



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

Marine Construction Plant Operator (Boom-grab Bucket) Trade Test Mock Practical Test Paper

此文件關於海面建造機械操作工（吊臂-夾吊）工藝測試考題。如有需要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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Trade Test Paper

Trade: Marine Construction Plant Operator (Boom-grab Bucket)

Skill Level: Skilled Worker

Question: Conduct the following work according to actual site environment:

1. Control the windlass to shift the barge towards the specified direction for about 2 m. (10 marks)

2. Prepare and check the following items before operation: (10 marks)
 - Valid barge licence, examination certificate of boom (fixed boom) and slinging tools;
 - Level of fuel, engine oil, coolant and performance of braking system of the crane;
 - Conditions of mast rope (桅索), crane platform, boom, sling, hoist ring (吊環), grab bucket, guy rope and other auxiliary slinging tools;
 - After completing the above preparation processes and safety measures, raise the boom to working height and prepare to lift the work piece.

3. Chase the grab bucket to the specified location (commonly called grab bucket chasing (追夾), maximum swing of grab bucket not exceeding 2 m) within 20 seconds for two consecutive times. (10 marks)

4. Candidate to select one of the following test items according to the actual site environment: (60 marks)
- Use the bucket (泥夾) or grapple (石夾) to grab materials in the barge cabin (i.e. existing materials in the barge), dump at the actual working location for 10 consecutive times; or
 - Grab sludge from the sea at the actual working location and dump in the barge cabin for 10 consecutive times.
5. Cut off a wire rope core (麻芯鋼纜) (wire) with circumference of 50 ~ 90 mm (length at will), and use hand tools to join the steel fork (鋼叉) to a quadruple ring buckle (四花環扣) with diameter of 600 mm for load testing. (10 marks)

Test Time: 3 hours

- Notes:
- (1) The candidate must read the “Notes to Candidates” in the Annex before starting;
 - (2) If the candidate did not complete safety measures during the test, he/she will be deemed to have failed the test; and
 - (3) There are 4 pages in the question. All test items will have a full mark of 100 and 60 marks or above will be considered as pass.

Notes to Candidates :

1. Candidates should read the test papers carefully and ask the invigilator for any queries.
2. Candidates should study the drawings and specifications attached to test papers, if any, before the test begins.
3. Candidates should carry out the test according to test papers, working drawings and specifications provided.
4. Candidates shall bring their own safety shoes, other safety equipment will be provided by trade testing centre. Candidates must take all necessary safety precautions to ensure work safety.
5. All tools and materials required by the test will be provided by trade testing centre, candidates should check and ensure their adequacy and quality. Candidates shall use the tools and materials properly based on trade practice. All the tools must be returned to trade testing centre after the test. The candidates may ask the invigilator for any problems.
6. Candidates are required to handle and move the tools and materials for use in the test, and to carry out associated works.
7. Invigilator will take record photos periodically during the test.
8. Candidates are not allowed to take any photo or video with cameras or mobile phones.
9. Candidates are not allowed to use their mobile phones during the trade tests, except for emergency situation.
10. The marking scheme is based on the following criteria :

- a) Understanding of drawing and specification
- b) Preparation works before commencement of test
- c) Working procedures
- d) Accuracy and quality of works
- e) Progress of works
- f) Proper handling and use of materials
- g) Proper use of tools and equipment
- h) Safety precautions
- i) Considerate of other trades
- j) Housekeeping after completion of test

- 11. All candidates must stop when time is up.
- 12. Candidates are required to return the test paper to invigilator after the test.
- 13. Offering bribe to invigilator is an offence in law and trade testing centre will report to the ICAC for any such case.

In the event that the candidate fails to take any necessary safety precautions and / or works in any dangerous situations, he / she will be assessed failed