

Safety rules for external companies / business partners working in the Duisburg plant

Siemens Energy Global GmbH & Co. KG
Wolfgang-Reuter-Platz 4
47053 Duisburg, Germany



1. Introduction



Welcome!

The safety regulations you have to observe at our location are presented in this safety instruction.

→ **If you do not comply with the regulations, you can be immediately expelled from the site.**

Please also consider that adherence to the safety regulations does not release your company from the responsibility for you or for compliance with the required safety measures for performing the activities.

Help proactively to prevent accidents - as well as to interact sustainably with our environment - also in your own interest!



2. Basics

ID card, working hours



You will receive a company ID card when entering the company site,
The ID card must be worn in a clearly visible manner!

The ID card must be returned at the latest after expiration of the period of validity.
Loss of the ID card must be reported immediately to your Siemens Energy coordinator for external companies and the security center (Gate 1)!

The access for pedestrians or vehicles on **Saturdays, Sundays and public holidays** only is permitted with a written permission from your Siemens Energy coordinator deposited at the security center (Gate 1). This also applies to working hours outside of 5:40 a.m. to 10:20 p.m.

The permission must be requested from your Siemens Energy Coordinator no later than the Thursday before the weekend.

The statutory regulations regarding **working hours** must always be complied with!

Persons requiring special protection (e.g. young people and trainees) must be supervised and must not be assigned to risky work or perform work in hazardous areas.



2. Basics

Environmental Protection & Energy Management



Every contractor employee is required to contribute to the careful handling of the environment and use of energy in his or her area of responsibility:

Rules for environmental protection:

- Avoidance of waste and mixing of waste.
- After completion of the work the waste has to be taken away and disposed of at one's own responsibility
- No discharge of substances into the sewage system (secure rainwater drains if necessary)
- Avoidance of exhaust, dust and noise emissions.

Energy management:

- Switch off unneeded machines, devices or other consumers when no longer required or disconnect them from the power supply. This applies especially when leaving the construction site or work area.
- If possible, use energy-saving machinery, devices or other consumers.



2. Basics Bans



No smoking - at the entire site including outdoor areas.

Exception: in the 4 smoking areas on site (see picture).



Alcohol and narcotics are absolutely prohibited!



Photography and filming on the site is permitted only with prior approval!



2. Basics

Inspections, Tools and Materials



Persons, belongings and particularly vehicles, are subject to **entering and leaving inspections**.

If you bring tools, equipment or materials on site:

→ These must be registered with the site security

Provide a detailed list of the items/equipment you bring with you (form available at site security).

The use of Siemens-Energy work equipment is only permitted with written permission and only in exceptional cases (especially crane systems, industrial trucks, tools, etc.).

All work equipment that you bring with you

- Must be in **proper condition**,
- Shall only be used **for its normal intended purpose**,
- Must be **tested according to legal requirements** (e.g. electrical equipment according to DGUV V3, personal protective equipment to prevent falling, ladders, etc.)

Use of bolt setting tools / driving tools / nail guns:

- Only devices with sequential actuation trigger are permitted!
- Work only when standing safely!
- No persons shall remain in the hazard area!

Use of hammers / impact tools:

- Consider hand protection! Provide suitable protective measures to avoid injuries caused by using a hammer or similar tool (e.g. using a finger saver / wear impact protection gloves / do not hold parts with your hand!)





2. Basics

Work Areas and Construction Areas I

Construction site areas must be clearly separated from other operational areas and marked as such. The following applies:

Blocking off construction and storage areas with temporary fence panels or equivalent substitute measures. Barriers must be maintained throughout the construction period.

Deactivation of safety equipment:

Free access to safety equipment must be ensured all times, never block it!

If operational safety devices have to be deactivated (e.g. deactivation of fire detectors and extinguishing systems), or if signs have to be removed, this is **only** permitted after **prior consultation** with your Siemens Energy Coordinator!

After completion of the work, these must be put back into operation!

In the event of damage to or malfunctions of our equipment:

If you notice any damage to or malfunctions within our facilities, please **immediately** report them to the plant security or your Siemens Energy coordinator.

Restriction of traffic routes / escape routes:

If a temporary closure of an escape route / a traffic route is necessary, coordinate with your Siemens Energy coordinator.



