KGS Code

KGS FP654 2020

Code for Facilities, Technology and Inspection for Liquefied Urban Gas Automobile Refueling

Deliberation/Resolution by Gas Technical Standards Committee : December 20, 2019
Approval by the Ministry of Trade, Industry & Energy : March 18, 2020

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 FP654 2020
Code Title	Code for Facilities, Technology and Inspection for Liquefied Urban Gas Automobile Refueling

Date of Establishment/Revision	Description
September 24, 2010	Established (Notification of the Ministry of Knowledge Economy No. 2010-374)
January 5, 2012	Revised (Notification of the Ministry of Knowledge Economy No. 2011-635)
November 17, 2014	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2014-589)
January 7, 2015	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2015-001)
July 3, 2015	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2015-372)
August 7, 2015	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2015-436)
January 8, 2016	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2016-006)
February 10, 2017	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2016-066)
September 29, 2017	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2017-475)
August 10, 2018	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2018-512)
January 16, 2019	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2019-026)
April 5, 2019	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2019-218)
May 21, 2019	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2019-317)
June 14, 2019	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2019-375)
July 16, 2019	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2019-434)
March 18, 2020	Revised (Notification of the Ministry of Trade, Industry & Energy No. 2020-169)

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Code for Facilities, Technology and Inspection for Liquefied Urban Gas Automobile Refueling

1. General

1.1 Scope

This Code applies to the facilities, technology and inspection of refueling installations for liquefied city gas automobiles [installations for refueling of automobiles (inclusive of yard tractors in conformity to the Enforcement Decree of the Harbor Act, Table 4, No.8) with liquefied city gas supplied through piping or storage tanks; hereinafter referred to as "refueling installations"] among gas refueling facilities in conformity to the Enforcement Regulation of the Urban Gas Business Act (hereinafter referred to as "Enforcement Regulation"), Article 2, Clause 4, No.3. <Revised on January 7, 2015>

1.2 Validity of Code

1.2.1 This Code has passed the deliberation and resolution by Gas Technical Standards Committee (Bill No. 2019-10, December 20, 2019) in conformity to the High Pressure Gas Safety Control Act, Article 33-2, in accordance with the Urban Gas Business Act (hereinafter referred to as "Act"), Article 17-5, Clause 2, has been approved by the Ministry of Trade, Industry & Energy (Notification No. 2020-169 of the Ministry of Trade, Industry & Energy, March 18, 2020), and is valid and effective as the detailed standards in conformity to the Act, Article 17-5, Clause 1.

1.2.2 Conformity to this Code is deemed to conform to Table 6-2, No. 4 of the Enforcement Regulation in accordance with the Act, Article 17-5, Clause 4. <Revised on August 10, 2018>

1.3 Definitions

The terms used in this Code are defined as follows:

1.3.1 "Combustible gases" are acrylonytrile, acrylaldehyde, acetaldehyde, acetylene, ammonia, hydrogen, hydrogen sulfide, hydrogen cyanide, carbon monoxide, carbon disulfide, methane,

methane chloride, methane bromide, ethane, ethane chloride, vinyl chloride, ethylene, ethylene oxide, propane, cyclo-propane, propylene, propylene oxide, butane, butadiene, butylene, ether methyl, mono-methylamine, di-methylamine, tri-methylamine, ethyl amine, benzene, ethyl benzene, and other gases which can combust in the air and of which lower explosion limit (limit of gas concentration in the air which can cause combustion when mixed with air; hereunder the same shall apply) is 10% or less and of which difference between the upper limit and the lower limit is not less than 20%.

1.3.2 "Liquefied gas" means a gas which is in a liquefied state by means of pressurization, cooling, etc. and of which boiling point at the atmospheric pressure is not over 40℃ or the normal temperature.

1.3.3 "Compressed gas" means city gas compressed to a certain pressure.

1.3.4 "Storage facilities" mean the facilities for storing city gas and include storage tanks and storage rooms for vessels filled with city gas.

1.3.5 "Storage tanks" mean tanks fixed and installed aboveground or underground to be filled with and store city gas.

1.3.6 "Vehicle-mounted tanks" mean tanks mounted onto vehicles to transport city gas.

1.3.7 "Filled vessels" mean cylinders filled with city gas of which filled mass or filling pressure is not less than a half of their filling capacity or filling pressure.

1.3.8 "Residual gas vessels" mean cylinders filled with city gas of which filled mass or filling pressure is less than a half of their filling capacity or filling pressure.

1.3.9 "Gas facilities" mean facilities and their accessory facilities through which city gas passes.

1.3.10 "High-pressure facilities" mean facilities and their accessory facilities through which high-pressure city gas passes.

1.3.11 "Processing facilities" mean facilities which can process city gas by means of compression, liquefaction or other methods and include compressors, vaporizers and pumps necessary for refueling city gas.