

ICS 71.120.01

CCS G 90



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

GB/T 25146-2010

**Quality acceptance specification for the chemical cleaning of
industrial equipment**

工业设备化学清洗质量验收规范

Issued on: September 26, 2010

Implemented on: March 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

Foreword

Appendix A of this standard is a normative appendix, Appendix B is an informative annex. The standard proposed by China Petroleum and Chemical Industry Association. This standard by the National Standardization Technical Committee of Chemical Machinery and Equipment (SAC/TC429) centralized. This standard was drafted. Bluestar Environmental Engineering Co., Ltd., China National Bluestar (Group) Co., Ltd. The main drafters of this standard. Li Defu, Chung Dong Sheng, Liu Yang, Chen Enhui, Liu Jie, Liu Shan, Wang Shuangtian, Cai Liang Zhen. Industrial equipment, chemical cleaning quality acceptance

1 Scope

China's national quality acceptance specification for the chemical cleaning of industrial equipment. It specifies the requirements, the inspection methods and the acceptance criteria for chemical cleaning operations on industrial plant. Chemical cleaning is what removes the scale, corrosion products, oil and construction debris from the inside of a system that cannot be reached - a boiler, a heat exchanger, a condenser, a chiller, a pipeline. It is done before commissioning to take out mill scale, welding residue and grease, and periodically in service to remove the deposits that insulate heat transfer surfaces and, in a boiler, cause the tube overheating that ends in a rupture. It is also an operation that can destroy the equipment it is meant to save. The chemistry used is aggressive by necessity - acids, chelants, alkaline solutions - and the margin between dissolving the deposit and dissolving the metal is maintained by the inhibitor, the concentration, the temperature and the time. Get any of them wrong and the cleaning removes base metal, attacks the welds, or leaves the surface active and rusting within hours; get the flushing wrong and residual cleaning solution stays in a dead leg and corrodes it for the life of the plant. So acceptance cannot be a visual inspection at the end. The standard specifies what is measured and when: the corrosion coupons that record how much base metal was lost during the operation, the deposit removal rate, the surface condition and the passivation film formed afterwards, the residual chemical and iron levels in the final flush, and the pH and the completeness of neutralisation. And it fixes the documentation, since the evidence that a cleaning was done correctly exists only in the records taken while it was happening. Issued on 26 September 2010 and in force since 1 March 2011.

This standard specifies the chemical cleaning of industrial equipment in soil classification, cleaning quality requirements, test methods, and final acceptance. Water This standard applies to carbon steel, low alloy steel, stainless steel, copper and copper alloys, aluminum and aluminum alloys and other materials formed on the surface of industrial equipment Dirt, rust, grease and other dirt chemical cleaning. Chemical cleaning industrial equipment material scale chemical cleaning materials and other industrial equipment can be implemented by reference.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 8978 Integrated Wastewater Discharge Standard Test methods for metallic corrosion rate and corrosion of the total

GB/T 25147 industrial equipment, chemical cleaning method of weight

GB/T 25148 industrial equipment, chemical cleaning cleaning cleaning rate and the rate of testing methods

GB/T 25149 industrial equipment, chemical cleaning passivation film quality carbon steel test method red dot method

GB/T 25150 industrial equipment, chemical cleaning of austenitic stainless steel passivation film quality testing methods blue dot method

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Chemical cleaning chemicalcleaning Methods using chemicals and pipeline equipment or chemical action of surface dirt to be washed to remove dirt.

3.2 Corrosion rate corrosionrate Chemicals and equipment to be cleaned, the metal piping and components relative rate of corrosion of metal in contact. Corrosion rate units available time Quality metal corrosion within the unit area, in units of grams per square meter per hour $[g/(m^2 \cdot h)]$.

3.3 Inhibition rate inhibitionefficiency Evaluation of corrosion inhibition efficiency parameters. η = Metal corrosion inhibitor was not added when the rate - the rate of metal corrosion inhibitor added when Metal corrosion inhibitor was not added when the rate x 100%

3.4 Total Corrosion metalcorrosionamount Chemical cleaning process, when contact with the chemical cleaning equipment or pipeline metal per unit area of \u200b\u200bthe etched metal quality. single Bit grams per square meter (g/m²).

chinastandards.org · PREVIEW