Experiment Details

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| Department Name | Mechanical |
| Class | S.Y. B.Tech |
| Semester | I st |
| Subject Name | Thermal Engineering. |
| Experiment No. | 02 |
| Experiment Name | Determination of the flash and fire point of Lubricating oil. |

Version History

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| --- | --- | --- | --- | --- |
| Sr. No. | Version Number | Created By | Approved By | Date |
| 1 | v1.0 | Akash Salunkhe | Prof. Mr. Rohit Ghulanavar | 09/11/2020 |
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AIM:

Determination of the flash and fire point of the Lubricating oil.

THEORY:

There is a test open type cup in which oil is taken for experiment. Arrangement is made for thermometer to measure the temp oil. A blowpipe is provided flame over the oil. To heat heating arrangement is provided.

PRE TEST:

1. The science of friction, lubrication and wear is called \_\_\_\_\_\_\_\_\_\_\_\_  
   a) Endiology  
   b) Geology  
   c) Tribology - Ans  
   d) Morphology
2. Viscosity index (VI) is a measure for the change of viscosity with change in
3. Temperature - Ans
4. Pressure
5. Volume
6. All of the above
7. The following type of Lubrication system is used in two stroke engines
8. Petroil (mist) system
9. Wet sump system
10. Dry sump system
11. All of above - Ans
12. The following type of Lubrication system is used Aircraft Engines
13. Petroil (mist) system
14. Wet sump system
15. Dry sump system – Ans
16. Splash System
17. \_\_\_\_\_\_\_\_\_\_\_\_ is the lowest temperature at which the oil burns continuously.  
    a) Viscosity  
    b) Flash point  
    c) Fire point – Ans

d) None of the mentioned

PROCEDURE:

1. Select the oil on which he/she wants to perform the experiment.
2. Run the simulation.
3. Note down the value of the flash and fire point of the lubricating oil.

POST TEST:

1. The point at which the ignitable vapours emitted by the oil is sufficient to support a flame
2. Flash Point
3. Fire point -Ans
4. Cloud point
5. Pour point
6. The measure of oil's resistance to flow
   1. Fire Point
   2. Oil Cooler
   3. Flash Point
   4. Viscosity – Ans
7. The lowest temperature at which oil can be poured or can flow is called as
8. Flash Point
9. Fire Point
10. Cloud Point
11. Pour Point – Ans
12. Specially formulated lubricants that provide lubrication under high loads
13. Beta Lubricants
14. Hypoid Lubricants – Ans
15. Hyploid Lubricants
16. None of above
17. The temperature at which paraffin wax and other solids normally held in a solution of oil begin to solidify and separate into tiny crystals
18. Pour Point
19. Flash Point
20. Cloud Point – Ans
21. Fire Point

REFERENCES:

Fluid Mechanics by R. K. Bansal

Engineering Fluid Mechanics by K. L. Kumar.