

INSTRUCTIONS. GENERAL SPECIFICATIONS OF A WELDING MACHINE

16.1. Vocabulary

Ex. 1. Say what the following abbreviations stand for.

1. AC
2. DC

Ex. 2. Complete the sentences with the given words.

**direct current, welding current, machine plate (2), class of insulation
H, net weight, power source, absorbed current**

The welding _____ (1) shows the _____ (2).

The _____ (3) of the welding equipment is 50 pounds.

Ensure the _____ (4) is stable before starting welding.

Adjust the _____ (5) according to the material thickness.

Check the _____ (6) for the recommended settings for welding.

This welding machine uses _____ (7) for the operation.

The _____ (8) during welding should be monitored closely.

16.2. Word Formation

Ex. 1. Change the form of the words to complete the sentences.

1. The machine's constant _____ (function) caused delays in production.
2. The _____ (adjust) child struggled to fit in at the new school.
3. The doctor was sued for _____ (practice) after a critical error during surgery.

4. The _____ (form) limbs of the infant required immediate medical attention.

16.3. Reading

Ex. 1. Read the text.

A welding machine is an important tool used in construction, manufacturing, and other industries. Its main function is to join two pieces of metal together by melting and fusing them. The general specifications of a welding machine include several key components.

First, the power source is critical. It converts electrical power to the appropriate form needed for welding. This can be either alternating current (AC) or direct current (DC). The choice between these depends on the type of welding being done. Next, the duty cycle indicates the machine's efficiency. It is usually given as a percentage and shows how long the machine can operate before needing a rest.

Another essential component is the electrode. This is a metal wire that conducts the current and melts to form the weld. Some machines use consumable electrodes, which melt away during welding. Others use non-consumable electrodes, which do not melt but create an arc that melts the metals being welded.

Additionally, the control panel allows the welder to adjust settings like voltage, current, and polarity. These settings need to be adjusted according to the material and thickness of the metals being welded. Lastly, safety features such as thermal overload protection and proper ventilation are crucial to ensure the operator's safety.

Understanding these specifications helps ensure that the welding process is efficient, effective, and safe.

Ex. 2. Answer the questions.

1. What is the main function of a welding machine?
2. What are the general specifications of a welding machine?
3. How does the power source of a welding machine affect its operation?
4. What is the duty cycle of a welding machine and why is it important?

5. What is the role of the electrode in the welding process?
6. How does the control panel of a welding machine help the welder?
7. Why are safety features like thermal overload protection important in a welding machine?

16.4. Communication

Ex. 1. Make sentences using the following words:

1. electricity/create/heat
2. used/caution
3. protective/gear/operating
4. settings/material/welded
5. grounded/before/use
6. clean/well-maintained/longevity
7. manual/troubleshooting/maintenance
8. proper/techniques/results
9. inspect/signs/damage
10. professional/help/repairs