

Code for Facilities, Technology and Inspection for Manufacturing of Commercial Gas Burning
Appliances

## 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 AB338 <sup>2022</sup>	
Code Title	Code for Facilities, Technology and Inspection for Manufacturing of Commercial Gas Burning Appliances	

Date of Establishment/Revision	Description
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)
January 5, 2012	Revised (Notification of the Ministry of Knowledge Economy No. 2011-635)
June 26, 2012	Revised (Notification of the Ministry of Knowledge Economy No. 2012-313)
November 17, 2014	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2014-589)
April 14, 2015	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2015-223)
January 8, 2016	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2016-6)
February 10, 2017	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2017-066)
September 29, 2017	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2017-475)
December 13, 2018	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2018-607)
November 18, 2021	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2021-785)
October 12, 2022	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2022-760)

# **Table of Contents**

T. General	I
1.1 Scope	1
1.2 Validity of Code	2
1.3 Reference Codes and Standards	2
1.3.1 Inspection standard for new technology products	2
1.3.2 Registration standard for manufacturing of foreign products < newly esta	
June 26, 2012>	
1.4 Definitions	
1.5 Application of Codes and Standards	
1.6 Interim Measures <newly 2012="" 5,="" established="" january="" on=""></newly>	
1.7 Restrictions on the Use of Parts <newly 18,="" 2021="" established="" november="" on=""></newly>	
2. Manufacturing Standard	
2.1 Manufacturing Facilities	
2.2 Inspection Facilities	
3. Manufacturing Technology Standard	
3.1 Materials <revised 2012="" 5,="" january="" on=""></revised>	
3.2 Construction and Dimensions < Revised on January 5, 2012>	
3.3 Devices	
3.4 Performance	
·	
3.4.2 Material performance < Revised on January 5, 2012>	
3.4.3 Operation performance <revised 2012="" 5,="" january="" on=""></revised>	
3.6 Marking	
3.6.1 Product marking	
3.6.2 Acceptance marking	
3.6.3 Enclosure of manual	
3.6.4 Labeling of gas safety rules <newly 18,="" 2021="" established="" november="" on=""> .</newly>	
4. Inspection Standard	
4.1 Kinds of Inspections	
4.1.1 Manufacturing facility inspection	
4.1.2 Product inspection	
4.2 Object Audit of Process Inspection	
4.2.1 Application for audit	
4.2.2 Audit method	

4.2.3 Adjudication committee	27
4.3 Inspection Items	27
4.3.1 Manufacturing facility inspection	27
4.3.2 Product inspection	27
4.4 Inspection Method	30
4.4.1 Manufacturing facility inspection	31
4.4.2 Product inspection	
4.5 Other Inspection Standards	35
4.5.1 Inspection of imported products <revised 18,="" 2021="" november="" on=""></revised>	35
4.5.2 Partial omission of inspection	35
4.5.3 Disposal of rejected products (not applicable)	35
4.5.4 Detailed inspection standards	35
Appendix A General Standard for Operation of Quality Control System for Gas	Appliance
Manufacturing Plants	36
Appendix B Performance Test Method for Large Gas Burning Appliances for Commercial	l Purposes
That Use Gas	41

# Code for Facilities, Technology and Inspection for Manufacturing of Commercial Gas Burning Appliances

#### 1. General

### 1.1 Scope

- **1.1.1** This Code applies to the facilities, technology and inspection for manufacturing of the liquefied petroleum gas burning appliances or city gas burning appliances (hereinafter referred to as "gas burning appliances") which come under the following (1) to (4) among the gas burning appliances in conformity 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. 10 and Table 7, No.4-j. <Revised on November 4, 2015>
- (1) Commercial gas burning appliances such as soup cookers, frying pans, grills, broilers, sterilizers, multi-tier rice cookers of which total gas input rating is not over 232.6 kW (200,000 kcal/h) and of which gas working pressure is not over 30 kPa.
- (2) Ranges, ovens, grills, oven ranges or rice cookers of which total gas input rating or gas input rating of one burner conforms to Table 1.1.1(2) and working gas pressure is not over 30 kPa.

		J 1	
Туре	Gas Input Rating		
	Total Gas Input Rating	Gas Input Rating of One	
		Burner	
Range	Over 16.7 kW (14,400 kcal/h) to 232.6 kW (200,000 kcal/h inclusive	Over 5.8 kW (5,000 kcal/h)	
Oven	Over 5.8 kW (5,000 kcal/h) to 232.6 kW (200,000 kcal/h inclusive	Over 5.8 kW (5,000 kcal/h)	
Grill	Over 7.0 kW (6,000 kcal/h) to 232.6 kW (200,000 kcal/h inclusive	Over 4.2 kW (3,600 kcal/h)	
Oven Range	Over 22.6 kW (19,400 kcal/h) to 232.6 kW (200,000 kcal/h inclusive [over 5.8 kW (5,000 kcal/h for oven part]	Over 4.2 kW (3,600 kcal/h) [over 5.8 kW (5,000 kcal/h for oven part]	
Rice Cooker	Over 5.6 kW (4,800 kcal/h) to 232.6 kW (200,000 kcal/h inclusive	Over 5.6 kW (4,800 kcal/h)	

Table 1.1.1(2) Gas Input Rating by Gas Appliance Types

- (3) Combination-type Gas Burning Appliances with two or more functions such as range and grill
- (4) Other Commercial Gas Burning Appliances