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By Mr. Donovan of Chelsea, petition of John F. Donovan, Jr., for legislation to define meters used for measuring household type liquid petroleum and providing for the testing and sealing of such meters. Mercantile Affairs.

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**The Commonwealth of Massachusetts**

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In the Year One Thousand Nine Hundred and Sixty-Three.

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AN ACT DEFINING HOUSEHOLD TYPE LIQUID PETROLEUM METERS  
AND PROVIDING FOR THE TESTING AND SEALING OF SUCH DEVICES.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

1 Section 28A of chapter 98 of the General Laws, as provided  
2 for by chapter 425 of the Acts of 1950, is hereby amended by  
3 striking out said section 28A as it now appears and substituting  
4 the following new section 28A:—  
5 *Section 28A.* Meters for measuring liquefied petroleum gas  
6 sold in the vapor state and household type liquid petroleum  
7 meters shall be sealed by the manufacturer thereof as herein-  
8 after provided or by a sealer of weights and measures in the  
9 town where the meter is used. The director of standards and  
10 necessities of life shall prescribe regulations including specifica-  
11 tions and tolerances governing the testing and sealing of such  
12 meters by the manufacturers and method of determining quan-  
13 tity of liquefied petroleum gas, and or other liquid petroleum  
14 heating oils, and may authorize any manufacturer to seal such  
15 meters upon written agreement to conform to said regulations.  
16 The director may at any time for cause revoke the authority so  
17 given by him to any manufacturer. For the purposes of this  
18 section the term "liquefied petroleum gas" shall mean and in-  
19 clude any material which is composed predominantly of any of  
20 the following hydrocarbons or mixtures of the same: propane,  
21 propylene, butane (normal or isobutane) and butylene. For the  
22 purposes of this section the term "household meters" shall mean  
23 positive displacement meters installed between the liquid heating  
24 oil storage tank and the oil burner for the purpose of determin-  
25 ing the quantity of liquid heating oil consumed.

## EFFECTS OF TEMPERATURE ON THE VISCOSITY OF LIQUIDS

BY  
JAMES H. VAN DEN HULST, JR.

The viscosity of liquids is a function of temperature, and the effect of temperature on the viscosity of liquids is of great importance in many practical applications. The purpose of this paper is to present a review of the literature on this subject, and to discuss the various factors which influence the viscosity of liquids.

The viscosity of a liquid is defined as the resistance to flow offered by the liquid to an applied force. It is a measure of the internal friction between the molecules of the liquid. The viscosity of a liquid is affected by many factors, including temperature, pressure, and the nature of the liquid itself.

It is well known that the viscosity of a liquid decreases as the temperature increases. This is true for all liquids, and the rate of decrease is greater for some liquids than for others. The reason for this is that as the temperature increases, the molecules of the liquid gain more energy and are able to overcome the internal friction more easily.

The effect of pressure on the viscosity of liquids is less pronounced than that of temperature. In general, the viscosity of a liquid increases slightly with increasing pressure. This is because the molecules are forced closer together, and the internal friction is increased.

The nature of the liquid itself also has a significant effect on its viscosity. Liquids with a high molecular weight and a high degree of association between molecules will have a higher viscosity than liquids with a lower molecular weight and a lower degree of association.

In conclusion, the viscosity of liquids is a complex property that is affected by many factors. A thorough understanding of the factors that influence the viscosity of liquids is essential for many practical applications.