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| Employer  SAKO BRNO A.S.  Project  **Modernization of WtE Plant SAKO Brno**  Date  June 2024 |

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| Intended for    Document type    Date |
| Part III, Appendix A14.2  Steel Constructions for Process |



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| Project name | Modernization of WtE Plant SAKO Brno |
| Version | 1 |
| Date | 2024-06-30 |
| Documentation | Procurement documentation – Part III – Employer’s Requirements |

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# General

Unless otherwise specified the delivered steel shall be produced in accordance with the latest issue of EN 1090-1 and EN 1090-2.

The Contractor is responsible for keeping up to date with the Legal regulation and regulatory requirements including the EU regulations.

The design basis for the boiler steel structure shall be delivered for Employer’s review as part appendix C1 *Reviewable Project and Design Data*. The boiler steel structure shall be executed in minimum EXC2 or EXC3 always in relation to Czech national annex to EN 1993-1-1.

# Protective Treatment

Protective treatment by painting shall be in accordance with the latest issue of EN ISO 12944.

* EN ISO 12944-1: General Introduction
* EN ISO 12944-2: Classification of corrosion categories
* EN ISO 12944-5: Protective Paint Systems

Requirements in EN ISO 12944 or the specifications below are additions or replacements to the corresponding requirements in EN 1090-1.

In general, recommendations and the word "should" in EN ISO 12944, shall be regarded as requirements.

The scope of the documentation and the deadline for its submission are shown in the control plan.

The use of electro galvanization will not be accepted as corrosion protection.

The following corrosion categories for steel structures are to be used when choosing the painting system:

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| --- | --- | --- |
| Structure | Corrosion category | Expected Lifetime |
| Indoor steel structures | C2 | Very high |
| Outdoor steel structures | C3 | Very high |
| Exposed to weather conditions up to 6 months | C3 | Very high |
| Exposed to regular cleaning during operation | C4 | Very high |
| Exposed to condensate during operation | C4 | Very high |
| Exposed to corrosive environment\* | C5 | Very high |
| Bunker Silo and reception hall | C4 | Very high |

\* I.e. IBA basement, IBA handling, flue gas treatment, wastewater treatment, chemical rooms, stack, etc.

In acidic environments hot dip galvanizing will not be accepted as the only means of surface treatment.

# Control Plan

The control plan below shall be detailed and incorporated into the Contractor’s own project quality plan.  
  
If the Contractor has a preferred standard control plan, which in general fulfils the below outlined, such standard control plan may also be submitted for the Employer’s acceptance.

| **Subject** | **Reference** | **Method** | **Scope** | **Time** | **Accept criteria** | **Documentation** |
| --- | --- | --- | --- | --- | --- | --- |
| **Material** | **EN1090-2 Cp. 12.2** |  |  |  |  |  |
| Steel quality |  | Check of certificates delivery notes | 100% | Prior to fabrication | EN1090-2 Cp. 12.2.1 | Certificates and signed delivery notes |
| Lamination |  | Check of NDT-report | Subject demanded without lamination: 100% | Prior to fabrication | EN1090-2 Cp. 12.2.1 | Control form/Certificate |
| Filler material |  | Check of data sheets and delivery notes | 100% | Prior to fabrication | EN1090-2 Cp. 12.2.1 | Control form and signed delivery notes |
| Bolts |  | Check of marking and delivery notes | 100% | Prior to fabrication | In accordance with project | Control form and signed delivery notes |
| **Fabrication** | **EN1090-2 Cp. 12.3** |  |  |  |  |  |
| Planning of production |  | Study | 100% | Prior to fabrication | Practicable production plan – EN1090-2 Cp. 9.3.2 | Checked quality plan |
| Contact areas in friction connections |  | Visual measuring | 100% | At factory | EN1090-2 Cp. 8.8 | Control form |
| Components from Subcontractor |  | Visual or measuring | 100% | Prior to reception on site | Faultless components | Control form |
| Planning of production |  | Study | 100% | Prior to fabrication | Practicable production plan | Checked quality plan |
| Finished component from factory |  | Visual | 100% | Receipt on site | Faultless component | Control form |
| **Welding** | **EN1090-2 Cp. 12.4** |  |  |  |  |  |
| Welders qualification |  | Certificate | 100% | Prior to fabrication | EN1090-2 Cp. 7.4.2 | Weld certificate |
| WPS |  | Data sheet | 100% | Prior to fabrication | EN1090-2 Cp. 7.4.2 | WPS |
| Welded connections |  | Visual/NDT control | EN1090-2 Cp. 12.4.2 | After welding | EN1090-2 Cp. 12.4.2 | Control form |
| **Mechanical components for connections** | **EN1090-2 Cp. 12.5** |  |  |  |  |  |
| Bolted connections, marking and torque |  | Visual. | 100% | During execution | EN1090-2 Cp. 12.5.1 and 12.5.2 | Control form |
| **Surface treatment** | **EN1090-2 Cp. 12.6** |  |  |  |  |  |
| Offered system specifications |  | Data sheet | Every system in use | Prior to contract | EN ISO 12944-5 and description | Description of systems |
| Contractors description of work/ -Instruction |  | Data sheet | Every system in use | Prior to execution | EN ISO 12944-5 | Note from paint Contractor |
| Procedure for reparation works |  | Data sheet | Every system in use | Prior to execution | EN ISO 12944-5 | Note from paint Contractor |
| Steel surfaces, degree of corrosion, faults in surfaced |  | Visual | Every time | Prior to painting | EN ISO 12944-4  EN 1090-2 Cp. 12.6 | Control form |
| Mechanical cleaning, degree of cleaning |  | Visual | Every time | Prior to painting | EN ISO 12944-4 | Control form |
| Paint, appearance |  | Visual | Every time | During execution | EN ISO 12944-7 | Control form |
| Finish control, coating thickness after treatment |  | Visual and electromagnetic measuring of thickness | Spot checks | After execution | EN ISO 12944-7 | Control form |
| **Assembly** | **EN1090-2 Cp. 12.7** |  |  |  |  |  |
| Planning |  | Study | 100% | Prior to assembly works | Practicable assembly | Checked assembly plan |
| Provisional supports |  | Study | 100% | Prior to assembly works | Acceptable Provisional supports | Checked plan |
| Geometry adjacent building parts |  | Visual and measurement  EN 1090-2 Cp. 12.7.3 | Control of interface to adjacent buildings | Prior to fabrication works/ commencement of assembly | EN1090-2 Cp. 11 and  Cp. 12.7.2+3 | Control form |
| Foundation bolts |  | Visual and measurement | Placement  Tightening | Prior to cast-in and during tightening | EN1090-2 Cp. 11.2.3.2 | Control form |
| Geometry complete construction |  | Measurement | Primary measurements: 100%  Secondary measurements: Spot check | After execution | EN1090-2 Cp. 12.7.3 | Control form |