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**Chemical Industry Standard of the People's Republic  
of China**

**中华人民共和国化工行业标准**

HG/T 20679-2014  
Replace HG/T 20679-1990

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**Design code for external corrosion protection of  
chemical equipment and piping**

**化工设备、管道外防腐设计规范**

**Issued on July 9, 2014**

**Implemented on November 1, 2014**

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of China**

**Chemical Industry Standard of the People's Republic of China**

**Design code for external corrosion protection of chemical  
equipment and piping**

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# **Design code for external corrosion protection of chemical equipment and piping**

HG/T 20679-2014

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**Ministry of Industry and Information Technology of the  
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**Announcement**

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The Ministry of Industry and Information Technology approved 676 industry standards including *Blister Packaging Machine* (see Annex for standard number, name, and main content and initial implementation date). Among them, 394 standards for machinery industry (including 16 standards for pharmaceutical equipment), 1 standard for automobile industry, 41 standards for aviation industry, 135 standards for light industry, 37 standards for textile industry, 4 standards for packaging industry, 42 standards for chemical industry, 6 standards for petrochemical industry, 4 standards for non-ferrous industry, 7 standards for metallurgy industry, 2 standards for building materials industry, 1 standard for electronic industry and 2 standards for communication industry.

The above standards for machinery industry are published by China Machine Press, the standards for automotive, pharmaceutical equipment and packaging industry are published by China Planning Press, the standards for aviation industry are published by China Aviation Integrated Technology Research Institute, the standards for light industry are published by Chinese Light Industry Press, the standards for textile and nonferrous metal industry are published by Chinese Standard Press, the standards for the chemical industry are published by Chemical Industry Press, the standards for petrochemical industry are published by China Petrochemical Press, the standards for metallurgical industry are published by Metallurgical Industry Press, the standards for building materials industry are published by Building Materials Industry Press, the standards for electronic industry are published by Electronic Industry Standardization Research Institute of the Ministry of Industry and Information Technology, and the standards for communication industry are published by Posts and Telecommunications Press.

Annex: The standard No., standard name and initial implementation date of 33 chemical industry standards.

**Ministry of Industry and Information Technology of the People's Republic of China**

July 9, 2014

**Annex:**

**Standard No., standard name and initial implementation date of 33 chemical  
industry standards**

Serial No.	Standard No.	Standard name	Standard No. replaced	Initial implementation date
612	HG/T 20568-2014	Code for design of storageyard and warehouse of bulk material of chemical industry	HG/T 20568-1994	2014-11-01
613	HG/T 21514-2014	Steel manholes and handholes	HG/T 21514-2005	2014-11-01
614	HG/T 21515-2014	Manholes for atmospheric use	HG/T 21515-2005	2014-11-01
615	HG/T 21516-2014	Steel manholes and handholes	HG/T 21516-2005	2014-11-01
616	HG/T 21517-2014	Slip on flange manholes with hinged cover	HG/T 21517-2005	2014-11-01
617	HG/T 21518-2014	Welding neck flange manholes with hinged cover	HG/T 21518-2005	2014-11-01
618	HG/T 21519-2014	Plate flange manholes with davit to vertical cover	HG/T 21519-2005	2014-11-01
619	HG/T 21520-2014	Slip on flange manholes with davit to vertical cover	HG/T 21520-2005	2014-11-01
620	HG/T 21521-2014	Welding neck flange manholes with davit to vertical cover	HG/T 21521-2005	2014-11-01
621	HG/T 21522-2014	Plate flange manholes with davit to horizontal cover	HG/T 21522-2005	2014-11-01
622	HG/T 21523-2014	Slip on flange manholes with davit to horizontal cover	HG/T 21523-2005	2014-11-01
623	HG/T 21524-2014	Welding neck flange manholes with davit to horizontal cover	HG/T21524-2005	2014-11-01
624	HG/T	Quick open manholes	HG/T	2014-11-01

	21525-2014	for atmospheric use	21525-2005	
625	HG/T 21526-2014	Elliptical quick open manholes with hinged cover	HG/T 21526-2005	2014-11-01
626	HG/T 21527-2014	Quick open manholes with hinged dome cover	HG/T 21527-2005	2014-11-01
627	HG/T 21528-2014	Handholes for atmospheric use	HG/T 21528-2005	2014-11-01
628	HG/T 21529-2014	Plate flange handholes	HG/T 21529-2005	2014-11-01
629	HG/T 21530-2014	Slip on flange handholes	HG/T 21530-2005	2014-11-01
630	HG/T 21531-2014	Welding neck flange handholes	HG/T 21531-2005	2014-11-01
631	HG/T 21532-2014	Welding neck flange handholes with hinged cover	HG/T 21532-2005	2014-11-01
632	HG/T 21533-2014	Quick open handholes for atmospheric use	HG/T 21533-2005	2014-11-01
633	HG/T21534-2014	Quick open handholes with rotating handle	HG/T 21534-2005	2014-11-01
634	HG/T 21535-2014	Quick open handholes with hinged cover	HG/T 21535-2005	2014-11-01
635	HG/T 21594-2014	Classification and technical specification for lining stainless steel manholes and handholes	HG21594-1999	2014-11-01
636	HG/T21596-2014	Lining stainless steel rotary cover manhole	HG21596-1999	2014-11-01
637	HG/T21597-2014	Lining stainless steel rotary arch cover of quick opening manhole	HG21597-1999	2014-11-01
638	HG/T21598-2014	Lining stainless steel horizontal hanging cover manhole	HG21598-1999	2014-11-01
639	HG/T21599-2014	Lining stainless steel vertical hanging cover manhole	HG21599-1999	2014-11-01
640	HG/T21600-2014	Lining stainless steel elliptic quick opening manhole	HG21600-1999	2014-11-01

