

General Welder Intermediate Trade Test Study Material for Written Test

(Version : IGW-SM-EN-02)



此文件關於普通焊工中級工藝測試技術知識測試（筆試）內容參考資料。
如需索取此文件的中文版本，請致電 2100 9000 與香港建造業工藝測試中心聯絡。

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This study material is a reference for candidate to prepare for attending written test in Intermediate Trade Test:

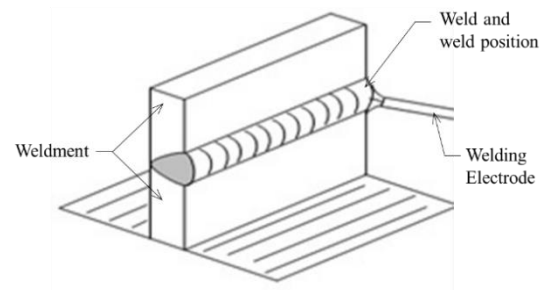
- 1 Shielded metal arc welding electrode has different size in diameter. The largest diameter is No. 6.
- 2 According to American Welding Society, electrode classification follows standard pattern, for example: E6013.
 - i. "E" stands for arc welding electrode.
 - ii. First two digits, i.e. 60, designates tensile strength of at least 60ksi (or 413MPa) of the weld metal.
 - iii. Third digit, i.e. 1, designates position. It means the electrode is usable in all positions (i.e. flat, horizontal, vertical and overhead).
 - iv. Last two digits taken together designates type of coating and current to use.
- 3 As mentioned before, for electrode E6013, the third digit, i.e. 1, designates position. It means the electrode is usable in all positions (i.e. flat, horizontal, vertical and overhead).
- 4 The tools shown in the photos are called welding rod oven.



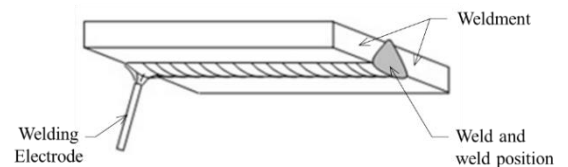
5 The tool shown in the photo is called cutting torch.



6 The weld position shown in the diagram is horizontal.



7 The weld position shown in the diagram is overhead.



- 8 Comparing to low carbon steel, medium carbon steel, high carbon steel and cast iron, low carbon steel has higher weldability than others.
- 9 In general, low carbon steel does not require preheating before welding.
- 10 Electrode rods should be kept dry in order to prevent porosity during welding.
- 11 The most serious weld defect is crack.
- 12 When considering shielded metal arc welding for vertical weld, welders should use short welding arc length, small size of electrode and low welding current.
- 13 The shielding gas used to protect the melt pool in gas tungsten arc welding (GTAW), or called tungsten inert gas welding, is argon.

- 14 The flame for oxy-acetylene cutting is neutral flame.
- 15 When there is a problem with an electrical tool, worker should stop using it and report to the person in charge to arrange repairing.
- 16 The highest fatal accident rate in construction industry is work at height.
- 17 Every board or plank forming part of a working platform should be not less than 25mm in thickness.
- 18 The top guard-rails of working platform should be ranged from 900 to 1150mm in height.
- 19 In case of any corruption/act of bribery happen in construction industry, it will cause decline in work quality.
- 20 The benefits of professional ethics and good conducts will improve construction industry and it will bring us mentally and physically well.

Precautions

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