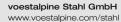
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LIFE General Safety Regulations Date: April 2015

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INTRODUCTION

Unless otherwise stated, whenever the masculine gender is used, both men and women are included.

We are strongly committed to health and safety at work for all employees

- at voestalpine in Linz;
- from outside companies working on the basis of a service contract;
- from companies providing manpower to work for third parties (leasing personnel).

We expect everyone to act responsibly with regard to health and safety in the workplace.

Before working at voestalpine for the first time, in addition to reading these General Safety Regulations you must receive instructions concerning the specific risks your job involves and safeguards.

1 First aid

1.1 Reporting emergencies

In an emergency (workplace accident, fire, explosion, gas leak, traffic accident, or similar), call one of the emergency numbers listed and give the details on the emergency instructions sign.

- What happened?
- Where did it happen? (Exact location: e.g., building, bay, gate number, etc.), location of the alarm raiser.
- How many people are involved?
- What injuries?
- Who is calling? (Give the telephone number where you can be contacted for further information).
- Wait for questions! Please hold until the person taking the emergency call hangs up.

1.2 Emergency numbers

You can reach the **in-plant** emergency services on the following numbers:

LAND LINE:

Ambulance 144 Fire 122 Works security 133

 VOESTALPINE CELL: (to ensure valuable time is not lost in an emergency, please save the phone numbers immediately)

Ambulance +90 144
Fire +90 122
Works security +90 133

 PERSONAL CELL: (to ensure valuable time is not lost in an emergency, please save the phone numbers immediately)

> Ambulance +43/50304/15 144 Fire +43/50304/15 122 Works security +43/50304/15 133

MOBILE RADIO: (last number can be any one, e.g., 0)

Ambulance 1440 Fire 1220 Works security 1330

1.3 What to do in the event of fire

The applicable fire safety regulations are legally binding for all employees.

1.4 Fire extinguishing systems

Rooms where fires are extinguished with gas have appropriate signs on the access doors. Before entering such rooms, you must receive instructions from the plant. If an alarm signal is triggered (horn and/or flashing light or sign), leave the room immediately and do not re-enter it.

2 Obligatory for all employees

2.1 Suitable health

Should you be in a physically or mentally impaired state (e.g., caused by illness, alcohol, drugs, or medication), you must not start your work, or continue it, if you are a danger to yourself or other people working at the plant.

2.2 Safety Instructions (SI), Safety Process Instructions (SVA)

You must comply with the

- Health and safety at work regulations;
- Safety instructions;
- Safety process instructions;
- Rules

at all times.

2.3 Keep the workplace clean and tidy

- An important basis for ensuring safety in the workplace is keeping it clean and tidy;
- After using any tools and equipment, you must clean them and return them to the appropriate place;
- When laying hoses, cables, etc., ensure people cannot trip over them and they do not cause any other hazards;
- If your work leaves rubble or waste, dispose of it in an eco-friendly way as soon as possible.

2.4 Environmental protection: waste

- Be environmentally aware, sort waste and use the company recycling system;
- Disposing of personal waste, such as scrap tires, hazardous work materials, refrigerators, car batteries, bulky garbage, etc. on the plant premises is prohibited.

2.5 Duty to report

You must report all incidents, defects and faults to your superior or the person responsible for the plant involved without delay.

These include:

wie z.B.

- Accidents at or on way to work, near accidents;
- Defects in: safety equipment, work resources, plant equipment, general lighting (including emergency lighting), safety lighting, power lines;
- Damage to property;
- Environmental damage;
- Fire occurrences;
- Illegible safety labels and floor markings.

You are required to approach other people if their behavior is inappropriate, irrespective of their affiliation and role in operations.

2.6 Your working area

- Please remain in your working area;
- Report to your superior beforehand if you intend to leave your working area during working hours;
- You are not permitted to enter parts of the plant outside your working area without an assignment.

Signing people outside the company in and out

Before entering and after leaving the allocated working area (also for internal maintenance work), people from outside the company must be signed in and out by the supervisor at the place responsible. You will find the contacts in the part of this document relating to the plant.

2.8 No alcohol, drugs, or smoking

- Bringing and consuming alcoholic beverages and drugs at the workplace is prohibited;
- You may consume low-alcohol beer in the break rooms during break times;
- Alcohol is strictly prohibited if you operate a crane or forklift (0.0 blood alcohol);
- Smoking and no smoking zones are designated.

2.9 Personal protective equipment (PPE)

- You can find the personal protective equipment required for your working area and the job in HQSU either under the machine or operation;
- Using the PPE for the specific purpose is mandatory;
- Do not wash any workwear with protection function (flame retardant, acid/alkali proof clothing) at home, as incorrect handling could result in its protection function being compromised;
- If workwear is extremely soiled, it could result in the protective effect being reduced or completely lost:
- Replace worn or damaged PPE without delay;
- In production areas wear sturdy, closed footwear on the designated visitor routes; the plant will provide additional protective equipment where required.

2.10 Mobile communication devices

While driving a vehicle (e.g., car, truck, bicycle, quad, scooter, forklift, crane, etc.) and operating machines or equipment, using your cell phone (e.g., for making calls, reading/writing text messages/emails, surfing the internet, etc.) and wearing headphones for various players is prohibited; Exception: communication necessary for operations.

2.11 Disciplinary action

 While In the event of gross or repeated violations of safety rules and regulations disciplinary action will be taken.

3 Workplace and job

3.1 Traffic and escape routes

- Use the designated walkways, footbridges, or underpasses for crossing the plant premises;
- Short cuts outside the permitted traffic routes are prohibited;
- Always keep traffic, transport and escape routes clear.

3.2 Doors and gates

- If there is a door beside a gate, you must use it even if the gate is open;
- Gates are only intended for vehicle use.

3.3 Storage

- Do not exceed the permissible floor, platform, shelf and scaffolding loads indicated;
- When setting down equipment, goods and loads of any kind, ensure that they are stable;
- Keep escape routes, emergency exits, traffic routes, stairs, entrances to electrical service rooms, light switches, distribution boxes, main switches or similar, and fire extinguishing systems clear and accessible at all times.

4 Work materials

4.1 Using work materials

- Work materials include all plant, machinery, equipment, devices and tools;
- You must use all work materials properly and for the intended purpose; follow the operating instructions;
- Before using any work materials, inspect them visually for any obvious defects every time;
- If you detect any defects, do not use the work materials; report them to the superior responsible;
- You may only carry out any repairs on work materials if you have been instructed to do so;
- You may only use work materials if you have been

trained or instructed on how to do so.

4.2 Hoses

- Prevent the free ends of hoses from lashing around—like a whiplash;
- Ensure the hose is suitable (pressure, media).

4.3 Forklifts

- You may only operate a forklift truck if you are trained to do so (hold forklift certification) and have an internal permit from your employer;
- You are responsible for complying with the regulations.

4.4 Cranes

- You may only operate crane systems if you have been trained or instructed on how to do so (hold crane certification), have an internal permit from your employer and are over 18 years of age;
- Riding on the load or load handling attachment is prohibited;
- Do not stand or walk under suspended loads; this applies in particular to magnetic transport;
- When working near cranes, ensure that the required clearance is observed.

4.5 Mobile elevating work platforms (aerial, articulated, or scissor lifts)

 In addition to complying with section 4.1, use personal protective equipment to prevent falling.

5 Work procedures

5.1 Repair, inspection, maintenance and cleaning work

When carrying out maintenance work (servicing, cleaning, repairing, troubleshooting):

 Switch off the electric drives at the main power supply and prevent them from being restarted accidentally (e.g. with a padlock); Protect system parts that could move as a result of the stored energy (hydraulic, pneumatic, gravity) with suitable means (e.g., by using a physical device).

Prepare more complex work, in particular the shutdown procedure for more complex system parts:

 In writing (e.g., work or repair program, disconnection notice, control slip).

All the information required for safe operation or ensuring the safe state of electrical systems, such as the state of the power supply, switching devices, and safety equipment, must be provided in a report (taking the risk of confusion into account).

When the work is completed, releases for restarting and operation must not be given on the basis of times agreed beforehand

After maintenance work, immediately replace any safety devices removed and ensure they are fully functional.

5.2 Working at heights: fall protection

Fall protection, such as guard rails, safety nets, or personal protective equipment, is required from the following heights:

- From 0.0 m: above or on water or other substances where you can sink;
- From 1.0 m on stationary operating or maintenance stands, elevated stands, traffic routes, nonpermanently closed wall openings, staircases, and platforms;
- From 2.0 m: for construction work at other workplaces, on stands and traffic routes;
- From 3.0 m: for work on roofs;
- From 5.0 m: when using leaning ladders, you must wear personal protective equipment to prevent falling or take appropriate action to prevent the ladder from falling over, such as enlarging the area it stands on (e.g., with a cross base or wider ladder base), adding side supports or attaching the ladder at the top end;

 Where stands are elevated temporarily, use suitable aids for accessing them such as ladders, podiums, or work platforms.

