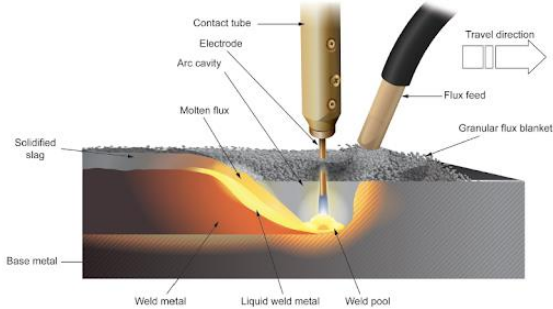


WELDING PROCESSES

5.1. Vocabulary

Ex. 1. Match the words with their definitions.

1. torch welding 	a. a specialized form of welding that uses a focused plasma arc to melt and join metals together.
2. gas metal arc welding (gmaw)	b. a welding method that uses a continuous solid wire electrode and shielding gas to create a weld.
3. oxy fuel or oxyacetylene welding	c. a type of welding where a handheld torch is used to heat and melt the metal pieces being joined together.
4. metal inert gas welding (mig)	d. a welding process that uses oxygen and acetylene gas to create a high-temperature flame for joining metals.
5. arc welding 	e. a manual welding process that uses a flux-coated electrode to create a weld while protecting it with a layer of slag.
6. submerged arc welding	f. a welding method that uses a granular flux to cover the molten weld pool, preventing atmospheric contamination and producing high-quality welds.
7. shielded-metal arc welding	g. a welding technique that uses a non-consumable tungsten electrode and inert gas to create a precise and clean weld.
8. plasma arc welding	h. a welding process that uses a consumable wire electrode and inert gas to protect the weld from atmospheric contamination.
9. gas tungsten arc welding (tig)	i. a welding technique that uses an

	electric arc to generate heat and join metals together.
--	---

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

arc, Shielded-metal arc welding, Submerged arc, Gas metal arc welding, Torch, plasma arc welding, MIG welding, Gas tungsten arc welding, oxy fuel

The craftsmen practiced _____(1) welding to fuse the metal pieces together seamlessly.

_____ (2) welding is preferred for its precise control over the heat and speed of the process.

His expert skills in _____(3) welding allowed him to create intricate designs on metal surfaces.

_____ (4), commonly known as GMAW, offers high efficiency and strong welds.

_____ (5) is often chosen for its versatility in joining different types of metals.

_____ (6), or TIG, requires a steady hand and attention to detail.

Modern techniques like _____(7) have revolutionized the industry with their precision.

_____ (8) is a popular method for its simplicity and effectiveness.

_____ (9) welding is ideal for creating deep welds in thick metal materials.

5.2. Reading

Ex. 1. Read the text.

Welding Processes

Welding is the process of joining two or more pieces of metal or plastic together using heat and/or pressure. There are several different types of welding processes, each with its own advantages and disadvantages. In this article, we will discuss four of the most common welding processes: MIG, TIG, arc, and spot welding.

MIG (metal inert gas) welding is a type of welding that uses a wire electrode to create an electric arc between the wire and the metal being welded. The wire melts and fuses with the metal to create a strong bond. MIG welding is fast and relatively easy to learn, making it one of the most popular welding processes. It is commonly used in the automotive and construction industries.

TIG (tungsten inert gas) welding is a more precise and versatile type of welding that uses a tungsten electrode to create an electric arc. Unlike MIG welding, TIG welding does not require a filler material, so it produces cleaner and more precise welds. However, TIG welding is slower than MIG welding and requires more skill. It is commonly used in the aerospace and automotive industries.

Arc welding is a type of welding that uses an electric arc to melt and fuse metals together. Arc welding can be done with or without a filler material. It is a versatile process that can be used to weld a wide range of metals, including steel, aluminum, and cast iron. However, arc welding produces a lot of heat and sparks, so it requires careful safety precautions. It is commonly used in the construction and shipbuilding industries.

Spot welding is a type of welding that uses heat and pressure to join two or more pieces of metal together. Spot welding is commonly used in the automotive industry to weld sheet metal parts together. It is a fast and efficient process, but it produces a lot of heat and can only be used on thin materials.

In conclusion, there are several different types of welding processes, each with its own advantages and disadvantages. The choice of welding process depends on the materials being welded, the desired strength and appearance of the weld, and other factors such as cost and time constraints.

Ex. 2. Answer the questions.

1. What is welding and how does it work?
2. How does MIG welding differ from TIG welding in terms of the materials used?
3. What are some common industries where MIG welding is commonly used?
4. Why is TIG welding considered more precise than MIG welding?
5. What safety precautions are necessary when using arc welding due to its characteristics?
6. In what industry is spot welding most commonly utilized?
7. What factors should be considered when choosing a welding process for a specific project?

5.3. Communication

Ex. 1. Make sentences using the following words:

1. Welding/processes/metal
2. Common/welding/method
3. Protective/gear/safety
4. Heat/applied/melt
5. Gas/welding/oxygen
6. Different/techniques/used
7. Requires/steady/precision
8. Creates/strong/bonds
9. Various/industries/construction
10. Challenging/rewarding/skill