

Wieland-Werke AG

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Section A – General

Part 2: Health, safety and environmental protection

The following delivery specifications of Wieland-Werke AG form part of the contract.
Any deviating specifications are to be agreed upon between the supplier/contractor and Wieland, and documented.

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Section A – General

Part 2: Health, safety and environmental protection

1. Management systems, statutory regulations

Wieland-Werke AG, with its sites in Ulm, Vöhringen, Langenberg and Villingen, is certified in accordance with ISO 14001, ISO 50001 and ISO 45001. For all the above-mentioned sites, a common company policy (www.wieland.com) exists in relation to this certification. The contractor must also adhere to this policy.

The contractor shall take into account all legal requirements and regulations in the scope of supply, in particular those resulting from the German Occupational Health and Safety Act (*Arbeitsschutzgesetz, ArbSchutzG*), the German Water Resources Act (*Wasserhaushaltsgesetz, WHG*), the German Federal Immission Control Act (*Bundesimmissionsschutzgesetz*) and the German Waste Management Act (*Kreislaufwirtschaftsgesetz, KrWG*), in each case in the current version, and carry out the measures prescribed by the approval authorities on his own responsibility.

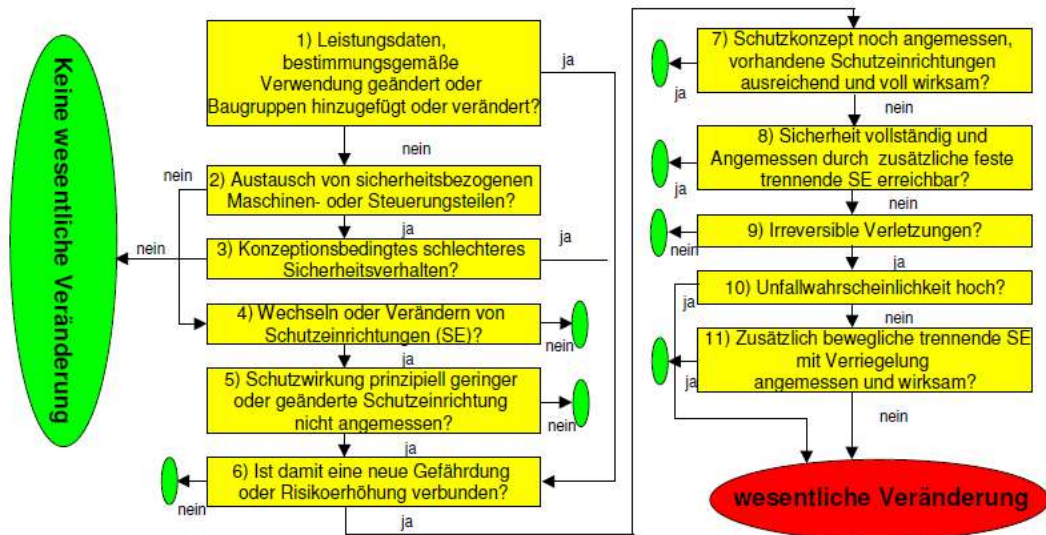
In principle, it is not permitted to make contact with the authorities on behalf of Wieland.

2. Projects and installations

2.1 Machinery Directive / German Machinery Ordinance

According to the EU Machinery Directive 2006/42/EC and the German Machinery Ordinance (9. ProdSV), the manufacturer is required to issue an EC Declaration of Conformity for each machine manufactured in order to certify the machine's conformity with the provisions of this Directive and this Ordinance, and to affix the CE marking. For machinery according to Annex IV of the Directive, one of the procedures according to Article 12 of the Directive must be applied.

The above also applies in the case of significant modifications to machinery/equipment as shown in the diagram below:



Legend:

DE	EN
Keine wesentliche Veränderung	No significant change
1) Leistungsdaten, bestimmungsgemäße Verwendung geändert oder Baugruppen hinzugefügt oder verändert?	1) Performance data, intended use changed or assemblies added or modified?
ja	Yes
nein	No