5.3 Surrounding area

- Where one workplace is above or higher than another, ensure that employees on the lower workplace level are not at risk and any traffic routes crossing it are protected;
- Protect openings in the ground, such as manholes, sewers, etc. during and after the work using appropriate means e.g., with expandable barriers, warning signs, weight bearing, and non-movable covers, etc.

5.4 Scaffolding

 Comply with the safety instructions for work scaffolding when awarding contracts for and erecting scaffolding.

Minimum requirements:

- You may only erect, substantially alter, or remove scaffolding if you are fit for and familiar with such work and under professional supervision (e.g., site foreman, site manager, etc.);
- In the area of traffic, mark scaffolding clearly where it will be noticed and prevent it from being hit by traffic;
- Using formwork panels is prohibited;
- Attach the scaffold release certificate (copy/ duplicate) on the scaffolding where clearly visible;
- An expert appointed by the scaffolding user must inspect the scaffolding for obvious defects:
 - · Whenever it is used for the first time;
 - After every longer work interruption;
 - After a storm, heavy rain, frost, or other period of bad weather;
 - Scaffolding systems at least once a month;
 - Other scaffolding at least once a week.
- Do not use any scaffolding until after it has been completed and tested (release certificate on the

- scaffolding);
- Do not climb onto mobile ladder scaffolds until they have been stably erected and protected against accidental movement with locking devices. You may only move them if you have ensured there are no people, objects, or materials on them.

5.5 Working on ladders

You may only carry out any work on leaning ladders if such work:

- Is only brief and within easy reach;
- Does not require great effort;
- Does not involve awkward postures;
- Does not require a wide range of tools and can be done with only one hand;
- You can transport tools and materials safely;
- If the fall height is over 5 m, you may only work if you use personal protective equipment to prevent falling or
- The ladder was prevented from falling over, e.g., by enlarging the area it stands on or attaching it at the top.

Using leaning ladders

- Lean the ladder at the specified angle of between 65° and 75°;
- Prevent it from slipping;
- In traffic areas, take precautions to prevent it from being hit;
- The ladder must protrude 1 m beyond where you get on or off;
- Do not use the topmost three steps/rungs, as there is nowhere you can hold on and there is also a greater risk of the ladder slipping.

Stepladders

- Do not use stepladders as leaning ladders unless they are specially designed;
- Only use the uppermost rungs if there is somewhere above where you can hold on; this also applies to moving from the stepladder to other standing places.

6 Working in special hazardous areas

Do not carry out any work

- in and on tanks, bunkers, pipelines, pits, manholes, sewers or similar;
- in areas with a danger of gas or explosive atmosphere;
- with live parts in certain areas;
- in the area of ionizing radiation

until after the safety procedures have been determined (e.g., obtaining release certificate for tanks/hot work/ switching off fire alarm systems, etc.) and under appropriate supervision.

You may only begin work near 110 kV overhead lines without reporting/providing information to the electricity grid control center (+43/50304/15-6721) if you have ensured that the horizontal/vertical distance from a crane boom, tool, or vehicle part to a 110 kV line conductor is never less than 5 m; you must also note this for permanent installations.

6.1 Working in hazardous CO areas

- You may only enter hazardous gas areas if agreed with the plant responsible;
- Carbon monoxide (CO) danger zones are labeled accordingly;
- If you inhale gases containing CO, there is an acute risk of poisoning that can lead to death.

7 Plant traffic

7.1 Road traffic

- The Austrian road rules (StVO) apply to the roadways on the plant premises;
- Failure to observe traffic regulations will be punished.

7.2 Vehicle traffic inside buildings

- Driving vehicles and parking inside plant buildings is generally prohibited;
- Exceptions are made where operations require and in designated traffic areas.

7.3 Special vehicles

- Exercise caution with special vehicles that are long or wide, carrying hot or hazardous materials, as their stopping distances may be longer and views of other road users restricted;
- Never force such vehicles to maneuver abruptly, even if it means you have to give way.

7.4 Plant railway

- Crossing the tracks is only permitted at the approved railroad crossings;
- Where the railroad line is straight, keep the safety zone clear (safe distance of 1.8 m measured from the track on both sides) at all times;
- will determine a larger safety zone to be kept clear;
- Observe the minimum clearance outline for the train and cars;
- Before starting any work in the safety zone, notify the transport controller+43/50304/15-4646;
- Follow the railroad staff's instructions at all times.

7.5 Load securing

 The vehicle driver and loader must ensure that the load is properly secured.

8 Safety markings and warning devices

- Please note audio and visual alarms:
- You must pay attention to and comply with signs and barriers:
- Removing safety markings and barriers without authorization is prohibited;
- Examples of safety markings—see Annex.

9 Chemical work materials

The safety procedures for using chemical work materials, such as cleaning agents, solvents, coatings, corrosive substances, and similar, are available in HQSU (in the registry of working materials) in the form of material safety data sheets and general fact sheets and must be followed.

Basic rules for handling chemical work materials:

- Keep your work space meticulously clean;
- Eating, drinking, smoking, and storing foodstuffs, drinks, and tobacco in the work area is prohibited;
- Avoid contact with your skin, eyes, and clothing.
 Wash clothing affected and do not wear again until after cleaning;
- After work, wash your hands and face with soap and water, then apply skincare (moisturizing) cream;
- If you have any problems, go to the plant medical center:
- Ensure that work materials do not come into contact with the ground, surface water or sewer system. Exceptions are when used for the intended purpose (e.g., dishwashing agent);
- Dispose of used or waste materials, residue, dilutions and empty containers, as indicated in the waste management policy.

Storage

 Outside the designated store, only the material quantities required for immediate work progress will be provided;

- Do not under any circumstances fill or store work materials in food containers (e.g., drinking vessels, beverage bottles);
- Prevent gas cylinders from falling over, protect them from heat radiation, and replace protective caps after use.

9.1 Markings

Markings on pipelines, gas cylinders, etc.—see
 Annex

10 Explosive atmospheres (zones)

- No ignition sources may exist or be taken into explosive atmospheres;
- Potential ignition sources include, for example, naked flames, sparks, smoking, hot surfaces, or non explosion-protected electrical equipment;
- Non explosion-protected electronic equipment for communication in explosive atmospheres is only permitted if it is switched off and stored in such a way as to prevent the device from falling and the battery from possibly being destroyed with sparking (pockets that can be closed).

11 Physical risks

11.1 Radiation protection

 The radiation protection areas are secured and labeled.

Radiation protection officers:

- voestalpine Stahl GmbH.....+43/50304/15-2293
- Steel & Service Center GmbH +43 50304/19-576

12 Further information

- You will find the laws that have to be displayed on the Intranet;
- You can find out more about health and safety issues relating to your job and workplace in HQSU under Evaluation.

Concluding remark:

 Only if you comply with these safety instructions can you play a proactive role in ensuring safety at voestalpine in Linz. We are also counting on you to abide by the rules and regulations applying to your workplace.

SLAB SEGMENT

Blast furnace

General

In the blast furnace we use the prepared ore (sinter) together with coke and flux. The hot blast of air blown in causes combustion and reduction processes. They then melt the pig iron (at 1,350–1,500°C). Byproducts of the process are blast furnace slag (1,200–1,400°C) and gas.

2. Personal protective equipment (minimum requirements)

In the area of the blast furnaces:

- · Hard hat for hot operations
- · Flame retardant protective clothing
- · Safety goggles
- · Safety shoes, heat resistant soles
- Additional protective equipment as indicated in section 3
- Warning: do not wear any underwear (socks, shirt) made of man-made fibers.

In the area of the blower station (GBZ):

- Hard hat
- · Safety shoes
- Safety goggles in designated areas

3. Hazards and action

SMELTING PROCESS

Hazard:

 Risk of burning with hot liquid metal and liquid slag

Action:

- Personal protective equipment (see section 2)
- Do not climb over pig iron and slag runners during tapping.

Hazard:

- Risk of poisoning from blast furnace gas (high CO content)
- Upper furnace
- Furnace top
- Dust cyclone
- GBZ 1
- GBZ 2

Action:

See section 6.1 "Working in hazardous CO areas"

Hazard:

 Risk of crushing during automatic charging

Action:

- Audio signal and warning light
- Only enter area when accompanied by person familiar with system

Hazard:

Moisture

Action:

 Do not let water come into contact with liquid pig iron—risk of oxyhydrogen explosions.

Hazard:

 Risk of crushing from the taphole drill and plugging machine

Action:

 Caution when there is a start warning (horn, flashing light)

4. Signing on and off

Blast furnace 5 control room +43/50304/15-5948
 Blast furnace 6 control room +43/50304/15-5949
 Blast furnace A control room +43/50304/15-5950
 GBZ 1 control room +43/50304/15-4542
 GBZ 2 control room +43/50304/15-6768

Contact

office +43/50304/15-3291

	Person responsible
	for GBZ shift+43/50304/15- 75602
•	Day shift supervisor's office
	(normal working hours only) +43/50304/15-2333
•	Used oil delivery notification
•	(normal working hours only) +43/50304/15-9828
Mai	ntenance responsible
•	Electric workshop supervisor +43/50304/15-6623
•	M&R+43/50304/15 -2012
•	Mechanics shift 2 +43/50304/15- 73208
•	or +43/50304/15 -5749
•	GBZ mechanics +43/50304/15- 8917
•	Electrical/I&C coordinator +43/50304/15-3867
•	Mechanics +43/50304/15 -5998

Coking plant

1. General

In der Kokerei wird Steinkohle unter Luftabschluss in Kammern erhitzt. Dabei entstehen Koks und Kokerei-Nebenprodukte wie aromatische Kohlenwasserstoffe, Kokereigas, Steinkohlenteer.