2. Basics

Work areas and construction site areas II



Storage of construction materials, materials, installation of temporary structures, construction trailers as well as containers, etc.: **Only with prior approval of your Siemens Energy Coordinator.**

Always keep work areas and break rooms **clean and tidy.**



Access to plant areas in which no work is to be performed within the scope of the contract is prohibited.



Access to monitored areas and control areas that are marked accordingly is permitted possible with the prior consent of your Siemens Energy Coordinator (**e.g. radiation protection / electromagnetic fields**).

Access prohibited for people with pacemakers / implants in signed areas.



The **use of fresh water, electricity and gas** is only permitted with the prior approval of your Siemens Energy Coordinator.

Before starting earthworks and in case of unforeseen complications during the execution, the consultation with your Siemens-Energy coordinator is necessary (clarification of supply lines and disposal lines or similar facilities / conditions at the location).

Use of portable heaters is only permitted with the prior consent of your Siemens Energy coordinator.





2. Basics

Personal Protective Equipment (PPE)

Your company is required to provide you with the necessary Personal Protective Equipment (PPE).
For your personal protection, you must always wear the PPE

- that has been specified in the risk assessment for the activities you are to perform,
- being specified by a mandatory sign in the work area.

→ **Mandatory signs must always be obeyed.**

→ **If the protective equipment is not available, it is not allowed to enter the designated area.**

In general, the following PPE must be used depending on the type of work:

- Safety shoes in general
- Protective goggles for work with risk of eye injury (e.g. sawing, drilling, welding, etc.)
- Safety helmet for work with risk of head injury, for work on two levels and for crane operation. In designated production buildings / areas according to signage
- PPE to prevent falling from a height (PSAgA) on the crane runways, on telescopic and articulated working platforms as well as during work with a risk of falling if no protection by side guards or scaffolding in place.
- Respiratory protection and hearing protection if required.



foot protection



safety helmet



ear protection



eye protection



hand protection



2. Basics

Siemens-Energy-Coordinator



Before starting work, contact your Siemens-Energy contractor coordinator.

Tasks of the Siemens-Energy coordinator:

- **Responsible** for coordinating the work
- **Authorized** to issue instructions in all matters of occupational safety and environmental protection
- Will give **instruction** regarding the building-specific regulations
- **Providing information** about the special hazards in the respective area and carrying out the mutual risk assessment



For any questions, your Siemens Energy Coordinator is your first point of contact!



3. Work Process

Working with Scaffolding



Scaffolds shall only be assembled by appropriately qualified scaffold erection companies!
Completed scaffolds must be inspected and then marked with the inspection report / scaffold release certificate.

Scaffolds without test report / release certificate must not be used!

Damaged scaffolding components must not be used or modified!

Scaffolds/areas not ready for use must be marked with prohibition signs "**Access prohibited**" and access to the hazard zone must be blocked.

Before use, scaffolds **must be visually inspected by each user**. Any damage must be reported to the responsible supervisor or the Siemens Energy Coordinator.

Modifications to scaffolds shall only be done by the scaffold erector. This also applies to changing or removing scaffold decks.

If defects are found during the inspection, the scaffold must be locked immediately and all employees working there must leave the scaffold (remove scaffold release certificate)!



3. Work Process Working at Heights



Before starting work with a falling height of **more than 2m**, a written permission (**permit**) (work permit - work at height at the Duisburg location) is required. Please contact your Siemens Energy coordinator!

If there is a risk of falling, this must be avoided by:

- **Necessarily acting devices** (e.g. guardrails, stationary working platforms or other technical fall protection devices)
- **Fall arrest systems** (e.g. catch scaffolds/ roof catch scaffolds/ safety nets/ protective walls)
- Use of suitable PPE against falling from height



PPE against falling from height:

PPE against falling from height must be **visually** inspected **before each use** and inspected once a year by a competent person. Use protective devices only if you have been instructed in its handling and are familiar with its use!

Entering crane runways / working on crane systems:

- Enter only after consultation with the Siemens Energy Coordinator
- Relevant crane controls, if necessary also from neighboring cranes, have to be confiscated and secured against unintentional and unauthorized operation.
- Working alone or only after consultation with the Siemens Energy is prohibited.



3. Work Process

Working with aerial work platforms



Only use persons for the operation of aerial work platforms who:

- are at least **18 years old** and **reliable**
- **have been instructed** in the operation,
- have a written order by the employer.

A **driver's license or certificate** of competence for the use of working platforms must be available and carried.

