#### SYMBOLS IN WELDING

#### 13.1. Vocabulary

Ex. 1. Match the words with their Russian equivalents.

1. submerge	а. трубопровод
2. reference code	b. техническое обслуживание
3. tube	с. контролер
4. maintenance	d. флюс
5. supervisor	е. погружать (в воду)
6. pipeline	f. достаточно
7. shielding gas	g. защитный газ
8. flux	h. труба
9. society	і. труба
10. enough	ј. решать
11. solve	k. общество
12. pipe	1. справочный код

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

pipeline, pipe, submerge, society, shielding gas, flux, solve, maintenance, tube, reference code, supervisor, enough

The welder had to \_\_\_\_\_(1) the metal piece in water to cool it down after finishing the job.

Make sure you include the \_\_\_\_\_(2) when ordering new welding equipment online.

The instructor handed out a \_\_\_\_\_(3) of welding rods to each student for practice.

Regular \_\_\_\_\_(4) of welding equipment is essential for ensuring safety in the workshop.

The \_\_\_\_\_(5) checked the welds on each piece before allowing them to be used in construction.

The \_\_\_\_\_(6) project required experienced welders to join sections of metal together.

The welder used \_\_\_\_\_(7) to protect the metal from contamination during the weld.

When welding, make sure to use \_\_\_\_\_(8) to prevent oxidation of the metal.

The local welding \_\_\_\_\_(9) held a meeting to discuss upcoming workshops and events.

Do you have \_\_\_\_\_(10) welding experience to take on this challenging project?

The welder needed to \_\_\_\_\_(11) a problem with the welding machine before continuing with the job.

The \_\_\_\_\_(12) was welded securely to ensure there were no leaks in the structure.

# 13.2. Reading

Ex. 1. Read the text.

# Symbols in Welding

In the world of welding, symbols play a crucial role in communication. These symbols are like a universal language that helps welders understand each other clearly, even if they speak different languages. When looking at a welding blueprint, you'll often see various lines, arrows, and shapes. Each of these elements has a specific meaning that tells the welder exactly where and how to make the weld.

For example, an arrow on a welding symbol points to the place where the weld is to be made. The type of weld is shown by the shape of the symbol placed on either side of the reference line. A triangle indicates a fillet weld, while a semicircle represents a spot weld.

Numbers written above or below the symbol provide additional details, such as the size of the weld or the length of the weld bead. Sometimes, there're also supplementary symbols, like a flag for a field weld or a circle indicating an all-around weld.

Understanding these symbols is essential for producing high-quality, accurate welds. By using these standardized symbols, welders can ensure their work meets specifications and safety standards, regardless of the project's complexity or location.

### Ex. 2. Answer the questions.

1. How do welding symbols help welders communicate with each other?

2. What does an arrow on a welding symbol indicate?

3. How can you determine the type of weld from the shape of the symbol?

4. What additional details can be provided by numbers written above or below the welding symbol?

5. Why are supplementary symbols like flags and circles used in welding blueprints?

6. Why is it important for welders to understand these standardized symbols?

7. How do welding symbols help ensure that work meets specifications and safety standards?

**13.3.** Communication *Ex. 1.* Make sentences using the following words:

- 1. Welders/use/symbols
- 2. Symbols/on/blueprints
- 3. These/symbols/indicate
- 4. Understanding/welding/symbols
- 5. Interpret/welding/symbols/correctly
- 6. Explain/meaning/welding
- 7. Welding/symbols/metal
- 8. Proper/interpretation/symbols
- 9. Learned/about/different
- 10.Following/symbols/accurately