

KES

**Test Method for Specific
Gravity of LPG**

KES T – L233

(EST.) 1989 – 06 – 19

Contents

- 1. Scope of Application**
 - 2. Summary of Test Method**
 - 3. Apparatus**
 - 4. Operation**
 - 5. Report**
 - 6. Accuracy**
 - 7. Standards for Evaluation**
- Additional Rule**



1. Scope of Application

This standard shall regulate a method to measure a specific gravity of liquefied petroleum gas with a hydrometer.

Note : For this test method, since there exists a danger that the vapor pressure of some sample may exceed a pressure-resistance limit of a hydrometer during the test, it shall not be applied to those samples.

2. Sumary of Test Method

Obtain and place sample in a pressure-resistant container, which already has a pressure-resistant hydrometer in it, keep the temperature of the sample at 15.0 ±0.2 °C, and measure the specific gravity.

3. Apparatus

3.1 Use I -type or II -type hydrometer, which has a thermometer made of glass that contains scales shown in the hydrometer table.

Table 1. Specific gravity hydrometer for liquefied petroleum gas

Hydrometer (¹)			Thermometer	
Type	I -type	II -type		
Total length (mm)	354 ~ 366	354 ~ 366	Range of scale(℃)	-1 ~ 32
Diameter of top part (mm)	More than 9.0	More than 9.0	Submersion	Everything submerges
Diameter of bottom part (mm)	19 ~ 22	19 ~ 22	Detailed scale(℃)	0.5
Pressure-resistance (kg/cm ²)	More than 14	More than 10	Long scale lines(℃)	5
Valid range of scale	0.500 ~ 0.600	0.500 ~ 0.650	Number of scales(℃)	5
Standard temperature	15 / 4 °C	15 / 4 °C	Length of parts of scales(²) (mm)	50 ~ 70
Detailed scale	0.001	0.001	Allowance for scales	0.2
Long scale lines	Every 0.005	Every 0.005		
Number of scales	Every 0.01	Every 0.01		
Length of parts of scales(²) (mm)	125 ~ 145	125 ~ 145		
Allowance for scales	Less than 0.001	Less than 0.001		

Note (¹) : The hydrometer marks a horizontal visibility

(²) : Parts of scales is the valid range of scales

3.2 It shall be in same shape and size as the one shown in a figure of a pressure-resistant LPG specific gravity hydrometer, as well as consist of transparent cylinder, metal support, gasket and pressure gage, and its inner pressure is 20 kg / cm².

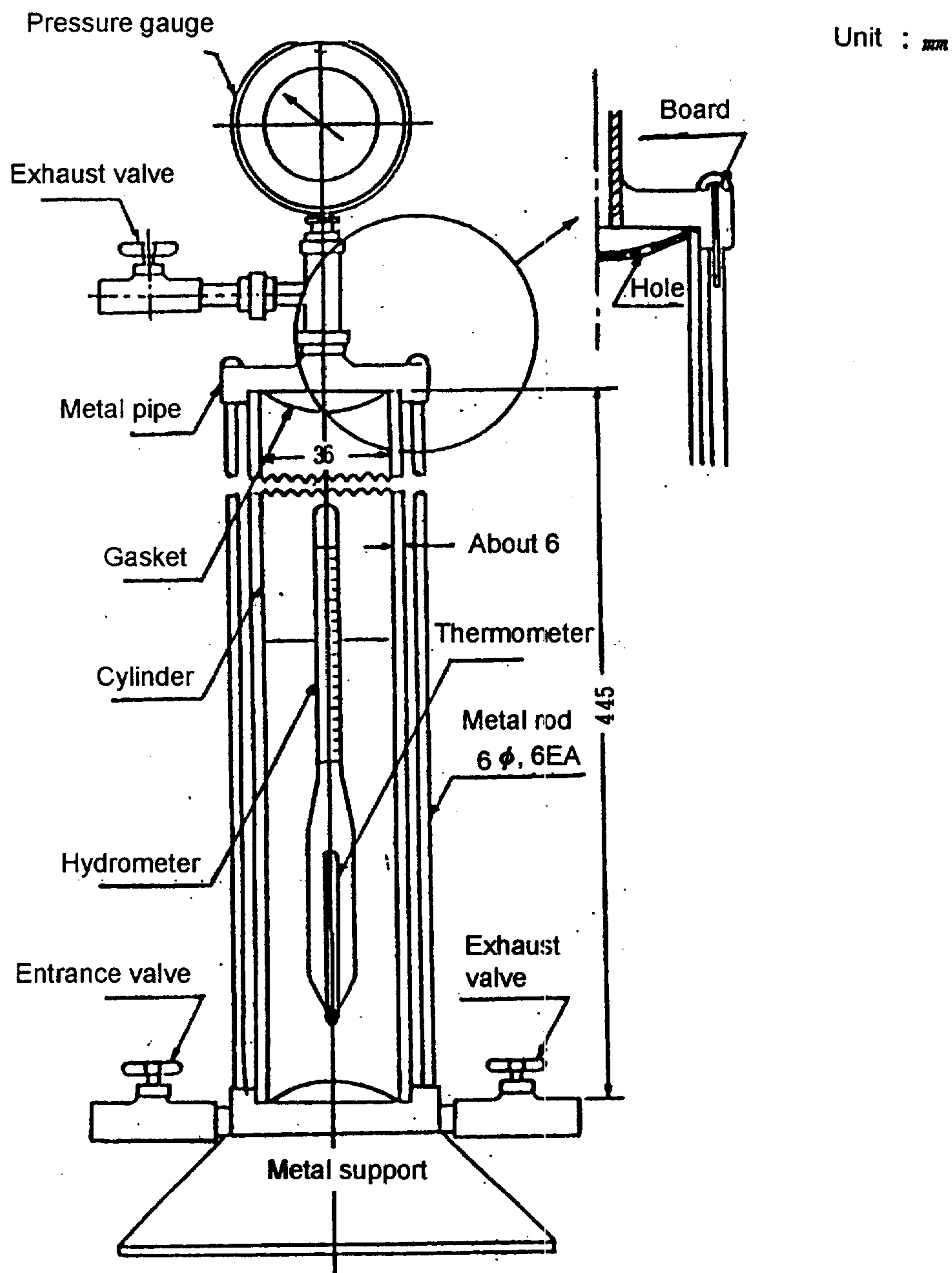


Figure. Apparatus for specific gravity of LPG (example)

3.2.1 Transparent Cylinder

Its length shall be about 445 mm and inner diameter shall be about 6 mm, and it shall be made of acrylic acid resin, or made of transparent plastics or glass that has higher corrosion resistance and strength.