Personal protective equipment (minimum requirements)

2.1. For work on the furnace top and upper gas gallery

- Hard hat for hot operations
- Safety goggles
- Flame retardant protective clothing
- Safety footwear (boots), heat resistant soles
- Additional protective equipment to be agreed with the customer

2.2. Coal byproducts

- Hard hat
- Safety goggles
- Acid proof protective clothing
- Safety footwear (boots)
- Additional protective equipment to be agreed with the customer

Hazards and action

COKING

Hazard:

 Coke oven and blast furnace gas in oven base (risk of poisoning)

hazardous CO areas"

Hazard:

Action:

■ Risk of crushing on

See section 6.1

"Working in

upper gas gallery and furnace top from rolling stock, such as pusher, charging car, automatic quenching car, etc.

Risk of burning

 Audio and visual signals

Action:

Hazard:

■ Flue dust

Action:

Safety goggles

Hazard:

■ Conveyors

Action:

 See operating and maintenance instructions

COAL BYPRODUCTS

Hazard:

Risk of explosion and fire

Action:

■ See section 10 "Explosive atmospheres (zones)"

Hazard:

 Coke oven gas in power house (risk of poisoning)

Action:

■ See section 6.1

"Working in
hazardous CO areas"

Hazard:

 Risk of burning in sulfuric acid unit

Action:

- Plunge bath and emergency shower
- If you come into contact with acid, rinse thoroughly with water immediately
- Personal protective
- equipment (see section 2.2)
- Wearing safety goggles mandatory

4. Signing on and off

- Coal byproducts plant control room +43/50304/15-4374
- Coking monitoring station +43/50304/15-**75068**

5. Contacts

5.1.	During	normal	working	hours
------	--------	--------	---------	-------

	Maintenance (coking)	+43/50304/15 -6558
	or	+43/50304/15 -8134
	or	+43/50304/15 -6890
•	Control room (coal byproducts) .	+43/50304/15 -4016
	or	+43/50304/15 -4170
	Office	+43/50304/15-8495

Maintenance responsible

•	Electric workshop supervisor	+43/50304/15 -73588
•	M&R	+43/50304/15 -3226
	Mechanics	+43/50304/15- 5986

5.2. Outside normal working hours

	Heating	•••••	+43/664/8360873
•	Battery .		+43/664/8360872

■ KW plant +43/664/8360876

Raw material supply/sintering plant

1. General

This area is engaged in planning, managing, unloading, storing and internal logistics concerning raw materials (coal, ores, pellets, coke and oil) for the sintering plant, coking plant and blast furnaces.

In the sintering plant, fine grained iron ores, limestone chips and circulating components that cannot be used direct in the blast furnace are sintered together with fine grained coke dust at temperatures over 1,200°C to form larger pieces (fused together superficially). They are then passed through a screening unit and crusher to achieve a grain (5–40 mm) that can be used in the blast furnace.

2. Personal protective equipment (minimum requirements)

- Hard hat
- Safety footwear (boots)
- Additional protective equipment to be agreed with the customer

3. Hazards and action

CRANES

Hazard:

- Risk of collision when working within minimum clearance
- Erecting scaffolding or mobile cranes

Action:

 Report to and agree with the offices responsible or coordinator

MEROS, DeNOx FLUE GAS TREATMENT

Hazard:

Chemicals used

Action:

- Acid proof clothing
- Safety goggles
- Emergency shower

SINTERING PLANT

Hazard:

Action:

■ Conveyors

 See operating and maintenance instructions

SINTERING PLANT, SINTERING BELT, LEVEL 3

Hazard:

Action:

- Gas leak in inflatable hood (CO gas)
- See section 6.1 "Working in hazardous CO areas"

4. Signing on and off

	Coal unloading foreman +43/664/836 0902
•	Harbor foreman +43/50304/15-75650
•	Process supply foreman +43/50304/15-73601
	E control room +43/50304/15-5905
•	Sintering belt 5 foreman +43/50304/15-73028
	or +43/50304/15-9707

Sintering belt control room +43/50304/15-5883

5 Contacts

٠.	Ountable	
•	Coordinator	+43/50304/15-9128
	Office	+43/50304/15-2409
	Shift supervisor	+43/50304/15-4039

Maintenance responsible

■ See blast furnace, section 5

Materials center

1. General

At the center, metallurgical materials, e.g., LD and blast furnace slag, are turned into a wide range of products such as granulated slag, drainage gravel, sandblasting media, blast furnace layer mix, etc. The materials center facilities are distributed across the plant and as such pose various different dangers.

2. Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Additional protective equipment as indicated in section 3

3. Hazards and action

GRANULATION, SLAG PIT, SKULL PROCESSING

Hazard:

 Risk of burning from liquid slag and handling oxyacetylene torches

Action:

- Hard hat for hot operations
- Flame retardant protective clothing

BUNKERS, CRUSHERS, AND SCREENING UNITS

Hazard:

Action:

- Dust formation
- Fine dust mask
- Safety goggles

4. Signing on and off

•	SG40 supervisor's office
	Granulation +43/50304/15- 75210
	or +43/664/8361967
•	SG60 materials supervisor's office +43/50304/15-77070
	or +43/664/6155452
•	Container scales +43 50304/15- 5901
	or +43/664/8361917
•	LD slag pit +43/50304/15- 73006
•	LD plant+43/50304/15- 73552
	or+43/50304/15 -5933

•	MUT plant +43/50304/15- 589 6
•	Blast furnace slag beds +43/50304/15- 7355 5
•	Crusher +43/664/8364830
•	ERG plant +43/664/8360231
•	Landfill +43/664/6155618
•	Skull processing +43/664/8361352
5.	Contacts
•	Coordinator +43/50304/15- 419 0
	Office+43/50304/15- 589 4

Slab processing

General

In slab processing, surface defects are eliminated from the slab by removing material. In addition, the slabs are trimmed and divided. They are transported away by heavy goods vehicles.

The scrap sorted and weighed at the scrap yard is transported to the steel mill by chutes and used in the crucible. Further, flame cutting work is carried out with automatic oxyacetylene and manual cutting machines. In the KL bay, slabs are divided, trimmed and flame cutting work carried out. A water-cooled oxyacetylene torch and various manual cutting machines (Secator) with feed are available.

Personal protective equipment (minimum requirements)

- Hard hat
- Safety goggles
- Safety footwear (boots)

3. Hazards and action

SLAB PROCESSING

Hazard:

Risk of burning from hot slabs

Action:

 Keep clear, do not step on slabs

KL BAY

Hazard:

 Risk of burning with hot slabs, flying sparks, and manual scarfing

Action:

 Keep clear, do not step on slabs

Hazard:

 Dust formation when turning slabs

Action:

Safety goggles

Hazard:

 Parts breaking off or projecting from the slabs

Action:

Keep clear

4. Signing on and off

•	Slab processing
	foreman's office +43/50304/15- 7396 4
•	Scrap yard weighing office +43/50304/15-73675
•	Alloy store office +43/50304/15- 602 0
5.	Contacts
•	Slab processing shift
	supervisor +43/50304/15- 675 3
•	Scrap yard/slab store
	shift supervisor +43/50304/15- 668 3
_	Office 142/50204/15 6001

SMELTING METALLURGY

Slab production

1. General

The pig iron, scrap, flux, and alloying agents are melted in the crucible and refined with oxygen. After alloying and refining the steel, in secondary metallurgy the steel solidifies in the continuous casting plants to form a strand and is divided into slabs. In addition to steel, LD slag and crucible gas (CO content) are also produced.

Personal protective equipment (minimum requirements)

- Hard hat for hot operations
- Flame retardant protective clothing
- Safety goggles (must generally be worn)
- Safety shoes
- Warning: do not wear any underwear (socks, shirt) made of man-made fibers.

3. Hazards and action

SMELTING METALLURGY

Hazard:

- Dust
- Risk of burning from
- liquid pig iron
- liquid steel
- liquid slag

Action:

 Personal protective equipment (see section 2)

Hazard:

 Crucible ejection in the event of a fault

Action:

 Crucible liner warning (audio and visual signal) on all platforms in the crucible area with indication to keep clear

Hazard:

- Risk of poisoning from crucible gas (CO content) in
- flue gas analysis
- containers,
- all crucible platforms from/including 14 m platform,
- ladle furnace 1,
- briquetting/ granulation,
- secondary dust removal

Action:

See section 6.1 "Working in hazardous CO areas"

SLAB PRODUCTION (CONTINUOUS CASTING PLANT)

Hazard:

 Risk of burning from liquid steel and slag

Action:

- Personal protective equipment (see section 2)
- During casting, stepping into/crossing the danger areas in the mold with the yellow markings is strictly prohibited.

