

MACHINE RUNNER'S REQUIRED QUESTIONS

1. *What is the principle of the flame safety lamp?*
 - a) The principle is to isolate the flame from the outside atmosphere so as to prevent an ignition. As the inner flame attempts to pass through the gauze, it is cooled below the ignition temperature of methane.
2. *How often should the machine operator test for gas?*
 - a) At least every 30 minutes.
3. *How long should you keep your safety lamp in explosive gas?*
 - a) Once gas has been detected, remove the lamp immediately.
4. *How close to the face can a machine be moved before you test for gas?*
 - a) Last open cross cut.
5. *Where is methane normally found?*
 - a) Near the roof because it is lighter than air.
6. *How many splices are permitted in a trailing cable?*
 - a) Five (5) are permitted. After the fifth splice is made the cable will be changed before the next shift.
7. *How do you test the roof?*
 - a) Sight, sound, and vibration.
8. *Where do you test for gas?*
 - a) Not more than one (1) foot from the roof, face, and rib of the working place.
9. *If gas is found in the working place, what should you do?*
 - a) De-energize the equipment and notify the foreman.
10. *How often are you required to examine the trailing cable?*
 - a) Daily.

GENERAL QUESTIONS

1. *If you found explosive gas in a working place in which the machine was operating, when would you again operate that machine?*
 - a) After gas had been rendered harmless and the place had been re-examined by the foreman.
2. *What is the first thing you would do upon coming into a working place?*
 - a) Evaluate the conditions of the place and check for the foreman's date and initials.
3. *When may a machine operator mine pass the last row of bolts?*
 - a) Only with a state approved deep cut plan in conjunction with a remote controlled miner.
4. *If arcing is noticed between machines, what would you do?*
 - a) De-energize the equipment and notify the foreman.
5. *Are you permitted to leave a mining machine while it is energized?*
 - a) No.
6. *What is the most common dangerous gas encountered in bituminous coal mines?*
 - a) Methane.
7. *What is the explosive range of methane?*
 - a) Five (5%) to fifteen (15%) - {10% being the most explosive.}
8. *Is methane heavier or lighter than air?*
 - a) Lighter.
9. *Is methane poisonous?*
 - a) No.
10. *What is the ignition temperature of methane?*
 - a) Eleven hundred degrees to thirteen hundred eighty degrees Fahrenheit (1100 to 1380)

11. *When testing for O₂ deficiency, where do you place your flame safety lamp?*
- a) Near the bottom, low areas.
12. *Is coal dust suspended in air explosive?*
- a) Yes.
13. *Is it your duty to determine the safety of the roof and sides of working places in which you cut? Explain why or why not.*
- a) Yes. No man shall be placed in charge of a coal cutting machine who is not capable of determining the safety of the roof and sides.
14. *What would you do if you found defects in a machine cable?*
- a) De-energize power to machine and notify foreman in charge.
15. *How long would you keep your flame safety lamp in explosive gas?*
- a) The flame safety lamp should not be kept in an explosive mixture any longer than is necessary to show the pressure of gas.
16. *When are you required to wear respiratory equipment?*
- a) Workman exposed to gas, dust, fumes and mist inhalation hazards shall wear approved respiratory equipment.
17. *As a machine operator, when are you required to report defects in your machine and to whom?*
- a) Promptly to your foreman in charge.
18. *What shall be done to the cutting devices of mining machines when they are parked or being trammed?*
- a) They shall be locked securely by mechanical means or electrical interlocks.
19. *What is the minimum quantity of air required in the last open cross cuts?*
- a) Six thousand (6,000) cubic feet per minute.

20. *How often shall the extendible probe used in conjunction with the methane detector be checked?*
- a) Prior to each operating shift.

PRECAUTIONS IN THE USE OF THE FLAME SAFETY LAMP

1. Be sure the lamp is locked before taking it into the mine.
2. Examine it carefully yourself. Make sure it is in good condition even if the lampman has passed it.
3. Do not attempt to open the lamp within the mine.
4. Do not set your lamp on the floor -- it may be upset and broken. Hang it up in a safe place.
5. Keep the lamp clean -- a dirty or oily lamp is dangerous to use.
6. Do not let the flame smoke.
7. Before entering a place, examine the flame of your lamp. Turn it up to the testing height desired. (Never make a test with a cold lamp.)
8. When testing for GAS, hold the lamp firmly by the fuel vessel (bottom).
9. When gas flames up (SHOWS) in the lamp, withdraw it slowly. If the flame goes out, return to fresh air before attempting to relight the lamp.
10. Having detected (found) GAS, do not repeatedly put the lamp back into the gas. (Danger off the place and report the condition to your foreman.)
11. ***REMEMBER:*** *A mine and the persons working in it are only as safe as the **BIGGEST FOOL** handling a flame safety lamp. His mistake may mean your death or injury.*

PROPER PROCEDURE TO TAKE IN APPROACHING THE FACE OF A WORKING PLACE SUSPECTED OF CONTAINING EXPLOSIVE GAS

Using a normal flame (walking flame), approach the face of the working place cautiously, moving slowly and at short intervals raising the lamp vertically towards the roof. If no gas has been found in the execution as outlined in this procedure and the highest points in the working place are reached, it may be said with a reasonable degree of certainty that explosive gas is not present. But if gas is detected (found) while testing, then lower the lamp gently and return from the place. Danger the place off and immediately report condition to the foreman.

LAMP NOT PERMISSIBLE WHEN:

1. In the hands of an incompetent person.
2. Has defective parts.
3. Not assembled properly.