Industrial Electromechanical Maintenance Study Guide

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1. Key Vocabulary Words & Definitions

Word	Translation	Definition
Bearing	Rodamiento	A mechanical component that reduces friction between moving parts.
Conveyor Belt	Banda transportadora	A continuous moving band that transports materials from one place to another.
Lubrication	Lubricación	The process of applying oil or grease to reduce friction between surfaces.
Voltage	Voltaje	The electrical potential difference between two points in a circuit.
Current	Corriente	The flow of electric charge in a circuit.
Circuit Breaker	Interruptor automático	A safety device that stops the flow of electricity when there is an overload.
Motor	Motor	A machine that converts electrical energy into mechanical energy.
Gear	Engranaje	A rotating machine part with teeth that transmit torque.
Welding	Soldadura	The process of joining materials by melting them together.
Hydraulics	Hidraulica	The use of liquid pressure to perform mechanical tasks.
Pneumatics	Neumática	The use of compressed air to perform mechanical tasks.
Insulation	Aislamiento	A material that prevents the passage of electricity, heat, or sound.
Screwdriver	Destornillador	A hand tool used for turning screws.
Multimeter	Multímetro	An instrument used to measure voltage, current, and resistance.
Transformer	Transformador	A device that changes the voltage of an electrical supply.
Solenoid	Solenoide	A coil of wire that generates a magnetic field when electric current passes through it.
Compressor	Compresor	A machine that increases the pressure of a gas.
Relay	Relé	An electrically operated switch.
Fuse	Fusible	A safety device that protects an electrical circuit by melting when overloaded.

2. Student Activities

Activity 1: Matching Words and Definitions

Match each vocabulary word with its correct definition. Write the letter of the correct definition next to each word.

1. ___ Bearing
2. ___ Conveyor Belt
3. ___ Lubrication
4. ___ Voltage
5. ___ Current
6. ___ Circuit Breaker
7. ___ Motor
8. ___ Gear
9. ___ Welding
10. ___ Hydraulics
11. ___ Pneumatics
12. ___ Insulation
13. ___ Screwdriver
14. ___ Multimeter
15. ___ Transformer
16. ___ Solenoid
17. ___ Compressor
18. ___ Relay
19. ___ Fuse

A. A device that stops the flow of electricity when there is an overload.
B. A machine that increases the pressure of a gas.
C. A machine that converts electrical energy into mechanical energy.
D. A rotating machine part with teeth that transmit torque.
E. A safety device that protects an electrical circuit by melting when overloaded.
F. A coil of wire that generates a magnetic field when electric current passes through it.
G. A material that prevents the passage of electricity, heat, or sound.
H. A mechanical component that reduces friction between moving parts.

I. A tool used for turning screws.
J. A process of joining materials by melting them together.
K. A continuous moving band that transports materials.
L. An electrically operated switch.
M. An instrument used to measure voltage, current, and resistance.
N. A device that changes the voltage of an electrical supply.
O. The flow of electric charge in a circuit.
P. The electrical potential difference between two points in a circuit.
Q. The process of applying oil or grease to reduce friction between surfaces.
R. The use of compressed air to perform mechanical tasks.
S. The use of liquid pressure to perform mechanical tasks.

Activity 2: Fill in the Blanks

Complete the sentences with the correct vocabulary word:

1. The _____ stops the flow of electricity when there is an overload.
2. A _____ is used to measure voltage, current, and resistance.
3. _____ reduces friction between mechanical parts.
4. The _____ helps transmit torque in a machine.
5. A _____ joins two metal pieces together by melting them.

Activity 3: True or False

Write **T** for true and **F** for false.

1. A solenoid generates a magnetic field when electricity passes through it.
2. A transformer increases air pressure.
3. A fuse protects circuits by melting when overloaded.
4. Hydraulics uses compressed air to perform tasks.
5. A motor converts mechanical energy into electrical energy.

Activity 4: Word Scramble

Unscramble the letters to find the correct vocabulary word:

1. TMARFSRERON (_____)
2. MSOERORPC (_____)
3. REAPG (_____)
4. SEDCNAYIBOT (_____)
5. RONICTCU KABEERR (_____)

Activity 5: Translation Practice

Translate the following sentences into Spanish:

1. "The compressor increases the pressure of a gas."
2. "A bearing reduces friction between moving parts."
3. "A conveyor belt transports materials."
4. "Lubrication helps protect machine parts."
5. "The voltage difference powers the motor."

Activity 6: Sentence Creation

Write a sentence using each of these words: **solenoid, lubrication, transformer, screwdriver, motor**.

1.

2.

3.

4.

5.

Activity 7: Identify the Tools

Download from Google a picture to match each word. (20 in total)

Activity 8: Discussion Questions

Answer the questions:

- Why is lubrication important in industrial maintenance?
- What is the difference between hydraulics and pneumatics?
- How do circuit breakers help prevent accidents?