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2) Austausch von sicherheitsbezogenen Maschinen- oder Steuerungsteilen?	2) Replacement of safety-related machine parts or control system parts?
3) Konzeptionsbedingtes schlechteres Sicherheitsverhalten?	3) Design-related poorer safety behaviour?
4) Wechseln oder Verändern von Schutzeinrichtungen (SE)?	4) Change or modification of safety equipment (guards and protective devices)?
5) Schutzwirkung prinzipiell geringer oder geänderte Schutzeinrichtung nicht angemessen?	5) Protective effect in principle reduced, or modified safety equipment not appropriate?
6) Ist damit eine neue Gefährdung oder Risikoerhöhung verbunden?	6) Is this associated with a new hazard or an increase in risk?
7) Schutzkonzept noch angemessen, vorhandene Schutzeinrichtungen ausreichend und voll wirksam?	7) Protection concept still adequate, existing safety equipment sufficient and fully effective?
8) Sicherheit vollständig und Angemessen durch zusätzliche feste trennende SE erreichbar?	8) Safety fully and adequately achievable by additional fixed guards?
9) Irreversible Verletzungen?	9) Irreversible injuries?
10) Unfallwahrscheinlichkeit hoch?	10) High probability of accidents?
11) Zusätzlich bewegliche trennende SE mit Verriegelung angemessen und wirksam?	11) Additional interlocking movable guards adequate and effective?
wesentliche Veränderung	Significant change

Risk assessment

The manufacturer is required to carry out a risk assessment to determine all hazards associated with his machine; he must design and build the machine taking his analysis into account.

The basis for the risk assessment, in addition to the above-mentioned Directive, is the standards EN ISO 13854, ISO 12100:2010, DIN EN ISO 13849 and DIN EN ISO 13857, as well as any machinery standards.

The risk assessment must be carried out before the machinery or installation is planned/designed. For this purpose, the danger points that are relevant for the operator are recorded, and a risk assessment is performed in accordance with DIN EN ISO 13849-1. The control functions must then be implemented in accordance with the determined required performance level (PLr).

Only approved components may be used for the realisation of safety-related control functions.

With the transfer into trial operation (see form FBHM-016), all safety devices must be functional. The updated safety assessment forms part of the final documentation and is therefore a requirement for acceptance of the system.

Declaration of Conformity, CE mark, Declaration of Incorporation

The procedure differs according to the different circumstances:

a) Complete deliveries of machinery and equipment

The contractor draws up the Declaration of Conformity and applies the CE mark.

He produces the risk assessment for the system, which forms part of the functional specification.

The risk assessment must be coordinated and prepared with our planning department before the technical realisation, in the course of the respective project planning steps, and is to be delivered upon the transfer into trial operation.

b) Machinery/equipment supplied by several manufacturersWith main contractor

The issuing of the CE mark is included in the scope of supply of the main contractor.

The main contractor is required to obtain the risk assessments for coordination with the contractors of the other trades in due time, e.g. from the machine designers to give to the

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electrical designers in good time before the electrical plans are drawn up. Wieland shall receive the risk assessments from all contractors no later than with the respective delivery.

Without main contractor

Wieland's project manager shall take the place of the main contractor.

The contractors for the individual assemblies and system parts shall produce a Declaration of Incorporation in accordance with the Machinery Directive.

Hazards arising from the system parts must be identified in good time in the project, discussed with the WWAG project manager, and documented.

2.2 System design**2.2.1 Basic requirements**Energy efficiency

Energetically effective and economically justifiable measures must be implemented at the contractor's expense, taking into account standard engineering practice and the current state of the art.

For the purpose of saving energy, the contractor shall investigate which units can be switched off or operated at reduced power under particular operating conditions, while maintaining operational safety.

When selecting units and machines, the highest energy efficiency (best available technology) shall be used. For electric motors in particular, please refer to the electrical delivery specifications. In the event of non-compliance with the energy efficiency values described in the order specification, the contractor (supplier) undertakes to provide a corresponding rectification free of charge to the client.

Meters are to be provided for each plant (entire plant) to be able to count inputs and outputs for all media (electricity, water, compressed air, acid, heat, wastewater, etc.) This is so that energy savings can be better tracked, energy efficiency increased, and a clear allocation established for billing purposes. For meter types, refer to the specific parts of the delivery specifications or coordinate with the specialist department.

Hazardous materials and substances hazardous to water

Hazardous materials and substances that are highly hazardous to water shall be avoided wherever possible (substitution principle). If hazardous materials or substances hazardous to water have to be used, approval must be obtained from Wieland in good time, and a safety data sheet submitted.

Waste/emissions

Waste/emissions (solid, liquid, gaseous) shall be specified. If necessary, suitable treatment/cleaning procedures shall be suggested. They shall be selected and specified by Wieland.

Cooling processes

Possible heat recovery options shall be specified. If a cooling system is required, it shall be selected and specified by Wieland (e.g. continuous cooling water flow or closed circuit cooling system). Any discharge of cooling water into the sewage system must be agreed with Wieland in advance.

Washing and rinsing processes, cleaning systems

For all washing and rinsing processes, the most water- and wastewater-saving technology possible shall be used. Wastewater quantities and qualities, as well as any waste water discharge points are to be agreed with Wieland in advance.

