



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35.



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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

DEPARTMENT OF AUTOMOBILE ENGINEERING

COURSE NAME : 19AUB301 – AUTOMOTIVE FUELS AND LUBRICANTS

III YEAR / V SEMESTER

Unit 4 – Properties and Testing of Fuels

Topic : Pour point, Flammability, Ignitability, Diesel index



CLOUD AND POUR POINT



- Pour point is defined as the lowest temperature at which the test fluid can be poured under the prescribed test conditions.
- It is one of the properties that determine the low temperature fluidity of a lubricating oil.
- When oil cooled slowly, the **temperature at which it appears hazy or cloudy** is known as cloud point.





TESTING OF CLOUD POINT AND POUR POINT





FLAMMABILITY



- Flammability is the ability of a chemical to burn or ignite, causing fire or combustion.
- The degree of difficulty required to cause the combustion of a chemical is quantified through fire testing.
- Flammability requires a fuel and oxygen together.
- Flammability limits are **the boundaries of high and low fuel concentration**, within which flammability is possible.
- Usually materials are rated as highly flammable, flammable and non-flammable.



IGNITABILITY



- Ignitability is the characteristic used to define as hazardous those wastes that could cause a fire during transport, storage, or disposal.
- It is tested by means of Flash point
- Example of ignitability is **Liquids with a flashpoint of less than 60°C.**



DIESEL INDEX



- Diesel index is an indication of the ignition quality of a diesel fuel.
- It can be determined by calculation from the specific gravity and the aniline point of the sample.

$$\text{Diesel index} = (\text{Aniline point} * \text{API}) / 100$$

- The higher the number, the better the ignition quality



REFERENCE



- <http://chemcases.com/fuels/fuels-a.htm>



THANK YOU !!!