Equipment must be in **perfect condition** and **inspected** by an expert.

The annual expert inspection must be visible on the equipment, e.g. by a label.

Devices must be checked by the user **every working day** with **functional tests** (condition and effectiveness of the safety devices). This must be documented.

When leaving the device / vehicle, the **ignition/main key must always be removed**.

Telescopic platforms must be provided with anchor points for PPE against falls from a height.

Suitable fall arrest systems must be worn (e.g. height safety device with max. length 1.8m) and attached to the defined anchor point.





3. Work Process

Working with aerial work platforms II

The following regulations must be observed - for your safety and the safety of others - when using aerial work platforms:

- A **second person** with knowledge of emergency lowering functions must always be in the work area as a safety post. The safety guard and operator of the working platform must wear a safety helmet.
- During the work, **the work area must be blocked / marked. No other persons** are allowed to remain in the work area.
- Climbing from the work cage onto another surface is strictly **prohibited!** In **exceptional cases**, it may only be possible to climb over with **prior consultation with the Siemens Energy Coordinator and agreement** and an appropriate risk assessment!
- The **maximum load** of the working platform must be observed!



Attention! If there are overhead cranes in the working area, they shall not be operated at the same time as the working platform. Contact the Siemens Energy coordinator for coordination!



3. Work Process

Working in confined spaces



Special requirements apply to work in confined spaces, e.g. tanks.
Essential points to be observed when working in confined spaces:

Before starting work in confined spaces:

- Carry out **risk assessment**.
- Designate a **responsible supervisor**.
- Designate a reliable **safety post** who is in contact with the employees (line of sight, voice communication, signal line) and who can summon help at any time without leaving his post.
- Obtain a **permit** with specified protective measures from the Siemens Energy Coordinator.
- **Do not start work until the protective measures specified in writing have been taken and the employees have been instructed.**



3. Work Process

Lifting operations



- If the use of crane systems is necessary, they shall only be used by persons who **have been trained for this purpose**. They have to be of **suitable health, have to be instructed and have to be authorized in writing** by Siemens-Energy.
- The **used slinging equipment must be suitable, tested and without visible damage**.
- Crane chains must have **safety devices** to prevent unhooking.
- **Pay attention to persons in the area of the crane**
- Never leave lifted loads unattended.
- **Do not walk or stand under lifted loads!**
- **Never climb onto or into suspended loads.**



3. Work Process

Working with electrical work equipment I



Be especially careful when working with electricity! Even the slightest mistake can be fatal!

Basically, the condition of the electrical equipment to be used must be suitable for the respective task and the respective ambient conditions!

Depending on the expected **mechanical, physical or chemical effects**, equipment of the corresponding application category (K1 / K2) must be used.

In general:

- **Electrical work equipment must be in perfect condition** (cables, insulation, mechanical protective devices) and have a **valid test status according to DGUV V3.**
- **VISUAL INSPECTION BEFORE EACH USE!**
- **Connection of electrical work equipment only with the agreement of your Siemens Energy coordinator. Always use a personal protective circuit breaker (PRCD-S) / construction power distributor!**
- **Maintain test certificates for those devices requiring monitoring (e.g. pressure vessels for compressors).**
- **Defective devices must not be used and must be blocked / removed immediately!**



protective insulation
(protection class 2)



Heavy duty



Dust-proofed





3. Work Process

Working with electrical work equipment II

Before each use, always check the following:

- Undamaged condition of the device and the supply line.
- The cable is not trapped e.g. in doors.
- Correct connection of plug.
- Need and possibility of covering / protecting cables e.g. under fixed covers.

Work on electrical devices, equipment or systems: may only be carried out by **appointed electricians** or by persons with the appropriate qualifications after consultation with a person responsible for the system.

Working on live systems is generally prohibited - If you have any questions, please contact your Siemens Energy coordinator!

For electrical work, the 5 safety rules apply in the correct order:

1. Tagout and lockout
2. Secure against restarting (e.g. padlock)
3. Determine absence of voltage (use approved voltage testers)
4. Ground and short-circuit
5. Cover or isolate adjacent live parts.





3. Work Process

Use of electrical equipment in case of increased electrical hazard

The following applies in **conductive areas with limited freedom of movement** (e.g. vessels, boilers, clamping fields):

- Portable electrical equipment may only be operated with protective extra-low voltage (42V) or with protective separation.
- Only welding sources bearing the "S" mark or the old "42V" or "K" mark may be used.
- Hand lamps may only be operated with safety extra-low voltage.
- Only one device may be connected to isolating transformers.

