



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Code for construction of field equipment, industrial pipe
welding engineering
(English Translation)**

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1 General Provisions

1.0.1 This Code was formulated with a view to improving the construction level of welding

1.0.1 This Code was formulated with a view to improving the construction level of welding

engineering for equipment in construction site of engineering construction and the industrial metallic pipeline, strengthening the quality control in construction process of welding engineering, and guaranteeing the engineering quality and engineering safety.

1.0.2 This Code is applicable to the welding engineering construction of the materials

made of carbon steel, aluminium and aluminium alloy, copper and copper alloy, titanium and titanium alloy (low alloy titanium), nickel and nickel alloy as well as zirconium and zirconium alloy.

1.0.3 The welding methods applicable to this Code include gas welding, shielded metal arc welding, submerged arc welding, tungsten inert gas arc welding, metal inert gas arc welding, self-shielded flux cored arc welding, electroslag welding and stud welding.

1.0.4 The welding engineering construction shall be carried out according to the requirements of the design document and this Code.

1.0.5 Where the design document needs be modified or the material needs be substituted, it

shall be approved by the original design organization and issued with written document.

1.0.6 This Code shall apply in conjunction with the current national standard "Code for Construction and Acceptance of Field Equipment, Industrial Pipe Welding Engineering" (GB 50683).

1.0.7 The welding engineering construction shall meet the relevant requirements of the relevant current national standards on energy conservation and emission reduction, environmental protection, safety technology as well as labour protection, etc.

1.0.8 The construction of field equipment, industrial pipe welding engineering shall not only in accordance with this Code, but also comply with the requirements specified in the current relevant standards of the nation.

2.0.1 Field equipment

It refers to the equipment manufactured or installed in construction site of engineering construction.

2.0.2 Welding responsible personnel

The personnel obtaining the required professional knowledge of welding by training, education or practice, being qualified with his capacity and designated to take responsibility of welding and relevant manufacture activities.

2.0.4 Welding procedure pre-specification

The welding procedure specification in need of qualification.

2.0.5 Welding procedure qualification

The process of preparing test piece and test specimen, conducting the test and assessing the result according to welding procedure pre-specification.

2.0.6 Welding procedure qualification report

The document recording the relevant test data and test result during the process of welding procedure qualification.

3 Basic Requirements

3.0.1

The requirements of welding technical specification shall be specified in design document.

3.0.2

The qualifications and responsibilities of welding responsible personnel and welding operation personnel shall meet the following requirements.

3.0.3

The supervision organization and general contracting organization shall be equipped with welding responsible personnel.

3.0.4

The construction organization shall meet the following conditions.

3.0.7 Before the welding for the engineering is conducted, the fixtures for welding and heat

treatment shall be inspected and calibrated, their operating performance shall be confirmed to be stable and secure. The measuring instruments and equipment for inspection and test shall be in validity period for verification or calibration.

4 Materials

4.0.1

The base metal adopted in welding engineering shall be provided with quality proof documents of manufactory and shall meet the requirements of the current national standard and design document.

4.0.3

The welding materials shall meet the requirements of design document and those specified as follows.

4.0.5

The construction site shall be set with systems of welding materials for preservation, stoving, washing, distributing, application and recycling. The management of the storage site, stoving and decontaminating facilities as well as the management during storage keeping and application of welding materials shall meet the requirements of the current professional standard "Rules of Quality Management of Welding Materials" (JB/T 3223).

5.0.1 After mastering the welding performance, the welding procedure qualification

must be carried out before engineering welding.

5.0.5 The procedure measures for welding procedure qualification of test piece on groove processing, fitting up and cleaning shall meet the requirements of relevant chapters in this Code.

5.0.7 The welding procedure qualification shall be carried out in the company of itself. The test pieces for welding procedure qualification shall be welded by skilled welders in the company. Inspection and test may be entrusted to the organization engaged in inspection and test with corresponding qualification.

5.0.8 Records shall be made in good condition during the welding procedure qualification.

After the qualification is finished, a welding procedure qualification report shall be prepared, which shall be examined and verified by the welding technical director.

5.0.9 Welding procedure pre-specification, welding procedure qualification report, inspection and test report, qualification test specimen and other documents shall be filed for preservation.

6 Welding Skill Qualification

6.0.1

The welding skill qualification shall be organized and implemented by the welding skill qualification committee of the company. In case that the company fails to establish the welding skill qualification committee, qualified company shall be entrusted to organize the examination.

6.0.2

The welding skill qualification committee of the company shall meet the following conditions.