CC3/CC4 control station +43/50304/15-73683

CC5/CC6/CC7 control station +43/50304/15-75063 Crucible gas control station +43/50304/15-4665 5. Contacts Crucible plant shift supervisor +43/50304/15-75617 or +43/664/6155960 Plant technician senior crane operator +43/50304/15-**75594** or +43/664/8360586 Secondary metallurgy shift supervisor...... +43/50304/15-4716 or +43/664/6155581 Continuous casting shift supervisor +43/50304/15-9293 or +43/664/6155598 or +43/664/6157174 Smelting metallurgy office +43/50304/15-6360

Slab production office +43/50304/15-5965

STRIP SEGMENT

Hot rolling

1. General

In the hot rolling mill we roll the continuous cast slabs supplied from the steel mill into coils of various widths, lengths, and thicknesses. The rolling temperature is up to 1.200°C.

2. Personal protective equipment Minimum requirements

- Hard hat (hot helmet in furnace area)
- Safety shoes

3. Hazards and action

FURNACE OPERATIONS

Hazard:

 Risk of burning with hot slabs and scale

Action:

 Keep clear, do not step on slabs

Hazard:

 Risk of poisoning with coke oven and blast furnace gas (CO content)

Action:

- Stationary gas detector with visual signal (danger gas) and audio signal (horn)
- Carry mobile CO detector with you
- See section 6.1
 "Working in hazardous CO areas"

Hazard:

 Pacemaker may be destroyed by SMC (skid marks induction heating)

Action:

 Information sign: no access for pacemaker wearers

4. Signing on and off

■ Furnace control station +43/50304/15-**6077**

■ Finishing line maintenance +43/50304/15-77732

- Wide strip line shift supervisor .. +43/50304/15-**6352**
- Day shift supervisor +43/50304/15-**6631**
- Wide strip line office +43/50304/15-**6936**
- Maintenance office +43/50304/15-**77273**

Finishing, packing

1. General

FINISHING: here we inspect, oil, weld, or divide steel strip (electrogalvanized, cold, hot-dip galvanized, and organically coated strips) to the required dimensions and to customer specifications.

COILS AND PACKAGES: we pack material units to customer specifications (with steel bands, paper, and wood).

2. Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Long-sleeved clothing ı.

Hazards and action 3.

FIN	11SH	ΗN	IG
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Hazard:

Action:

Do not touch plates

Risk of cutting

yourself on plates with sharp edges

Signing on and off 4.

- I line 1 main control station +43/50304/15-77350
- I line 2 main control station +43/50304/15-77349
- I line 3 main control station +43/50304/15-73461

KWW 2, Bay 7, Gate 67, Column G9-G11, level 1

- I line 4 main control station +43/50304/15-73346 Surface treatment center, Bay V4, Gate 16
- I line 5 main control station +43/50304/15-74105
- Finishing shift supervisor +43/664/615 **5722**
- Packing shift supervisor +43/664/615 **5723**
- I line 6 inspection station +43/50304/15-**76029** or +43/50304/15-**76040**
- Output control station +43/50304/15-76032

Contacts 5.

Shift supervisor, see section 4

Pickling, cold rolling

Allgemeines

KWW 2

PICKLE 2: bonding the unpickled hot strip to form continuous strip. Pickling to remove the scale from the hot strip using hydrochloric acid. Acid treatment and iron oxide production.

TANDEM: cold rolling the pickled hot strip to customer specifications (five-stand roll line).

KWW 3

CONTINUOUS TANDEM: cold rolling the pickled hot strip to customer specifications (five-stand roll line)

Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Long-sleeved clothing

3. Hazards and action

Tandem pickling (BETA), regeneration

Risk of burning with acid

Action:

- Acid proof clothing
- Safety goggles
- Emergency shower

Hazard:

Action:

Risk of cutting yourself on plates with sharp edges Do not touch plates

Signing on and off

Cold rolling supervisor's office .+43/50304/15-77292
 KWW 2, Bay 3, Gate 56a
 KWW 2, Bay 6, Gate 68
 KWW 3, Bay T2, Gate 100

■ BG12 maintenance +43/50304/15-**74237**

•	Cold rolling supervisor's office +43/50304/15-77292
•	Shift supervisor +43/50304/15- 77403
	Maintenance day shift
	supervisor +43/50304/15- 9952
	or +43/664/836 2803
-	Office +43/50304/15-9820

Organic coating

1. General

BABE: surface treatment (corrosion protection) and coating with paints for decorative finishes on steel strip (cold, electrogalvanized, and hot-dip galvanized).

Personal protective equipment (minimum requirements)

See section 3

3. Hazards and action

STRIP COATING LINE (BARE)

Risk of explosion with solvents

Action:

See section 10 "Explosive atmospheres

Hazard:

 Risk of burning with acids and alkalis

sharp edges

Action:

- Safety goggles
- Acid proof clothingEmergency shower
- Hazard: Action:

Risk of cutting yourself on plates with

Do not touch plates

Signing on and off

- BABE 1 main control station +43/50304/15-6872
 KWW 2, Bay B0, Gate 52
- BABE 2 main control station +43/50304/15-3344
 Surface treatment center, Bay B2, Gate 128

Contacts

- See section 4.
 - BABE 1—shift supervisor +43/664/615 5975
- BABE 2—shift supervisor +43/664/615 5975

Hot-dip galvanizing

General

Recrystallization annealing and hot dipping of cold-rolled wide steel strip with a zinc coating including the pre and post treatment steps required.

Personal protective equipment (minimum requirements)

- Hard hat
 - Safety shoes
- Long-sleeved clothing

3. Hazards and action

HOT-DIP GAI VANIZING LINES

Hazard:

 Risk of burning with liquid zinc

Action:

Do not enter designated area

Hazard:

 Risk of suffocation from nitrogen and inert gas in the area of the furnace and dancer roll storage

Action:

 Use mobile O2 detector

Hazard:

 Risk of burning with acids and alkalis

Action:

- Safety goggles
- Acid proof clothing
- Emergency shower

Hazard:

Action:

 Strong magnetic fields from galvannealing coils and magnetic filters
 Information sign: no access for pacemaker wearers

4. Signing on and off

- FVZ 1 main control station +43/50304/15-6912 KWW 2, Bay V1, Gate 52
- FVZ 2 main control station +43/50304/15-75990

- Surface treatment center, Bay V3, Gate 15
- FVZ 3 furnace control station +43/50304/15-2770
 Surface treatment center, Bay B3, Gate 133
- FVZ 4 main control station +43/50304/15-77121
 Surface treatment center, Bay B4, Gate 145
- FVZ 5 main control station +43/50304/15-8356
 Surface treatment center, Bay B5, Gate 154a

Contacts

See section 4

•	If you have any special questions, please contact the
	shift supervisor:

•	FVZ 1 shift supervisor	+43/664/615 5793
	FVZ 2 shift supervisor	+43/664/615 5791
	FVZ 3 shift supervisor	+43/664/615 9806
	FVZ 4 shift supervisor	+43/664/836 2724
	FV7.5 shift supervisor	+43/664/836 2724

Annealing, skin pass rolling, texturing, electrogalvanizing

General

BATCH ANNEALING LINE: the cold-rolled strips as rolled are recrystallization annealed on static bases in an inert gas atmosphere.

SKIN PASS ROLLING LINE: light rerolling of annealed strips to optimize their surface finish, improve formability, and flatten them

CONTINUOUS ANNEALING LINE 1: in this process the cold-rolled strips as rolled are recrystallization annealed, skin pass rolled, inspected, and finished in one pass.

CONTINUOUS ANNEALING LINE 2: cold-rolled electric strip is continuously cleaned, annealed, coated with insulating paint, and finished.

TEXTURING: creating a specified surface roughness on the work rolls using various texturing processes (EBT, EDT, SBT).

ELECTROGALVANIZING LINE: electrolytic galvanizing of annealed, skin pass rolled, and cold-rolled wide steel strip to improve corrosion protection and surface finish.

Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Long-sleeved clothing

3. Hazards and action

SKIN PASS STAND

Hazard:

 Risk of cutting yourself on plates

with sharp edges

Action:

Do not touch plates

CONTINUOUS ANNEALING LINE 1

Hazard:

Risk of cutting

yourself on plates with sharp edges

Action:

Do not touch plates

Hazard:

 Risk of burning yourself with acids and alkalis

Action:

- Acid proof clothing
- Emergency shower
- Safety goggles

Hazard:

 Risk of suffocation from nitrogen and inert gas in the area of the furnace and dancer roll storage

Action:

- Use mobile O2 detector and also
- Cell phone or radio

CONTINUOUS ANNEALING LINE 2

Hazard:

- Risk of cutting yourself on plates with sharp edges
- Risk for your eyes of paint splashing in the coater area

Action:

- Do not touch plates
- Safety goggles
- Emergency shower

Hazard:

- Risk of suffocation from nitrogen and inert gas in the furnace area
- Risk of burning yourself with alkalis

Action:

- Wearing a mobile gas detector mandatory
- Safety goggles
- Emergency shower

ELECTROGALVANIZING

Hazard:

 Risk of explosion with H2

Action:

See section 10 "Explosive atmospheres

Hazard:

- Risk of burning yourself with electrolytes
- Acids
- Alkalis

Action:

- Acid proof clothing
- Safety goggles
- Emergency shower

Hazard: Action:

 Strong magnetic fields in galvanizing area Information sign: no access for pacemaker wearers

Hazard:

 Risk of cutting yourself on plates with sharp edges

Action:

■ Do not touch plates

4. Signing on and off

- HGL monitoring station+43/50304/15-**6487** KWW 2, Bay 5, Gate 68a, Column E13/14
- EDT texturing control station ... +43/50304/15-**77087** KWW 2, Bay 8, Gate 61d
- HGL/skin pass shift supervisor ... +43/664/615 8567
- Cont. annealing 1 main control station+43/50304/15-**75564**

KWW 2, Bay 9, office extension, southwest

- Cont. annealing 1 shift supervisor +43/664/615 5713 Cont. annealing 2 main control station +43/50304/15-**76064** Bay B6
- Cont. annealing 2 process engineer +43/664/883 20716
- ELO main control station +43/50304/15-4715
 Surface treatment center, Bay V4, Gate 16

- ELO shift supervisor +43/664/615 5971
- Shift supervisor, see section 4

SERVICE SEGMENT

Mobile systems engineering

1. General

The mobile systems engineering department is primarily concerned with repairing and maintaining mechanical components and crane systems. It is the central service provider for voestalpine Stahl's entire Linz plant with a main workshop and several smaller facilities located around the premises. The crane and equipment service personnel mostly works on the facilities on site.

2. Personal protective equipment

In the area of the work place

- Hard hat
- Safety shoes
- Additional protective equipment as indicated in section 3

Hazards and action

Hazard:

Action:

 Machining - grinding work, sparking, debris flying off Wear safety goggles

Hazard:

Action:

 Risk of cutting yourself on plates and work pieces with sharp edges Do not touch plates or work pieces

4. Signing on and off

	0 0	
•	Crane service workshop +4	43/50304/15 -75525
•	Equipment workshop	+43/664/615 8358
•	BG83 facility	+43/664/615 8353
	ELO facility	+43/664/615 8357

	Management	 +43/50304/15 -5551
Offic	e	 +43/50304/15-5553

Equipment service:

	Person responsible for process	
	Slab	+43/50304/15-2608
•	Person responsible for process	
	Strip	. +43/50304/15-4495
•	Supervisor	+43/50304/15-77709
Cran	ne service:	
•	Person responsible for process	+43/50304/15-77810
•	Supervisor	+43/50304/15 -75525
	Agency staff management	
	Contract staff coordinator	+43/50304/15-74471

Electrical engineering center

General

The electrical engineering center is the main service provider for servicing, repairing, and building new electrical equipment at the Linz plant and for external customers. Work is not only carried out at the BG28 and main electrical workshops (EHW) but also on site at the customer's premises during the day, sometimes the night shift, or on standby duty.

Personal protective equipment (minimum requirements)

In the area of the work place in the workshops

- Safety shoes
- Protective clothing

3. Hazards and action

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Action:

 Machining - grinding work, sparking, debris flying offSpäne Wear safety goggles

Hazard:

Action:

 Risk of cutting yourself on plates with sharp edges ■ Do not touch plates

Hazard:

Action:

Risk of injury when winding

Wear safety goggles

The following areas are responsible for maintenance, safe operation, and in the event of faults

- Low-voltage systems
- Lighting
- Socketsystems

+43/50304/15-2240

■ Transformer room 6/0.4 kV/0.5 kV

+43/50304/15-6721

	Fire alarm, Heating and Ventilation systems	+43/50304/15 -9383
•	Lifting gear - mechanical	+43/50304/15- 77810
	Lifting gear - electrical Elevators	+43/50304/15- 2707
4.	Signing on and off	
BG2	8, main electrical workshop	
•	EHW: repairs reception	. +43/50304/15 -73707
•	Office	+43/50304/15 -3435
5. Elev	Ansprechpartner Reparat	
	Supervisor	+43/50304/15 -2707
	Fault reception	+43/50304/15- 5974
Syst	ems and control engineering	
•	Supervisor	+43/50304/15- 2240
Elec	trical machines	
	Supervisor	+43/50304/15 -5973
Air	conditioning and fire alarm syste	ems
	Supervisor	+43/50304/15 -9383
Sen	sors and I&C	
•	Supervisor	+43/50304/15- 8858

Safety +43/50304/15-**2563**

Refractory engineering

1. General

At the brick making plant we produce MgO-C bricks and various backfilling, gunning, and repair compounds. In addition, we also repair used slider and dummy plates at the brick plant.

Ladle linings, RH vessels and moving parts with refractory linings.

Personal protective equipment (minimum requirements)

- Hard hat
- Protective clothing
- Safety shoes

Hazards and action

Hazard:

 CO gas risk from proximity to blast furnace A

Action:

See section 6.1"Working in hazardous CO areas"

4. Signing on and off

- Brick making plant control room +43/50304/15-4835
- Day shift supervisor +43/50304/15-4837

5. Ansprechpartner

Siehe Punkt 4.

Materials management & divestment

General

The main process of materials management and divestment is the divisional service provider for inventory management, incoming goods, proper storage, supply, and recycling of general spare parts (ART) and special spare parts (RT), materials and supplies (HiBe), and is divided into:

- Inventory management
- Central warehouse, ART, divisional incoming goods, and plant-wide goods distribution
- Warehouses and stores for spare parts, materials, supplies, and small parts
- Divestment of equipment and spare parts

No smoking except in designated smoking zones.

Personal protective equipment (minimum requirements)

There are no particular risks for visitors or special protection required as long as the visitor or guest is accompanied by the main process manager or taken to the storage areas by a person responsible for the store and remains under supervision.

Hazards and action

No protection required

Signing on and offn

When entering and leaving the stores on site (except central warehouse), anyone from outside the company must without exception report to the foreman in the relevant store and sign in and out the visitors book (store 11).

At the central warehouse, report to the main entrance $\mbox{-}$ goods issue.

Store no.	Description	Telephone no.
1	Central warehouse	+43/50304/15- 77631
2	Automatic small parts store	+43/50304/15- 77631
3	Oils, greases, fuels	+43/50304/15- 75818
5	Steel mill spares store	+43/50304/15- 6085
6	Blast furnace, ore preparation, metallurgical materials	+43/50304/15- 4261
7	Coking plant	+43/50304/15 -5056
8	Power plant supplies store (spares)	+43/50304/15 -4261
11	Rolling mill (spares)	+43/50304/15- 77375
18	Crane parts, plates, section steel	+43/50304/15 -77545
30	Pit furnace bay	+43/50304/15- 73053
63	Tool issue	+43/50304/15- 77545
92	VAAN spares store	+43/50304/15- 77375
131	Heavy plate	+43/50304/15- 77375
9	Rolling stock workshop (LogServ)	+43/50304/15 -5887
10	Heavy duty vehicle repairs (vehicle workshop)	+43/50304/15 -5887
146	Car workshop	+43/50304/15- 5887

5. Contacts

•	Management	+43/50304/15 -2531
•	Office	+43/50304/15 -8453
•	Inventory management	+43/50304/15 -5915
•	Central warehouse	+43/50304/15 -3038
•	Divestment	+43/50304/15 -3206
	Shift supervisor or	
	foreman	+43/50304/15 -5994
	or	. +43/664/615 5181

Warehouses and stores for spare parts, materials, supplies, and small parts

•	Person responsible for process	+43/50304/15-77616
	Supervisor	+43/50304/15- 74192

Mechanical engineering center

1. General

The mechanical engineering center is primarily involved in repairing and servicing mechanical components. This work is mainly carried out in the workshops.

Personal protective equipment (minimum requirements)

- Safety shoes
- Wear safety goggles in all the bays, working and production areas except for the traffic routes marked BLUE.

3. Hazards and action

Hazard:

Action:

 Machining - grinding work, sparking, debris flying off Wear safety goggles

Hazard:

Action:

- Risk of cutting yourself on plates and work pieces with sharp edges
- Do not touch plates or work pieces

4. Signing on and off

- Machining +43/50304/15-**6898**
- Welding and steelwork +43/50304/15-77716
- Metalworking and hydraulic shop +43/50304/15-3285
- Testing service +43/50304/15-**77414**

Contacts

See section 4

Test engineering and analysis

General 1

The test engineering and analysis department uses both physical and chemical methods to determine material properties in its laboratories and other facilities.

2. Personal protective equipment (minimum requirements)

Visitors must wear sturdy footwear and long-sleeved clothing (work coat) as long as the visitor or guest is accompanied by the person responsible for the lab or someone instructed by him/her to do so. The lab manager or employee may require appropriate PPE for special situations or operations.

