damage? |
|  | 18.22 Is there a need for a medical check-up for employees who are exposed to vibrations at work above the limit value or if vibration damage is suspected? |
|  | 18.23 Is there a need for medical check-up for employees who weld in other materials of polyurethane or epoxy, etc. which when heated can form toxic airborne compounds? |
|  | 18.24 If any welder has a pacemaker, defibrillator, insulin pump or other implant, has a doctor been consulted? |
|  | 18.25 If venting of gas-welded pipes is to be done, is the work carried out safely, e.g. by leading the exhaust out via a hose connected to the venting valve and is the air led outdoors? |
|  | 18.26 If venting of gas-welded pipes is to be done, is the work carried out safely, for example: by using carbon monoxide gas detectors to quickly detect if carbon monoxide levels become too high? |
|  | 18.27 If venting of gas-welded pipes is to be done, is the work carried out safely, for example: by no one staying in the space where the exhaust air is directed and the space being ventilated before anyone enters it? |
|  | 18.28 Does everyone know that it is forbidden to use free-burning gas flames for heating? |
|  | 18.29 Is it possible to reduce the risk of strong smoke development during welding by changing the welding method to one that produces less smoke? |
|  | 18.30 Are there well-functioning routines so that the welder always brings welding equipment with integrated extraction in the welding gun or smoke eater? |
|  | 18.31 Is it checked that:   * the welding unit is faultless? * the return conductor is correctly connected? * everyone knows that you must not have a welding cable hanging over your shoulder or use the cable reel as a seat and is this respected? * electric cables incl. return conductors are routed in such a way that they cannot be damaged? * the electrode holder is never placed on any metallic object connected to the electrical circuit? * the workplace is dry? |
|  | 18.32 If welding occurs and cannot be avoided, do employees have something to sit on e.g. stable pallet? |
|  | 18.33 If welding is to be done inside very hot objects: are heat insulating gloves and some type of ventilated hooded suit made of fireproof material used? |
|  | 18.34 If welding is to be done inside very hot objects: is thermal insulation available that can be used when welding in a cold location? |
|  | 18.35 If thorium-alloyed TIG electrodes are used:   * are the electrodes stored in closed containers? * is welding with alternating current avoided? * when grinding or welding, is the grinding dust sucked up and treated as environmentally hazardous waste? |

## Trucks

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|  | 19.1 Does work with forklifts occur? |
|  | 19.2 Do all forklift drivers have training and the employer's permission to drive a forklift? |
|  | 19.3 Does the person who leads and supervises the work with forklifts have the knowledge, information and experience required for the work to be carried out safely? |
|  | 19.4 Is the truck driver exposed to vibrations due to, for example, uneven floors? |

## Lifting devices

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|  | 20.1 Does the employee who will perform the lifting have practical and theoretical knowledge to use lifting devices and lifting equipment? |
|  | 20.2 Does the employee who will use the lifting device have the employer's permission? |
|  | 20.3 Are opinions and permission obtained from the coordinator at the shared workplace when lifting is planned in the workplace? |
|  | 20.4 Is the work planned, organized and carried out so that dangerous situations are prevented? |
|  | 20.5 Is a responsible person appointed for planning and carrying out the lifting operations when several workplaces are involved? |
|  | 20.6 Is it ensured that no one walks under a suspended load, that respect for shutdown/cordoning off is maintained? |
|  | 20.7 Is there a signalman where someone is within the working area of ​​the lifting device? |
|  | 20.8 Does everyone who connects loads have documented knowledge of safe lifting? |

## Ladders and work stands

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|  | 21.1 Have the employees received training/instruction to use ladders? |

## Work-related injuries and accidents

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|  | 22.1 Are there routines for reporting incidents, accidents and occupational diseases? |
|  | 22.2 Is www.anmalarbetsskada.se or some other system used when reporting work-related injuries? |
|  | 22.3 Do the employees know these routines? |
|  | 22.4 Have incidents, accidents at work and occupational diseases been investigated, followed up and measures taken? |
|  | 22.5 Have managers and the work management had the safety representative with them during investigations? |