In other conductive areas, protective measures such as protective extra-low voltage, protective separation, residual current circuit breakers (RCD) or personal protective switches (PRCD-S) with a rated residual current of max. 30 mA are permissible.



Work in **potentially explosive atmospheres** requires the approval of the responsible Siemens Energy coordinator. Be particularly careful when using electrical equipment in potentially explosive atmospheres. Discuss the measures to be taken with your Siemens Energy coordinator.



3. Work Process

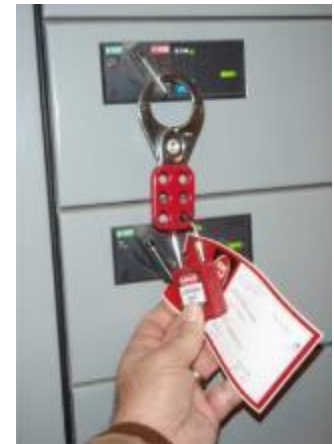
Activities on plants with energy application



For activities on systems with energy loading (compressed air, hydraulics, electrics, gas, etc.), prior coordination with your Siemens Energy Coordinator is required.

Only carry out work when the machines and systems are shut down. **Disconnect** the system!

- Before carrying out any activities, the shutdown routine (LOTO: Lockout-Tagout) must be observed!
- Secure the disconnection point against unintentional operation or reconnection by means of locking devices (personal padlock).
- Each disconnection point must also be marked with a warning tag (e.g. indicating the location of the work, the date and the person authorized to remove the safety device).
- Before removing fuse interlocks and restarting the work equipment, it must be checked whether this can be done safely.
- Residual energies (e.g. potential energy) must be safely dissipated or made safe by protective measures. Work under the lifted parts only if lowering is prevented by lowering protection.



3. Work Process Ladders and steps



Use step ladders for your work. Rung ladders only allowed in reasonable particular cases. Do not climb from step ladders onto platforms etc.! Leaning over to the side is also prohibited, as lateral forces always mean a risk of tipping over!

- **Only short-term and light activities may be carried out with ladders/steps.** Otherwise, a working scaffold must be erected.
- In principle, **all ladders must have a documented inspection** (e.g. inspection label).
- Always carry out a **visual inspection** before using a ladder.
- Instead of ladders and steps, **never use unsuitable means of access**, such as chairs, tables, boxes, etc., or even combinations thereof.
- If the **ladder is placed in a traffic route**, the location of the ladder must be secured with e.g. signs, warning cones, barriers or safety posts.





3. Work Process

Floor openings, ceiling and stage load capacity, gratings, railings

In buildings, the **permissible loads of the individual floors and light grids/coverings** must be observed.

The removal of floor covers, gratings and railings requires the **approval** of the Siemens Energy Coordinator and may only take place after **suitable substitute safety measures** against falling have been taken.

Gratings and railings shall be properly reinstalled **immediately** upon completion of the work.

Missing railings on traffic routes/stairways or other areas shall be adequately secured with safety measures.

Warning tape is not a fall protection device!





3. Work Process Hazardous Substances

Hazardous and flammable substances **shall only be used with the prior consent of the coordinator.**

Safety data sheets and operating instructions for all substances used must be kept available.

Hazardous substances may only be used by you **after you have been instructed on the basis of the relevant operating instructions.**



Containers with hazardous ingredients **must always be marked** with the appropriate labeling and hazard symbol!

Under no circumstances shall food packaging be used for filling with chemicals, cleaning agents, etc.

The **quantity of hazardous substances in the work area must be limited to the daily requirement.** Storage is generally not permitted on site.

Waste must be disposed of on your own responsibility, if necessary, this must be coordinated with the Siemens Energy Coordinator.





4. Fire Protection

Fire-hazardous work (welding, abrasive cutting work, etc.) may only be carried out after approval by means of a fire permit. Please also contact your Siemens Energy Coordinator!

Remove all combustible parts from the hazardous area. Observe safety measures to prevent a fire from starting in accordance with the fire permit, e.g.

- Cover combustible parts that cannot be removed.
- Seal openings.
- Provide suitable fire extinguishing agents, e.g. ABC powder extinguishers.