No long-sleeved clothing is required for metallurgical and surface analysis.

Hazards and action 3.

Hazard:

Action:

 In the mechanical and physical test engineering facilities there is the risk of injury from sawdust or falling parts.

Hand protection

Signing on and off

Mechanical and physical test engineering

- Sample workshop...... +43/50304/15-6702
- Mechanical and physical

test lab +43/50304/15-6577

Cold-rolled strip/

- surface treatment test lab +43/664/8364750 Auxiliary foundry and refractory

- materials test lab+43/50304/15-6108

Ansprechpartner

Mechanical and physical test engineering See section 4

Metallurgical and surface

•	analysis +43/50304/15- 77323
•	or +43/50304/15- 77963
•	Metallurgy process analysis +43/50304/15-3908
•	or +43/50304/15- 4698
•	Environment and process analysis +43/50304/15-75733
•	or +43/50304/15- 4926
•	Non-destructive material testing +43/50304/15-5851
	or +43/50304/15 -6675

Electricity

General

The power plant generates electricity from blast furnace, coke oven, crucible and natural gas, and—in emergencies—light heating oil for the smelter. In addition, the following media are also used or supplied to the smelter: cooling water, feed water, steam, and heavy heating oil. Another task is supporting the district heating network. Power distribution supplies the internal and external companies on the plant premises with electricity from the power plant and 110 KV grid.

2. Personal protective equipment (minimum requirements)

- Hard hat
- Protective clothing
- Safety shoes

3. Hazards and action

Hazard:

 Working with high and low-voltage switchgear

Action:

 See instructions for outside companies or non-power distribution departments working in power distribution electrical systems or working in cable tunnels and switchgear—safety regulations

Hazard:

 Cable tunnels (losing your way, fire, gas)

Action:

 See instructions for working in cable tunnels and switchgear—safety regulations

4. Signing on and off

Pow	ver supply
•	Network control center, BG56,
	level 2, control room +43/50304/15 -5916
	or +43/50304/15 -6721
•	Mobile shift technician
	Electricity distribution +43/664/615 5202
•	Safeguarding, switching, grounding engineer
	(09:00-15:00) +43/50304/15- 3263
Pow	ver plant and block 07
•	Water-oil system, BG56,
	level 2, control room +43/50304/15- 73409
5.	Contacts
•	Power plant shift foreman
	(00:00-24:00) +43/50304/15-3235
•	Plant management (day)
	(07:00-16:00) +43/50304/15-3876
•	Plant engineer (day)
	(07:00-16:00) +43/50304/15-73078
	Office (day)
	(07:00-15:00)+43/50304/15-5913

Technical media

Gas. water. and steam pipe networks

1. General

The gas, water, and steam pipe networks are for supplying the various media from where they are produced (e.g., coking plant, blast furnace, steel mill) to where they are used (coking plant, blast furnace, steel mill, central blower station, hot and cold rolling mills, etc.).

2. Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Additional protective equipment as indicated in section 3

Hazards and action 3.

GAS, WATER AND STEAM PIPE NETWORKS

Hazard:

Action: Risk of CO gas in the

■ See section 6.1

"Working in

- immediate vicinity of drainage systems and when moving blind
 - hazardous CO areas" plate valves

4. Signing on and off

- Heating system shift foreman +43/50304/15-2777 or +43/664/836 0406 Pipeline engineering, north +43/50304/15-3241 or +43/664/615 5276
- Pipeline engineering, south +43/50304/15-9713 or +43/664/836 0402
- Systems engineering heating system +43/50304/15-4386

•	Heating system shift foreman	
	(00:00-24:00)	+43/50304/15 -2777
	or	. +43/664/836 0406
•	Plant management (day)	+43/50304/15 -9045
	or	. +43/664/615 5267
•	Plant engineer (day)	+43/50304/15 -3067
	or	. +43/664/615 7176
•	Plant engineer (day)	+43/50304/15 -3282
	or	. +43/664/615 8697

Gasometer/metallurgical gas network/GG standalone grid/mixed gas stations 1-4 and flare systems 1-6

1. General

The gasometers are used for maintaining pressure in the metallurgical gas network or buffering to compensate for differences between production and consumption. There is a separate gas holder for each metallurgical gas network: blast furnace, coke oven and crucible gas. Flare systems 1–6 prevent excess pressure in all the gas networks.

Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Additional protective equipment as indicated in section 3

3. Hazards and action

GASOMETER

Hazard:

 Risk of CO gas in the immediate vicinity of the gas holder or when approaching the gasometer plate

Action:

See section 6.1"Working in hazardous CO areas"

Hazard:

 Risk of burning yourself with gasometer sealing agent P (gasometer oil)

Action:

- Protective clothing
- Hand protection
- Safety goggles

METALLURGICAL GAS NETWORK/GG STANDALONE GRID/ MIXED GAS - STATIONS 1-4 AND FLARE SYSTEMS 1-6

Hazard:

 Risk of poisoning from blast furnace, crucible and coke oven gas (CO content)

Action:

■ See section 6.1 "Working in hazardous CO areas"

4.	Signing on and off
•	Central gasometer control room +43/50304/15-4028
•	Heating system control room +43/50304-15-4046
•	Heating system shift foreman +43/50304/15-2777
	or +43/664/836 0406
5.	Contacts
	Heating system shift foreman
	(00:00-24:00) +43/50304/15-2777
	or+43/664/836 0406
	Plant management (day) +43/50304/15-9045
	or +43/664/615 5267
	Plant engineer—water/
	metallurgical gas (day)+43/50304/15-3067
	or +43/664/615 7167
	Plant engineer—industrial

Heating system

1. General

The heating system includes facilities for supplying/disposing of (drains) steam (20 bar and 6 bar) and water (process water, wastewater, pure water, bath water, feed water, sewage, hot water, and district heating) for the smelter and external partners. The various media have to be treated accordingly regarding pressure, temperature, and purity. In addition, there is also a back pressure turbine in the heating system for generating electricity from steam.

Personal protective equipment (minimum requirements)

- Flame retardant protective clothing
- Hard hat
- Safety shoes
- Additional protective equipment as indicated in section 3

Hazards and action

HEATING SYSTEM

Hazard:

 Risk of burning yourself with chemicals

Action:

- Acid proof clothing
- Safety goggles
- Emergency shower

PIPES AND SEWERS (MANHOLES)

Hazard:

- Risk of CO gas areas

Action:

- See section 6.1
 "Working in hazardous CO areas"
- 4. Signing on and off
- Heating system shift foreman +43/50304/15-2777
 or +43/664/836 0406

•	Heating system shift foreman
	(00:00-24:00) +43/50304/15-2777
	or +43/664/836 0406
•	Plant management (day) +43/50304/15-9045
	or +43/664/615 5267
•	Plant engineer (day) +43/50304/15-3282
	or +43/664/615 8697
•	Plant engineer—wastewater
	(day)+43/50304/15-4456
	or +43/664/836 2128

Crucible gas production

General

Crucible gas production and steam generation are located in the LD 3 steel mill, with the outdoor crucible gas facilities on the north side of the mill. The crucible gas occurring during steel production is removed, cooled, cleaned and, depending on composition and requirements, piped to the gas mixing stations or flared. The steam occurring in the heat recovery boilers is supplied to the steel mill itself or metallurgical steam network.

Personal protective equipment (minimum requirements)

- Hard hat for hot operations
- Safety shoes
- Safety goggles
- Additional protective equipment as indicated in section 3

3. Hazards and action

Hazard:

Action:

- Risk of CO gas during blower operation, work on the outdoor facilities or while a goggle valve is being operated.
- See section 6.1 "Working in hazardous CO areas"

4. Signing on and off

•	LD 3 crucible gas control station +43/50304/15-73029
	or +43/50304/15- 4665
•	Heating system shift foreman +43/50304/15-2777
	or +43/664/836 0406

Contacts

•	Heating system shift foreman
	(00:00-24:00) +43/50304/15-2777
•	Plant management (day) +43/50304/15-2396
•	Plant engineer (day) +43/50304/15- 75070

LD 3 water treatment

General 1

LD 3 water treatment means cleaning, cooling and chemically treating the circulating cooling water for supplying the steel mill facilities.

2. Personal protective equipment (minimum requirements)

- Hard hat
- Safety shoes
- Additional protective equipment as indicated in section 3

Hazards and action

Hazard:

Risk of CO gas in the gravel filters, roof area, and cooling towers for the RH systems

Action:

■ See section 6.1 "Working in hazardous CO areas"

Hazard:

- Scalding if you fall into the hot water tank (temperature up to 55°C)
- Risk of drowning

Action:

- Personal protective equipment to prevent falling

Hazard:

 Risk of burning from chemicals in the metering area

Action:

- Acid proof clothing
- Safety goggles
- Emergency shower

4. Signing on and off

- Water treatment control room
 - WAB 1 +43/50304/15-77022
- Heating system shift foreman +43/50304/15-2777

•	Heating system shift foreman
	(00:00-24:00) +43/50304/15-2777
	or +43/664/836 0406
•	Plant management (day) +43/50304/15-2396
•	or +43/664/615 5282
•	Plant engineer (day) +43/50304/15- 75070
	or +43/664/615 5282

SUBSIDIARY COMPANIES

Europlatinen GmbH

1. General

At voestalpine Europlatinen GmbH, we stamp the sheet metal supplied in coils and strips in our die-cutting systems to make blanks (cut parts) and formed parts. Depending on what the customer requires, we can join two or more blanks with our laser welding systems.

