

Code for Facilities, Technology and Inspection for Manufacturing of LP Gas Pressure Regulators for Welding and Cutting

# Gas Technical Standards Committee

Byung-Hak Choi, Professor of Gangneung-Wonju

National University

Vice-Chairman Gi-hyun Jang, Professor of Inha University

Yoon-Gil Hwang, Manager of Energy Safety Department,

Ministry of Trade, Industry & Energy

Chae-Sik Kwak, Director of Technology and Safety,

Korea Gas Safety Corporation

High-Pressure Gas

Byung-Hak Choi, Professor of Gangneung-Wonju

National University

Seong-Jin Song, Vice president of SungKyunKwan

University

Beom-Seok Lee, Professor of KyungHee University

Chun-Seok Yoon, CEO of Hanul E&R

Yeong-Hoon Ann, Professor of HanYang University

Liquefied Petroleum Hyeong-Hwan Ann, Professor of Korea National

Gas University of Transportation

Hyuk-Myun Kwon, Professor of YonSei University

Jeong-Sik Cheon, Director of E1 CO., Ltd.

kyung-Soo Kang, Senior Researcher of Korea Institute of

**Energy Research** 

Yong-Kwon Lee, Vice-President of DaeYeon Co., Ltd.

**Urban Gas** Dong-Il Shin, Professor of MyongJi University

Jeong-Hoon Kim, Principal Researcher of Korea Institute

of Machinery and Materials

In-Cheol Jeong, Director of Yesco Co., Ltd. Gi-hyun Jang, Professor of Inha University

**Hydrogen Gas** Kwang-Won Lee, Professor of HoSeo University

Ho-young Jeong, Professor of ChonNam National

University

In-Yong Kang, CEO of H&Power Co., Ltd.

Woon-Bong Baek, Senior Researcher of Korea Institute

of Standards and Science

# Korea Gas Safety Code

This code is the detailed standards established by the Gas Technical Standards Committee in accordance with Article 22-2 of "High-Pressure Gas Safety Control Act", Article 45 of "Safety Control and Business of Liquefied Petroleum Gas Act" and Article 17-5 of "Urban Gas Business Act", Article 48 of "Hydrogen Economy Promotion and Hydrogen Safety Management Act". Since conformity to this Code is deemed to conform to the laws and regulations above, this Code must be observed.

This English version of KGS Code is an informal translation from its Korean original version. Only the Korean version of the KGS Code is officially effective since it has been authorized by the Gas Technical Standards Committee (KGS Code Committee). The secretariat of the Committee reserves the right to revise the English version whenever translation errors are found.

History of Establishment and Revision of KGS Code		
Code Number	KGS AA437 <sup>2022</sup>	
Code Title	Code for Facilities, Technology and Inspection for Manufacturing of LP Gas Pressure Regulators for Welding and Cutting	

Date of	Description			
Establishment/Revision				
December 31, 2008	Established (Notification of the Ministry of Knowledge Economy No. 2008-380)			
May 15, 2009	Revised (Notification of the Ministry of Knowledge Economy No. 2009-193)			
August 13, 2012	Revised (Notification of the Ministry of Knowledge Economy No. 2012-391)			
November 17, 2014	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2014-589)			
December 10, 2015	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2015-641)			
January 8, 2016	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2016-6)			
December 15, 2016	Revised (Notification of the Ministry of Trade, Industry & Energy, No. 2016-638)			
December 13, 2018	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2018-607)			
March 28, 2022	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2022-250)			



# **Table of Contents**

1. General	1
1.1 Scope	1
1.2 Validity of Code	1
1.3 Reference Codes and Standards	1
1.3.1 Inspection standard for new technology products	1
1.3.2 Registration standard for manufacturing of foreign products < newly e	established on
August 13, 2012>	2
1.4 Definitions	2
1.5 Application of Codes and Standards(currently not used)	4
1.6 Interim Measures(currently not used)	4
1.7 Types	4
2 Manufacturing Facility Standard	4
2.1 Manufacturing Facilities	4
2.2 Inspection Facilities	5
3. Manufacturing Technology Standard	6
3.1 Design (not applicable)	6
3.2 Materials	6
3.3 Thickness (not applicable)	7
3.4 Construction and Dimensions	7
3.5 Fabrication (currently not used)	9
3.6 Welding (not applicable)	9
3.7 Heat Treatment(not applicable)	9
3.8 Performance	9
3.8.1 Product performance	9
3.8.2 Material performance	11
3.8.3 Functional performance	11
3.9 Marking	11
3.9.1 Product marking	11
3.9.2 Acceptance marking	12
4. Inspection Standard	12
4.1 Kinds of Inspections	12
4.1.1 Manufacturing facility inspection	13
4.1.2 Product inspection	13
4.2 Object Audit of Process Inspection	15
4.2.1 Application for audit	15

4.2.2 Audit method	15
4.2.3 Adjudication committee	16
4.3 Inspection Items	17
4.3.1 Manufacturing facility inspection	17
4.3.2 Product inspection	17
4.4 Inspection Method	20
4.4.1 Manufacturing facility inspection	20
4.4.2 Product inspection	20
4.5 Other Inspection Standards	24
4.5.1 Inspection of imported products	24
4.5.2 Partial omission of inspection	25
4.5.3 Disposal of rejected products (not applicable)	
4.5.4 Detailed inspection standards	25
Appendix A General Standard for Operation of Quality Control System for Gas	Appliance
Manufacturing Plants	26

# Code for Facilities, Technology and Inspection for Manufacturing of LP Gas Pressure Regulators for Welding and Cutting

## 1. General

#### 1.1 Scope

This Code applies to the facilities, technology and inspection for manufacturing of liquefied petroleum (LP) gas pressure regulators for welding and cutting (hereinafter referred to as "pressure regulators") among the pressure regulators which conform to the Enforcement Regulation of the Safety Control and Business Regulation of Liquefied Petroleum Gas Act (hereinafter referred to as "Enforcement Regulation"), Table 3, No. 1 and Table 7, No.4-a. < Revised on December 10, 2015>

### 1.2 Validity of Code

- **1.2.1** This Code has passed the deliberation and resolution by Gas Technical Standards Committee (Bill No. 2022-1, February 18, 2022) in conformity to the High Pressure Gas Safety Control Act (hereinafter referred to as "High Pressure Gas Act"), Article 33, Clause 2 in accordance with the Safety Control and Business Regulation of Liquefied Petroleum Gas Act (hereinafter referred to as "Act"), Article 45, Clause 1, has been approved by the Minister of Trade, Industry & Energy (Notification No. 2022-250 of the Ministry of Trade, Industry & Energy, March 28, 2022) and is valid and effective as the detailed standards in conformity to the Act, Article 45, Clause 1.
- **1.2.2** Conformity to this Code is deemed to conform to Table 7 of the Enforcement Regulation in accordance with the Act, Article 45, Clause 4. <Revised on December 10, 2015>

#### 1.3 Reference Codes and Standards

#### 1.3.1 Inspection standard for new technology products

In case the Minister of Knowledge Economy accepts that the new manufacturing and inspection