Smoke detectors must generally not be deactivated. If this is absolutely necessary, it must be agreed with the Siemens Energy Coordinator.



Smoke detectors can also be activated by dust / water vapor!

If necessary, organize deactivation by consulting with the Siemens Energy Coordinator.

Inform yourself about:

Location of the nearest manual fire alert



Location of the nearest fire extinguisher



5. Traffic Rules Internal Traffic



The road traffic regulations apply on the entire company premises incl. parking lot!

- The maximum speed is **10 km/h!**
- Reversing only with a unobstructed view or safety guard or reversing video system.
- Behave carefully, considerately and avoid obstructing traffic.
- Parking in front of emergency exits, rescue routes, hydrants, entrances, gates or similar bottlenecks is prohibited! This also applies to the placing or storage of materials! The plant security or your Siemens Energy coordinator will provide information on parking possibilities.
- Damage / accidents / abnormalities must be reported immediately to the plant security.



Watch out for "blue spots" from forklifts!



5. Traffic Rules Industrial Trucks / Fork Lifts




- Vehicles shall only be operated by persons who **have been trained for this purpose, are fit for the job, have been instructed and have been authorized in writing.**
- Vehicles shall only be operated if the driver has sufficient visibility or has been instructed by a spotter.
- Always use safety retention systems (e.g. seat belt).
- Switch on lighting. Adjust speed to **max. 10km/h.**
- When leaving the vehicle, secure it against rolling away and remove the key.
- Passengers shall only be carried on the equipment in places approved for this purpose.
- Loads must be secured. Lifting equipment must be inspected by a competent person every 12 months.
- Observe the load capacity diagram when loading.
- **Do not walk or stand under a lifted load.**





5. Traffic Rules Pedestrians

- As a general rule, use the existing sidewalks whenever possible. If the roadway must be used, walk on the edge of the roadway.
- Furthermore, roadways have to be crossed fast by the shortest route at right angles to the direction of travel, observing the vehicle traffic.
- Gates are not allowed to be crossed by pedestrians. Use the existing side doors! Symbol: 
- When walking on stairs, always use the handrail or keep it within reach.
- Reading or sending messages from a cell phone while walking on stairs is prohibited.
- Phone calls are only permitted in a safe location.
- Do not ignore barriers - danger to life! Walk around cordoned-off areas on accessible main paths!



6. Emergency Preparedness



	Landline phone at site INTERNAL	(Mobile) phone / EXTERNAL
Fire / Local Plant Security	112	0203 605 112
Injured/sick person (Local medical service)	110	0203 605 110

Please **do not directly alert external rescue forces** (fire department / emergency doctor / police) in order not to obstruct the internal rescue chain.

If, due to circumstances, it is needed to call for external rescue services directly, the site security must be informed immediately, e.g. by surrounding employees or on the nearest emergency telephone.

Where did something happen?
 What happened?
 How many people are affected?
 What kind of injury?
Waiting for queries!





6. Emergency Preparedness Company medical service

In the event of **accidents and injuries**, the following services are available at the Duisburg site:

- **Company medical service:** Building 14 ground floor (until 5:00 p.m.)
- **Company paramedics** from Plant Security at Gate 1 (after closing time of the medical service)
- **First aid facilities** in accordance with local fire escape and rescue plan
- **AED** (Automatic External Defibrillator) - Site plan (next slide)



Every accident, even a commuting accident and minor injuries, must be documented in the first-aid book, at the medical service or site security, and the Siemens Energy Coordinator will be informed!



Electrical accidents: Due to the risk of cardiac arrhythmia immediate medical attention is necessary, even after a suspected "wiper"!



6. Emergency Preparedness Automated External Defibrillators (AED)





6. Emergency Preparedness: In Case of a Fire

Remain calm!

Report the fire



Operate manual fire alert



Call 112 (internal)

0203 / 605-112 (external)

Find safety

Warn people in danger.

Take helpless people with you.

Close doors.

Follow marked escape routes.

Do not use lifts.



Go to an assembly point.

Follow safety staff instructions.