2. Personal protective equipment (minimum requirements)

Safety shoes

3. Hazards and action

Hazard:

 Risk of cutting yourself on plates with sharp edges

Action:

Do not touch plates

Hazard:

Action:

- Strong magnetic fields in clamping devices
- Information sign: no access for pacemaker wearers

4. Signing on and off

As instructed or authorized:

- HR office in office building—first floor
- Report to shift leader/supervisor responsible or requester

5. Contacts

•	Office +43/50304/15- 6351
•	QSU management +43/50304/15-77648
	or +43/664/615 9870
	or+43/50304/15 -3005
	or +43/664/836 3160
	Production management +43/50304/15-77647
	or +43/664/836 2533
	After around 17:00 (Mon 06:00–Sun 06:00) you can
	only contact the shift supervisor.
•	Shift supervisor +43/50304/15-3752

or +43/664/615 9882

Giesserei Linz GmbH

General

At the Linz foundry we primarily manufacture steel castings for energy generation, production, and mechanical engineering.

We first melt the steel cast in sand molds as basic steel at the steel mill and then alloy it in the ladle furnace at the foundry.

In the non-ferrous metal (NEM) foundry we melt the material and then cast 95% in ingot molds and the remainder in sand molds. We produce maintenance-free friction bearings and gate valves for pressing tools.

Personal protective equipment (minimum requirements)

- Hard hat for hot operations
- Safety goggles (must generally be worn)
- Flame retardant protective clothing
- Safety shoes
- Additional protective equipment for the relevant activities as per clothing list

3. Hazards and action

METALLURGICAL GAS NETWORK/GG STANDALONE GRID/ MIXED GAS - STATIONS 1-4 AND FLARE SYSTEMS 1-6

Hazard:

Action:

 Risk of burning yourself with liquid steel, on heat treated or preheated castings

Keep clear

MAGNETIC TESTER

Hazard:

Action:

Strong magnetic fields

 Information sign: no access for pacemaker wearers

CASTING PITS

Hazard:

 Risk of falling into temporarily unsecured casting pits

Action:

Keep clear of pit area

VOD PLANT

Hazard:

Hazardous gas areas with CO during operation

Action:

■ See section 6.1 "Working in hazardous CO areas"

Signing on and off

Steel foundry

•	Maintenance	+43/50304/15- 75432
	or	+43/664/615 9035
•	Crane department	+43/50304/15 -73270
	or	. +43/664/883 20253
NEN	4 foundry	

Supervisor	+43/50304/15 -6946
or	. +43/664/615 9049

5. Contacts

•	Steel foundry	+43/664/615 9047
	NEM foundry	+43/664/615 9031

Grobblech GmbH

General

Processes at voestalpine Grobblech: four-high stand, furnaces, finishing, cladding, and heavy plate pressing. Regular range: plate 5–150 mm thick. After heating the feedstock that comes from the steel mill or cladding line (clad plate packages) to about 1,200°C, we remove the scale from the slabs in the scale washer. Rolling is carried out in the four-high stand (four rolls). If required, after rolling the heavy plates can be cooled quickly with water. These plates go through the following machines:

- Leveling machine for achieving the required flatness
- Double cut shears, cut to length shears, or flame cutting machines for cutting the plates
- Test systems (ultrasound for testing the interior structure), turning grate for visual inspection
- Annealing furnace for heat treatment as required

In clad plate package assembly, scale is removed from the individual plates by a continuous shot blaster, they are polished by belt grinders, treated by a rubbing unit, assembled to form a package, bonded by automatic welding machines and then heated for package rolling.

On the cladding completion line, after heat treatment, scale is removed from the roll-bonded clad plate packages by the continuous shot blaster, the plates are cut to shape using plasma torches, flattened on the cold-rolling machine, the cladding polished by belt grinders and finally they are packed.

The heavy plate plant produces boiler heads and other parts on a hydraulic press. In two assembly areas the boiler heads consisting of several parts are built. We have a dishing press and two flanging machines to produce different designs for boiler heads and cones.

Personal protective equipment (minimum requirements)

- Hard hat
- Hard hat for hot operations—pusher/pit/continuous furnaces
- Safety shoes

Hazards and action

PUSH/PIT/CONTINUOUS FURNACES

Hazard:

- Risk of burning from hot slabs and scale;
 risk of burning and
- poisoning from fuel gases (CO content)

Action:

- Flame retardant protective clothing
- See section 6.1 "Working in hazardous CO areas"

ROLLING STAND, FINISHING, CLADDING, HEAVY PLATE

PRESSING

Hazard:

- Risk of cutting yourself on plates with sharp edges
- Risk of crushing on roller conveyors and when handling plate products

Action:

- Keep clear, do not touch plates
- Keep off roller conveyors

CLADDING, PACKAGE ASSEMBLY, COMPLETION,

HEAVY PLATE PRESSING

Hazard:

- Risk of crushing from handling plate products
- Risk of cutting yourself on plates with sharp edges

Action:

 Keep clear, do not touch plates

PIT FURNACE BAY AB

Hazard:

Action:

Keep clear

- \blacksquare Hot transport
- Risk of scale flaking
- Risk of collision
- Hot slabs are

transported by overhead crane 507 to the feeder for the 4.2

m four-high stand

4. Signing on and off

Four-high stand and furnaces

- Pusher furnace control room +43/50304/15-**6187**
- Pit furnace control room +43/50304/15-**6027**
- Rolling stand control cabin +43/50304/15-73087

Finishing

Cladding

Package assembly

- Supervisor +43/664/615 5258

Completion

- Supervisor +43/664/615 6175

Head fabrication

Plant maintenance

■ Supervisor +43/50304/15-**6365**

Contacts

Plant maintenance supervisor ... +43/50304/15-6365

Logistik Service GmbH Commercial vehicle and rolling stock workshops

1. General

The workshops service and repair all kinds of vehicles.

Personal protective equipment (minimum requirements)

- Wearing bump cap or hard hat mandatory
- Safety shoes

3. Hazards and action

No protection required

4. Signing on and off

- Rolling stock workshop +43/732/6598-**6183**
- Commercial vehicle workshop .. +43/732/6598-**5931**

Contacts

See section 4.

Engine and railcar workshop, and workshop for maintaining rail and safety installations

General

Inspection and repair work is carried out on rolling stock in the engine and railcar workshop, while the workshop for rail and safety installations is responsible for building new and maintaining existing stock.

2. Personal protective equipment (minimum requirements)

- Wearing bump cap or hard hat mandatory
- Special protective equipment as required when signing on or receiving orders/instructions

3. Hazards and action

No protection required

4. Signing on and off

	Customer service center +43/50304/15-4877
	or +43/50304/15 -9379
•	Workshop supervisor +43/50304/15- 73197
	or+43/50304/15- 5249

Contacts

See section 4.

Steel & Service Center GmbH

1. General

Preprocessing and distributing cut plates, slit steel strip, cut shapes, construction parts and components of various grades, as well as further processing services such as deburring, sand blasting, annealing, and flattening.

EMERGENCY NUMBERS for Industriezeile:

On the production lines:

	Ambulance	0	144
•	Fire	0	122
_	Delige	Λ	122

Production area D (south ring): see 1.2 Emergency numbers – general section

Personal protective equipment (minimum requirements)

- Hard hat
- Exceptions:

Industriezeile production site

Plant production site

- Bay 7 without crane operation
- Bay 8
- Protective clothing for the given task in accordance with clothing regulations
- Safety shoes

3. Hazards and action

Hazard:

Action:

- Risk of cutting yourself on plates with sharp edges
- Risk of burning yourself on hot plates, offcuts, construction parts and components

Do not touch plates

Hazard:

 Risk of crushing on roller conveyors and when handling plate products

Action:

 Keep off roller conveyors

Hazard:

Action:

- Strong magnetic fields on magnet stacking units
- Information sign: no access for pacemaker wearers

Signing on and off, internal Shear cuts:

- Production management +43/50304/15-72520 or +43/50304/15**-72521**
- Plant production site Shift supervisor +43/50304/15-6878
- Industriezeile production site Shift supervisor +43/50304/15-**72532**

Cut shapes:

- Production management+43/50304/15-72966 or.....+43/50304/15-**72986**
- Foreman +43/664/6158899

Parts and components:

- Production management+43/50304/15-73760 Process manager +43/664/8363504
- Process manager +43/664/8364235

Contact 5.

IIMS management +43/50304/15-72573 or...... +43/50304/15-**72410**

Annex

You will find the most frequently used gases with their most important properties and the safety procedures listed below.