641	HG/T21602-2014	Lining stainless steel flat cover handhole	HG21602-1999	2014-11-01
642	HG/T21603-2014	Lining stainless steel rotary cover quick opening handhole	HG21603-1999	2014-11-01
643	HG/T21604-2014	Lining stainless steel swing-type quick opening handhole	HG21604-1999	2014-11-01
644	HG/T20679-2014	Design code for external corrosion protection of chemical equipment and piping	HG/T20679-1990	2014-11-01

## Forward

According to the requirements of *Notice on Printing and Distributing the Plans for the Second Batch* of Industry Standard System in 2011 (G.X.T.K. [2011] No. 134) from Office of the Ministry of Industry and Information Technology and *Notice on Forwarding Notice on Printing and Distributing the Plans for the Second Batch of Industry Standard System in 2011* from Office of the Ministry of Industry and Information Technology from China Petroleum and Chemical Industry Federation (Z.S.H.L.Z.F.[2011] No. 300), this code is revised by East China Engineering Science and Technology Co., Ltd. under organization of the national chemical process piping design technology center station commissioned by the China Petroleum and Chemical Exploration Design Association.

From the date of implementation, this code shall replace the Provisions for the *Design regulation for external corrosion protection of chemical equipment and piping* HG/T 20679 - 1990.

The Code is divided into 8 chapters and 6 appendixes, which mainly includes the following technical contents: General rules, terminology, surface preparation, the requirements for surface preparation, atmospheric corrosion, liquid medium corrosion, soil corrosion, surface identification color and code indication, appendixes, explanation of wording in the standard, normative standards and explanation of provisions.

Compared with HG/T 20679-1990, the standard has the main changes as follows:

1. The standard name is changed to *Design code for external corrosion protection of chemical equipment and piping*;
2. Taking the standards requirements of engineering construction as the main content, comprehensively revise the contents of the original standard, and sort out the provisions and chapters and format of the standard in accordance with the requirements of the Provisions on the Compilation of Standards for the Construction of Projects.
3. Terms, the requirements of surface preparation, liquid medium corrosion, insulation and corrosion protection, fire and corrosion protection and other chapters are added;
4. Forward, description of terms in the specification and the introduction of the standard directory are added, and according to the need, the explanation of part of clauses is



added.

The Standard is under the jurisdiction of China Petroleum and Chemical Industry Association.

The technical content of this code is explained by East China Engineering Science and Technology Co., Ltd. In the implementation process of the specification, if the specification needs to be modified or supplemented, please send opinions or advice letter to the national chemical process piping design technology center station (address: No. 2, Chuangda 2nd Road, Laiguangying High-tech Industrial Park, Chaoyang District, Beijing; Postal code: 100012) East China Engineering Science and Technology Co., Ltd. (mailing address: No. 70. Wangjiang East Street, Hefei City, Anhui Province; Postal code: 230024), for the reference for future revision.

Chief editorial organizations, participated organizations, main drafters and main examiners of the Code:

**Chief editorial organizations:** East China Engineering Science and Technology Co., Ltd.

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## **1 General provisions**

**1.0.1** In order to ensure the service life of the external corrosion protection design of the chemical equipment, pipeline and steel structure, uniform and standardize design standards, make this code.

**1.0.2** This code is applicable to the external corrosion protection of chemical equipment, pipe and steel structure of carbon steel, cast iron, low alloy steel and stainless steel.

**1.0.3** The environmental conditions of this code include the industrial atmosphere (collectively referred to as the atmosphere), liquid medium, soil, etc.

**1.0.4** The corrosion protection methods used in this code include non-metallic coating, coating and cladding, excluding metal painting, metal coating and electrochemical protection.

**1.0.5** The performance indexes of anti-corrosive materials shall meet the requirements of this code, and have the factory certificate and the inspection data. Materials shall be used within the period of validity and the expired materials shall not be used.

**1.0.6** The design for external corrosion protection of chemical equipment, piping and steel structure, in addition to comply with this code, shall be in conformity with the requirements of the current national relevant standards.



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