Attempt to extinguish the fire
without putting yourself at risk



Use fire extinguisher



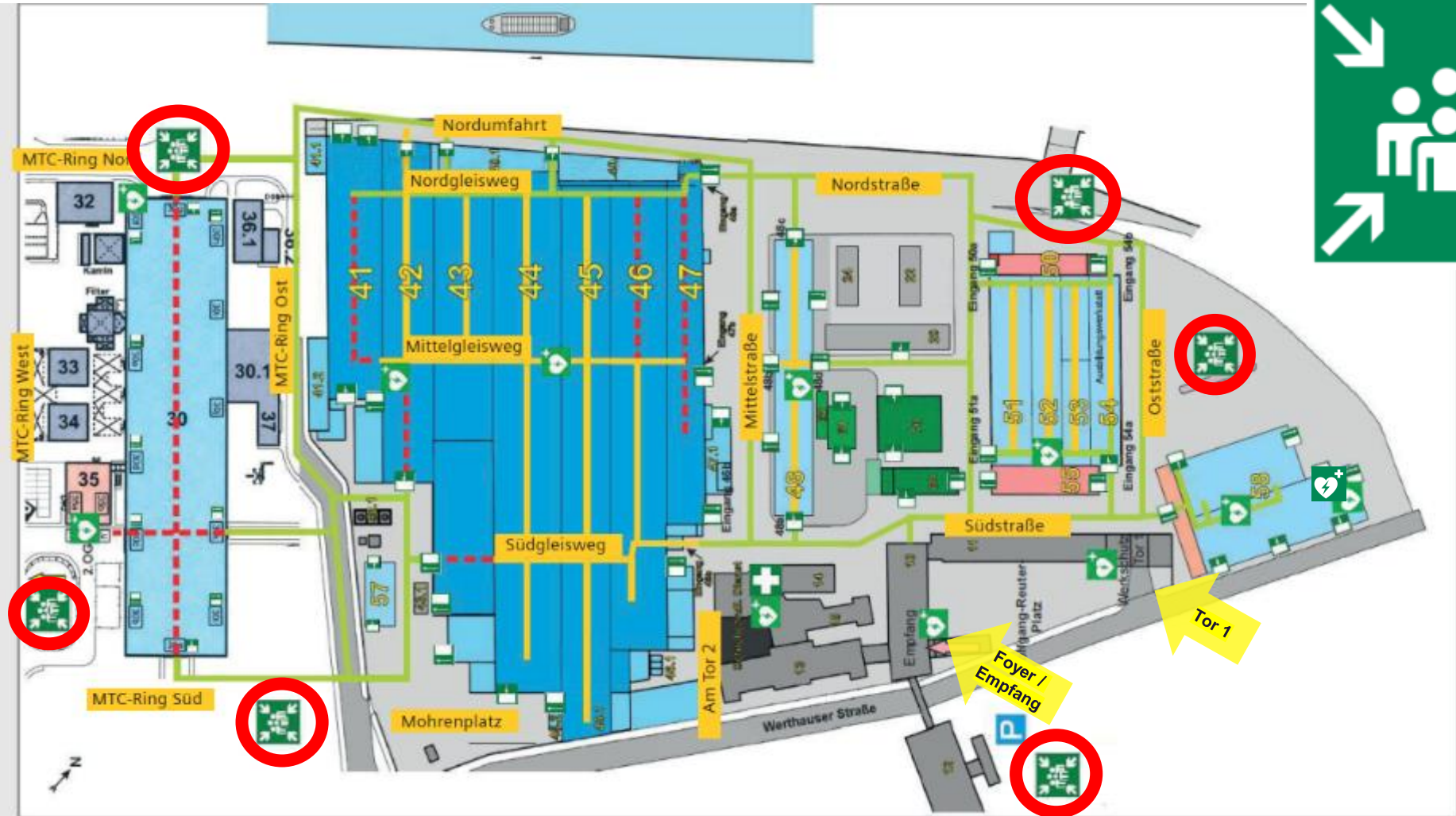
Use fire hose



Fire Safety Regulation according to DIN 14096 / Stand 02/2021



6. Emergency Preparedness Assembly points and important names of places



7. Summary



The main rules:

- Wear your personal protective equipment.
- Only use suitable work equipment which is suitable for your work.
- Always coordinate your activities in relation with the mutual risk assessment together with your Siemens Energy coordinator.
- If doubts arise during the work or if you are unsure about the execution, stop your activity and consult your Siemens Energy coordinator.
- **Only carry out work in which you have been instructed / trained for and for which you are authorized.**



Thank you!



This is followed by your specific on-site briefing with your Siemens Energy coordinator.

We wish you a pleasant and safe stay.