Pipeline marking to VAN 230.05			
Medium—gas pipeline*/gas cylinder mar- king	Properties	Safety procedures	
Compressed air*	May contain dirt particles	Do not direct the compres- sed air jet at your body	
Oxygen •	Oxidizing	Prohibited: • Using it to clean workwear • Using it to improve air quality • Using it to operate pneumatic machines • Wearing greasy gloves to operate the valve Fire hazard!	
Nitrogen	Displaces oxygen (asphyxiant)	Prevent nitrogen from collecting	

Acetylene *	Flammable Flammable Toxic due to contamination	Prevent • Leaks • Observe no smoking • Maintain gas burning systems
Coke oven gas * Blast furnace gas * Crucible gas *	Flammable Toxic (due to CO content)	Note keep clear of the area Note no smoking Prevent leaks Maintain gas burning systems Special safety procedures (use gas detectors and gas masks, do not work in the area alone) Note details in SVA: safety procedures in hazardous CO gas areas

Argon '	Displaces oxygen (asphyxiant)	Prevent argon from collecting
Carbon dioxide (CO2)—in fire extinguishers	Colorless Non flammable Odorless (clove scent added) Liquid released solidifies	In an emergency (fire) there is both an audio alarm with a siren and a visual one with a flashing light If an alarm sounds or you detect a clove scent, leave the danger area and go outdoors CAUTION: The room is flushed 30 seconds after the alarm signal—lowering the oxygen content—DANGER OF ASPHYXIA

*) Note: Officially authorized deviation from marking to ÖNORM Z 1001 (VAN 230.05)

Color coding for piped media	Pipeline markings with colored rings		
RAL 6002 Water		Potable water Pure water Bath water Hot water Steam condensate Feed water Salt water, brine Process water River water Muddy water Wastewater Soft water	
RAL 3002 Steam		(hardness degree 7) Steam <12 bar Steam 12–25 bar Steam >25 bar	
RAL 5010 Air		Blower air, turbo air Hot air Compressed air <8 bâr Compressed air ≥8 bâr Coal dust Sand-air mixture	

		,
RAL 1012 Gas		Blast furnace gas, cleaned
		Raw blast furna- ce gas
		Coke oven gas
		Mixed (blast furnace and coke oven) gas
		Crucible gas
		Shielding gas
		Natural gas
		Acetylene
		Liquefied gas (propane, butane)
		Carbonic acid
		Nitrogen
		Argon
		Oxygen
		Hydrogen
		Ammonia
RAL 2000 Acid		Acid Acid, concentrated
RAL 4001 Alkali		Alkali Alkali, concentrated
RAL 8012 Petroleum for hydraulic sys-	X	Hydraulic oil, gear oil
tems and gears	XCode letter for specifications	more stringent

RAL 8012 Fire- resistant fluids	HFA HFB	Oil in water emulsion (filtrate) Water in oil emulsion
	HFC	Aqueous solution
	HFD	Anhydrous liquid
	Labelling to VDM 24320	A 24317 and
RAL 8012 Flammable fluid		Tar oil Gasoline Benzene (light oil, coal)
RAL 9005 Tar		Pure tar
RAL 7003 Vacuum	No color coding	

Hazard symbols/pictograms

OLD	NEW	DESCRIPTION
		Highly toxic: Very small quantities can cause death or also chronic damage to your health from inhaling, swallowing or ab- sorbing through the skin. Example: hydrogen cyanide, potassium cyanide Toxic:
		Small quantities can cause death or also chronic damage to your health from inhaling, swallowing, or absorbing through the skin. Carcinogenic substances are also labeled "toxic". Example: formaldehyde
		Easily flammable: Fluid substances: flash point 0°C to under 21°C. Solid substances: Dust explosions possible Examples: gasoline, aluminum powder Highly flammable: Fluid substances: flash point below 0°C and boiling point max. 35°C Example: ethylene oxide Gaseous substances: Flammable range with air, highly flammable liquefied gas
		Examples: propane gas, natural gas





Environmental hazard:

If it escapes to the environment, it can cause an immediate or subsequent danger to the environment (water, ground, air) or living organisms.



Explosive hazard:

Explosion from flame ignition

Example: picric acid salts



Oxidizing:

Reacts with other substances, especially combustible ones, generating great heat.

Example: oxygen





Corrosive:

In contact with organic tissue may dissolve it. **Example:** sulfuric acid over 15% in water



Nο pictogram

Harmful:

Can cause death or also chronic damage to health from inhaling, swallowing, or absorbing through the skin.



Nο pictogram

Irritant:

Can cause inflammation from short-term, longer or repeated contact with the skin or mucous membranes. Example: sulfuric acid 5-15% in water

No symbol	Health risk
No symbol	Gas cylinder: Gases under pressure, compressed, liquefied, cryogenic, or dissolved gases
No symbol	Exclamation mark

In addition to the hazard pictograms on the labels, you will also find the signal words **DANGER** for high level of risk or **CAUTION** for "less serious" risk categories.

Examples of labels Emergency signs

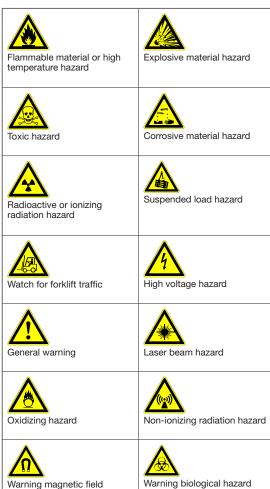


Mandatory action signs



Hard hat, eye and hearing protection required	Face shield required
Dust mask required	Respirator required
Hand protection required	Foot protection required
Protective clothing required	Safety harness must be worn
Disconnect before maintenance	Disconnect before opening
Wash hands	Drinking water
Gas cylinders must be chained	Safety vest must be worn

Warning signs





Fall hazard



Slip hazard



Low temperature hazard



Irritant or harmful hazard



Gas cylinder hazard



Battery hazard



Explosive atmosphere hazard



Hot surface hazard



Crush hazard



Constriction hazard



Pinch point/entanglement hazard



Automatic start-up hazard



Warning optical radiation



Optical damage due to radiation from natural or artificial light sources



Yellow and black stripes: obstacles and danger areas



Red and white stripes: no admittance

Prohibition signs

No smoking	No fire, open flame, or smoking
No pedestrians	Do not extinguish with water
Not drinking water	Authorized personnel only
No access for industrial vehicles	Do not touch
No cell phone	Do not switch
No pacemakers	No access with metallic implants
No food or drink	No unauthorized ladder use
Do not stand here	No reaching in

Fire safety signs

Fire alarm telephone	Fire extinguisher
Fire hose	Fire alarm (manual)
Ladder	

Gebäudeverzeichnis

BG 2Prüftechnik und Analytik
BG 3 Kokerei, Prüftechnik und Analytik
BG 4 Forschung und Entwicklung
BG 5Gebläsezentrale
BG 6 WFL
BG 8MCE Industrietechnik
BG 9 Materialwirtschaft & Devestitionen, vivo
BG 12 Technikum Roheisen, Schmiede
BG 13 Mechanisch Technisches Zentrum
BG 15Betriebsräte
BG 17 Betriebsmedizin
BG 18 Wertstoffzentrum
BG 19 Schmelzmetallurgie, Betriebsrat
BG 20 Technischer Service, Lichtpauserei, Zentralarchiv
BG 26 Betriebsmedizin
BG 28 Elektrotechnisches Zentrum
BG 29Prüftechnik und Analytik
BG 31Zentrales Schaltgebäude
BG 33 Andritz Hydro
BG 34. Vorstand Technik, Grobblech, Technischer Service
BG 35Technischer Service
BG 36Band
BG 37Leitung Band
BG 38Bramme
BG 39 Anarbeitung, Prozessautomation Bramme,
Post-Service-Center, DK-Vermessung
BG 40 Innovationscenter Stahl
BG 41voestalpine AG
BG 44Gästehaus, Küche
BG 45Primetals
BG 47 Primetals , Geschäftsführung
BG 48 Primetals , Bautechnik
BG 49 Andritz Hydro
BG 52 Instandhaltung Stahlwerk
BG 54 Schrottplatz
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BG 5	5Giesserei
BG 50	6Kraftwerk
BG 5	7Forum Zukunft, Personalmanagement,
	Reisestelle, Stahlstiftung, Personalberatung
BG 5	8Nutzfahrzeug - Werkstätte
BG 6	3 Bilfinger MCE
BG 6	4 Bilfinger MCE
BG 6	5Bürogebäude FVZ 1- Babe 1
BG 6	6Lehrwerkstätte
BG 6	7 Anlagentechnik Bramme
BG 69	9Kontiglühe
BG 70	0Logistik Service
BG 7:	2Projektbaracke
BG 73	3Nasstrennanlage
BG 7	4 Primetals GmbH
	5Verkaufs- und Finanzzentrale
	6Bürogebäude Caseli
	7 Stahlwelt
	0Projektbaracke
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	2 Instandhaltung FVZ 4
	3Anlagenservice
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SG	25Feuerfesttechnik
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