



## Code for Facilities, Technology and Inspection for Manufacturing of Gas Ovens



## Personnel

### Gas Technical Standards Committee

Chairman	Kwang-Won Lee, Professor of Hoseo University
Vice-Chairman	Seung-Hoon Nam, Principal Researcher of KRISS
Ex Officio Member	Hui-Won Lee, Manager of Energy Safety Department, Ministry of Trade, Industry & Energy Hae-Myeong Yang, Director of Technology and Safety, Korea Gas Safety Corporation
High-Pressure Gas	Seung-Hoon Nam, Principal Researcher of KRISS Beom-Seok Lee, Principal Professor of Kyung Hee University Dong-Myeong Ha, Professor of Semyung University Chang-Gi Kim, Principal Researcher of Korea Institute of Machinery and Materials Hyuk-Myun Kwon, Director General of Occupational Safety & Health Research Institute Su-Dong Byun, CEO of Q-Best
Liquefied Petroleum Gas	Doo-Seon Park, Managing Director of Daesung Industrial Gas Co., Ltd Hyeong-Hwan Ann, Professor of Korea National University of Transportation Byeong-Hak Choei, Professor of Gangneung-Wonju National University Seong-Min Lee, Director of KOGAS Research Institute Yong-Gwon Lee, Vice-President of EG CNE Co.,Ltd Gi-hyeon Jang, Director of Kiturmi Jeong-Sik Chon, Direto of E1 CO., Ltd.



### History of Establishment and Revision of KGS Code

Code Number	KGS AB333 <sup>2018</sup>
Code Title	Code for Facilities, Technology and Inspection for Manufacturing of Gas Ovens

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)
June 26, 2012	Revised (Notification of the Ministry of Knowledge Economy No. 2012-313)
May 20, 2013	Revised (Notification of the Ministry of Knowledge Economy No. 2013-087)
December 18, 2013	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2013-343)
November 17, 2014	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2014-589)
November 4, 2015	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2015-578)
January 8, 2016	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2016-6)
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)



## Table of Contents

1. General.....	1
1.1 Scope.....	1
1.2 Validity of Code.....	1
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.....	2
1.4 Definitions.....	2
1.5 Application of Codes and Standards.....	3
2. Manufacturing Standard.....	3
2.1 Manufacturing Facilities.....	3
2.2 Inspection Facilities.....	4
3. Manufacturing Technology Standard.....	5
3.1 Materials.....	5
3.2 Construction and Dimensions.....	6
3.3 Devices.....	11
3.3.1 Power failure safety device.....	11
3.3.2 Head wind prevention device (not applicable).....	12
3.3.3 Fire extinguishing safety device.....	12
3.3.4 Other devices.....	12
3.4 Performance.....	12
3.4.1 Product performance.....	12
3.4.2 Material performance.....	14
3.4.3 Operating performance.....	15
3.5 Heat Treatment (currently not used).....	20
3.6 Marking.....	20
3.6.1 Product marking.....	20
3.6.2 Acceptance mark.....	20
3.6.3 Enclosure of manual.....	21
4. Inspection Standard.....	21
4.1. Kind of Inspections.....	21
4.1.1 Manufacturing installation inspection.....	21
4.1.2 Product inspection.....	21

4.2 Object Audit of Process Inspection .....	24
4.2.1 Application for audit.....	24
4.2.2 Audit method.....	24
4.2.3 Adjudication committee.....	25
4.3 Inspection Items.....	25
4.3.1 Manufacturing installation inspection .....	25
4.3.2 Product inspection.....	25
4.4 Inspection Method.....	28
4.4.1 Manufacturing installation inspection .....	28
4.4.2 Product inspection.....	29
4.5 Other Inspection Standards.....	33
4.5.1 Inspection of imported products.....	33
4.5.2 Partial omission of inspection .....	33
4.5.3 Disposal of rejected products (not applicable).....	33
4.5.4 Detailed inspection standards.....	33
 Appendix A General Standard for Operation of Quality Control System for Gas Appliance Manufacturing Plants.....	 34
 Appendix B General Conditions for Testing of Gas Ovens.....	 39
 Appendix C Test Methods of Gas Ovens .....	 42



# Code for Facilities, Technology and Inspection for Manufacturing of Gas Ovens

## 1. General

### 1.1 Scope

**1.1.1** This Code applies to the facilities, technology and inspection for manufacturing of the liquefied petroleum gas ovens or city gas ovens (hereinafter referred to as "ovens") which come under the following (1) to (3) among the combustors 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) The total heat input rate is not over 5.8kw (5,000 kcal/hr),
- (2) The heat input rate of one burner is not over 5.8kw (5,000 kcal/hr), or
- (3) The working gas pressure is not over 3.3 kPa.

**1.1.2** The combustors excluded from the gas appliances subject to license in accordance with the Enforcement Regulation, Table 7, No.5-b are as follows:

- (1) Gas torches used for welding and cutting, etc.,
- (2) Dryer combustors used in casting sand dryers, printing ink dryers, concrete dryers, etc.,
- (3) Combustors for heat treatment furnaces or heating furnaces used as metal heat treatment furnaces, glass and ceramic furnaces, atmosphere gas furnaces, etc.,
- (4) Melting furnace combustors used in metal melting, glass melting, etc.,
- (5) Combustors attached to gas canisters of which internal volume is less than 100 mL, and
- (6) Other combustors acknowledged by the Minister of Trade, Industry & Energy to be free from any problem in safety control. <Revised on September 29, 2017>

### 1.2 Validity of Code

**1.2.1** This Code has passed the deliberation and resolution by Gas Technical Standards Committee (Bill No. 2018-9, November 23, 2018) in conformity to the High Pressure Gas Safety Control Act