

Summary of the partial revision of "Ministerial Ordinance of Technical Requirements under the Gas Utilities Industry Law" and "Ministerial Ordinance of Technical Requirements under the Law concerning the Securing of Safety and Optimization of Transaction of Liquefied Petroleum Gas"

October, 2007

Product Safety Division,
Commerce and Information Policy Bureau,
Ministry of Economy, Trade and Industry

1. Background of amendment

On 7th February, 2007, an accident has happened, caused by carbon monoxide poisoning by the unvented-type gas instantaneous water heater with the incomplete combustion arrester. Following above accident, another accident has happened, caused by carbon monoxide poisoning by the unvented-type gas space heater.

To prevent these type of accidents, we will amend the "Ministerial Ordinance of Technical Requirements under the Gas Utilities Industry Law" and "Ministerial Ordinance Technical Requirements under the Law concerning the Securing of Safety and Optimization of Transaction of Liquefied Petroleum Gas".

2. Summary of amendment

- (1) Imposition of setting of “interlock mechanism” to the unvented-type gas instantaneous water heater which prevents re-ignition after the incomplete combustion arrester’s operation. Additionally, re-ignition in the normal operation should be prevented after the incomplete combustion arrester operated more than three times in succession.
- (2) Imposition of function to notice users incomplete combustion arrester’s operation to the unvented-type gas instantaneous water heater and the unvented-type forced ventilating gas space heater.
- (3) Amendment of the value of carbon monoxide density by which the incomplete combustion arrester starts its operation for the unvented-type gas instantaneous water heater and the unvented-type gas space heater; the amendment values are as follows.

	Unvented-type gas water heater	Unvented-type gas space heater
Carbon monoxide density (Volume %)	<u>In exhaust gas</u> Measured value: 0.03% (Current implementation: <u>In combustion gas</u> Theoretical value: 0.14%)	<u>In combustion gas</u> Theoretical value: 0.05% (Current implementation: <u>In combustion gas</u> Theoretical value: 0.07%) Attention: Theoretical value is the converted value to express carbon monoxide density in the ideal combustion without surplus oxygen

- (4) Amendment of the time when the incomplete combustion arrester starts its operation for the unvented-type gas instantaneous water heater and the unvented-type gas space heater; the

amendment times are follows.

Item	Operation time
Unvented-type gas instantaneous water heater	30 seconds (Current implementation: 10 minutes)
Unvented-type gas space heater	90 seconds (Current implementation: 10 minutes)

- (5) Imposition of warning indication expressing that not ventilating when using the product may cause death to the main body of the unvented-type gas instantaneous water heater and the unvented-type gas space heater.
- (6) Adding the following two contents to the function of the unvented-type gas instantaneous water heater and the unvented-type gas space heater taking into account the amendment of the vented-type gas instantaneous water heater in April 2007.
 - (i) Prevention of unjust remodeling of a safety device, and its reinforcement of the durability strength
 - (ii) Imposition of fail-safe design
- (7) Amendment of the theoretical value of carbon monoxide density in the normal combustion of the gas combustion equipment

Item	Theoretical value of the carbon monoxide density□ in the normal combustion
unvented-type	Less than 0.03% (Current implementation: water heater= less than 0.14%, space heater= less than 0.07%)
vented-type direct vent-type outdoor-type	Less than 0.14% (Current implementation: less than 0.28%)

3. The date of enforcement

This amendment of the ministerial ordinance will be entered into force on April 1st, 2008.