The use of organic solvents should be avoided wherever possible. If organic solvents are nevertheless used, the system must be enclosed in such a way that the loss rate remains as low as possible. Contaminated solvents must in principle be collected separately from other liquid waste and prepared for disposal.

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2.2.2 NoiseNoise emissions relevant to the workplace

Machinery must be designed and constructed in such a way that risks resulting from the emission of airborne noise are reduced to the lowest level, taking account of technical progress and the availability of means of reducing noise, in particular at source.

The level of noise emission may be assessed with reference to comparative emission data for similar machinery.

Technical measures have priority over organisational measures, and these in turn have priority over the use of hearing protection.

The operating instructions must contain the following information on airborne noise emissions from the machinery/equipment:

- the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A); where this level does not exceed 70 dB(A), this fact must be indicated;
- the peak C-weighted instantaneous sound pressure value at workstations, where this exceeds 63 Pa (130 dB in relation to 20 µPa);
- the A-weighted sound power level emitted by the machinery, where the A-weighted emission sound pressure level at workstations exceeds 80 dB(A).

These values must be either those actually measured for the machinery in question or those established on the basis of measurements taken for technically comparable machinery which is representative of the machinery to be produced.

In the case of very large machinery, instead of the A-weighted sound power level, the A-weighted emission sound pressure levels at specified positions around the machinery may be indicated.

Where the harmonised standards are not applied, sound levels must be measured using the most appropriate method for the machinery. Whenever sound emission values are indicated the uncertainties surrounding these values must be specified. The operating conditions of the machinery during measurement and the measuring methods used must be described.

Where the workstation(s) are undefined or cannot be defined, A-weighted sound pressure levels must be measured at a distance of 1 metre from the surface of the machinery and at a height of 1.6 metres from the floor or access platform. The position and value of the maximum sound pressure must be indicated.

Noise emissions relevant to environmental protection

Any noise emissions occurring outdoors shall be specified in good time in advance. Examples: Chimneys, exhaust pipes, fans, coolers, flow noise in pipes, air intakes, vents, etc.

Depending on the distance from neighbouring residential buildings, maximum permissible sound power levels are specified by Wieland for these emission sources.

In addition to the level of the site-dependent immission limit value, these also depend on the existing initial pollution.

Under the German Federal Immission Control Act, the night-time limits (22:00 – 06:00) are significantly lower than the daytime limits (06:00 – 22:00).

2.2.3 Radiation/laser protection

If X-ray equipment or lasers of class 3R or higher are used, the Wieland radiation protection officer or laser protection officers must be involved in the planning and procurement process in good time. The operation of X-ray equipment requires a permit from the occupational health and safety inspectorate (*Gewerbeaufsichtsamt*, GAA), which shall be obtained by Wieland's radiation protection officer. The contractor must provide evidence in advance that he has the specialist knowledge needed to place X-ray equipment into operation. In the case of lasers, the contractor or his laser protection officer is responsible for the safe use of the lasers from commissioning until the handover of the system to Wieland.

2.2.4 Water protection

All containers containing substances hazardous to water must be reported to Wieland in advance in the form of a list with dimensions, volume and contents.

Suitable spill containment systems must be provided for all containers.

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Handling of substances hazardous to water

A specialist company certification (*Fachbetriebszulassung*) in accordance with the applicable statutory regulations of the German federal and state governments is required for the construction and installation of systems or system components for handling substances hazardous to water.

When constructing and installing systems or system components for handling substances hazardous to water – in consultation with Wieland’s environmental protection department – all other laws and regulations of the German federal government and of the respective state (Ulm, Villingen: Baden-Württemberg; Vöhringen: Bavaria; Langenberg: North Rhine-Westphalia) must be observed.

In particular, the following points must be observed:

- Quality and design of containers and level probes (test marks, etc.)
- Size and design of spill containment systems for substances hazardous to water at installations
- Attachment of name plates to the aforementioned collection systems and their documentation
- Carrying out and documenting a leak test after completion of such spill containment systems
- Visible and easily accessible installation of all containers, pipes, fittings, apparatus, assemblies and other plant components
- Clear labelling of pipelines, valves and containers

2.2.5 Immission control

Exhaust air ducts or chimneys must be reported to Wieland in advance. For chimneys, a structural analysis must be provided.

For all exhaust gas and exhaust air systems, it must be ensured that exhaust air is discharged unimpeded, and vertically upwards where possible. The height of chimney outlets must be placed at least 1 m above the roof edge, or 1 m above the highest windows or building openings in the vicinity, to safely avoid a backflow of exhaust gas into the building. In the case of installations requiring a permit, the chimney height and design specifications often deviate from the above-mentioned heights.

