



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

Deliberation/Resolution by Gas Technical Standards Committee : September 16, 2022

Approval by the Ministry of Trade, Industry & Energy : October 12, 2022

Gas Technical Standards Committee

Chairman	Byung-Hak Choi, Professor of Gangneung-Wonju National University
Vice-Chairman	Gi-hyun Jang, Professor of Inha University
Ex Officio Member	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
<hr/>	
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 Gas	Hyeong-Hwan Ann, Professor of Korea National 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

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 AB339 ²⁰²²
Code Title	Code for Facilities, Technology and Inspection for Manufacturing of Butane 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)
April 15, 2012	Revised (Notification of the Ministry of Knowledge Economy No. 2012-179)
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)
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)
January 9, 2017	Revised(Notification of Ministry of Trade, Industry & Energy, No. 2017-3)
September 29, 2017	Revised(Notification of Ministry of Trade, Industry & Energy, No. 2017-475)
December 13, 2018	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2018-607)
April 2, 2021	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2021-274)
October 12, 2022	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2022-760)

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
1.6 Interim Measures.....	3
1.7 Kinds (currently not used).....	4
1.8 Restriction on Use of Parts	4
2. Manufacturing Standard.....	4
2.1 Manufacturing Facilities.....	4
2.2 Inspection Facilities.....	4
3. Manufacturing Technology Standard.....	6
3.1 Materials<Revised on April 5, 2012>	6
3.2 Construction and Dimensions	6
3.3 Devices	8
3.3.1 Power failure safety device	8
3.3.2 Head wind prevention device.....	8
3.3.3Flame supervision device	8
3.3.4 Other devices	9
3.4 Performance.....	9
3.4.1 Product performance	9
3.4.2 Material performance<Newly established on April 5, 2012>	11
3.4.3Operation performance.....	11
3.5 Heat Treatment (currently not used).....	14
3.6 Marking.....	14
3.6.1 Product marking	14
3.6.2 Acceptance marking.....	15
3.6.3 Enclosure of manual.....	15
3.6.4 Marking of gas safety rule	15
4. Inspection Standard	16
4.1 Kinds of Inspections.....	16
4.1.1 Manufacturing facility inspection.....	16
4.1.2 Product inspection	17

4.2 Object Audit of Process Inspection	19
4.2.1 Application for audit	19
4.2.2 Audit method	19
4.2.3 Adjudication committee	20
4.3 Inspection Items.....	21
4.3.1 Manufacturing facility inspection.....	21
4.3.2 Product inspection	21
4.4 Inspection Method	24
4.4.1 Manufacturing facility inspection.....	24
4.4.2 Product inspection	24
4.5 Other Inspection Standards.....	29
4.5.1 Inspection of imported products	29
4.5.2 Partial omission of inspection	29
4.5.3 Disposal of rejected products (not applicable)	29
4.5.4 Detailed inspection standards.....	29
Appendix A General Standard for Operation of Quality Control System for Gas Appliance Manufacturing Plants.....	30
Appendix B General Test ConditionsforButane Gas Burning Appliances.....	35
Appendix C Test Method of Butane Gas Burning Appliance.....	36

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

1. General

1.1 Scope

1.1.1 This Code applies to the facilities, technology and inspection for manufacturing of the butane gas burning appliances (exclusive of portable butane gas burning appliances and butane gas burning appliances for ignition of charcoal grills. hereinafter referred to as "gas burning appliances") which use jointed cylinders or welded cylinders filled with liquefied butane gas and of which total heat input rate is not over 232.6 kW (200,000 kcal/hr) 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 May 15, 2009, November 4, 2015>

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

- (1) Gas torches used for welding and cutting,
- (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 accepted by the Minister of Trade, Industry & Energy to be free for many 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. 2022-7, September 16, 2022) in conformity to the High Pressure Gas Safety Control Act