## Work posture and workload

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|  | 23.1 Does the work area provide enough space for appropriate work movements? |
|  | 23.2 Are equipment adapted to the employees body size and the work task in such a way that employees can use work postures and working movements that are favorable to the body? |
|  | 23.3 Are there work moments where it is straining to see properly, for example due to insufficient lighting or small text? |
|  | 23.4 Does work movement occur:   * with arms above shoulder height? * below knee height? * with bending or twisting movements of the hand and forearm? * under strong time pressure? * that repeats over a longer period of time? |
|  | 23.5 Does hand movements such as:   * grip with great effort * uncomfortable hand grips * poor grip * high precision requirements * demanding pinch grip   occur during work? |
|  | 23.6 Does work postures such as:   * kneeling * squatting * lying down * postures that repeats over a longer period of time   occur during work? |
|  | * 1. Are: * regular micro breaks * and/or rotating tasks   planned for repeated work over a longer period of time. |
|  | 23.8 Is there manual lifting of heavy loads? |
|  | 23.9 Are aids used? |
|  | 23.10 Are aids available for rolling handling (cart, etc.) instead of carrying loads? |
|  | 23.11 Does repetitive work occur, ie: repeating similar work movements over and over again? The time for each work step is short and the movements take place to such an extent that there is a risk of discomfort. |
|  | 23.12 Is it possible to switch to sitting when the work involves prolonged standing or walking? |
|  | 23.13 Are there voice ergonomic risk factors in the workplace (take into account the working culture, noise, indoor air quality, working posture, stress, and access to a sound amplifier). |
|  | 23.14 Do managers have sufficient knowledge of current regulations and ergonomic risks? |
|  | 23.15 Does the introduction course for the employer and empoyee include ergonomics? |
|  | 23.16 Does the employee have sufficient knowledge to be able to perform tasks ergonomically correctly?   * suitable working positions/movements * technical equipment/aids * risks from inappropriate work techniques * signs of overload * have received written instructions in case of serious risks |
|  | 23.17 Do the employees have the opportunity to practically train in suitable work techniques? |
|  | 23.18 Is there follow-up that employees follow instructions and work in an ergonomically appropriate way? |

## Organizational and social work environment

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|  | 24.1 Is there a work environment policy? |
|  | 24.2 Are there clear and well-known goals for the organizational and social work environment? |
|  | 24.3 Is there a written distribution of work environment tasks, powers and resources? |
|  | 24.4 Have the needs for knowledge and training for managers been clarified and met? |
|  | 24.5 Are employees informed and trained about important work environment issues, e.g. about risks at work? |
|  | 24.6 Does solitary work occur? |
|  | 24.7 Is solitary work arranged so that the employee does not run a greater risk when working alone than if several people do the work jointly instead? |
|  | 24.8 Do new hires, hired staff and staff with new duties receive a good introduction that includes the work environment? |
|  | 24.9 Do employees have the possibility to take shorter breaks during work? |
|  | 24.10 Is it possible to vary tasks at work? |
|  | 24.11 Do the employees have the possibility to influence the organization and implementation of their own work? |
|  | 24.12 Is there a good balance between the demands of the work and the employees resources for carrying out the work? |
|  | 24.13 Is there a good balance between the demands of the work and the employees access to support and help for the execution of the work? |
|  | 24.14 Does violations and preferential treatment occur in the workplace? |
|  | 24.15 Are violations and conflicts handled as soon as they arise? |
|  | 24.16 Are staff appraisal held regularly? |
|  | 24.17 Are risks of ill health and accidents investigated, assessed and remedied when planning and making decisions about, for example, new or changed operations, purchases, repairs, maintenance or remodeling? |

## Ventilation

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|  | 25.1 Is mandatory ventilation control (OVK) carried out at the intervals that apply to ventilation systems? |
|  | 25.2 Are there well-functioning procedures for documentation of control, operation and maintenance? |
|  | 25.3 Are there current documents describing the ventilation system? |
|  | 25.4 Is there enough space to work properly with fans, units, components and ducts? |
|  | 25.5 Are the exhaust ducts from the process ventilation cleaned? |
|  | 25.6 Do service and operating personnel have the necessary skills? |
|  | 25.7 Is it clear who is responsible for control, operation and maintenance of the ventilation systems? |