Feasibility of emission measurements

To ensure that emission measurements can be carried out in a technically flawless and safe manner, a measurement section with sampling point shall be provided at a suitable location in consultation with Wieland.

Where applicable, the instructions in DIN EN 15259 (Requirements for measurement sections and sites) shall be observed.

2.3 Documents and official approval

The test documents for installation components (e.g. chimneys, pipelines, containers, drip pans, overflow protection devices, leak detectors, etc.) must be submitted no later than at the end of installation.

In the case of systems requiring approval, all documents required for the official approval (plans, diagrams, system descriptions) must be delivered by the agreed deadline as agreed with the client.

Please note: For all systems requiring approval, **construction may only commence once the relevant approval notice has been issued.**

3. Installation and construction sites

In our plants, we attach the greatest importance to health and safety, and demand optimum safety at every workplace. Before carrying out any work on our premises, you must take careful note of the relevant safety regulations on site.

Failure to observe the regulations may result in harm not only to yourself, but also to our employees. In the event of serious or repeated violations of the safety regulations, we will therefore notify both

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your company management and the relevant authorities. In addition, we reserve the right to ban you from our plant.

Furthermore, the protection of the environment and the economical use of energy have a high priority in our plants.

3.1 Health and safety information sheet

For all work and installation activities in one of our plants, the latest version of the respective “Health and safety information sheet for employees of external companies” must be observed. Here you will also find all emergency numbers as well as the contact persons for occupational safety, fire protection and environmental protection.

In addition, before starting work, a safety briefing – in particular on the special features at the site – must be carried out by the project manager in charge. A Wieland form must be signed to confirm having received this briefing and acknowledge having read the health and safety information sheet.

3.2 Construction Site Ordinance (*Baustellenverordnung, BaustellV*)

When planning and executing construction projects, in particular when scheduling work to be carried out simultaneously or consecutively, the following measures must be taken in accordance with the German Construction Site Ordinance.

This also applies to substantial alteration and demolition work.

Construction sites within the meaning of the Construction Site Ordinance are construction projects of the building trades as well as installations for building services engineering, in which buildings and structures are erected, modified or demolished. Mechanical engineering does not fall within the scope of the Construction Site Ordinance.

Advance notice of the construction site

If the duration of the work exceeds 30 days and more than 20 workers are employed at the same time or if 500 person-days are exceeded, an advance notice must be submitted to the occupational health and safety directorate (GAA) at least two weeks before the site is set up, containing at least the information specified in Annex I BaustellV.

Safety and health plan (SIGE plan)

If an advance notice according to 1. has to be submitted for a construction site on which employees of several employers are working, or if work involving particular risks as specified in Annex II BaustellV is performed there, a safety and health plan (SIGE plan) shall be drawn up prior to the setting up of the construction site.

The plan must indicate the safety and health provisions applicable to the construction site.

Construction site coordinator

One or more suitable coordinators must be appointed for construction sites where employees of several employers are working. Suitable coordinators must in principle have construction expertise and knowledge in the field of occupational safety.

At the Langenberg and Villingen plants, the coordinator and/or the SIGE specialist can be appointed via external partners.

During the planning of the construction project, the coordinator shall

- plan, prepare and coordinate the envisaged measures
- prepare the SIGE plan, and
- compile a document with later activities that are relevant to occupational safety (e.g. safety during cleaning work, maintenance work, ...)

During the execution of the construction project, the coordinator shall

- coordinate the application of section 4 of the German Occupational Safety and Health Act (*Arbeitsschutzgesetz, ArbSchG*)
- ensure that the contractors fulfil their obligations under this ordinance
- update and maintain the SIGE plan, and

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- organise and coordinate the cooperation by the contractors with regard to occupational health and safety.

3.3 Environmental protection on construction sites

Specific construction vehicles or equipment (excavators, vibrators, mobile fuel filling stations, etc.) must comply with safety standards to prevent environmental pollution. Before setting up a mobile fuel filling station, approval must be obtained from Wieland – with simultaneous specification of the installation site.

Waste/disposal

Solid or liquid waste or scrap materials (rinsing water, concentrates, cleaning cloths, sweepings, etc.) must be disposed of as follows:

- by taking away and disposing of properly
- by filling into containers or receptacles provided and assigned by Wieland for this purpose.
- For larger construction sites, a waste disposal coordinator must be appointed to coordinate procedures with the site's waste management officer.

In addition, the general terms and conditions for assembly apply (see delivery specifications, section A – part 3).