

Construction Plant Mechanic Intermediate Trade Test Practical Test Mock Paper

(Version : ICM-PM-EN-01)



此文件關於建造機械技工中級工藝測試實務測試模擬試題。

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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Construction Plant Mechanic Intermediate Trade Test

Practical Test Mock Paper

Trade: Construction Plant Mechanic

Grade: Semi Skilled Worker

Test Content: According to the attached works drawing, complete the following items at designated location:

1. Refer to Drawing 1, mark, saw and file 5mm thick mild steel (M.S.) plate to form the required triangular shape workpiece.
2. Refer to Drawing 2, weld both sides of M.S. plates by continuous fillet weld with appropriate electric current of welding machine, and choose proper electrode and welding joint location.
3. Refer to Drawing 3, cut the workpiece according to the marked lines, i.e. each 100mm long, by using oxy-acetylene cutting device. Before the commencement of works, choose proper tools, setup and check the oxy-acetylene cutting device properly and adjust the pressure. (Time allowed: 20 mins.)
4. Refer to Drawing 4, cut a $\varnothing 20$ mm G.I. pipe to the required length and prepare thread at the end of the pipe by using proper pipe cutting machine and threading machine respectively, and install it to a given coupler.
5. Refer to Drawing 5, use the proper tools to measure and mark the position of the holes. Drill the holes on TWO pieces of M.S. plates, and prepare thread for bolts of M8 x 1.25mm pitch.
6. Refer to Drawing 6, use the proper tools to drill holes onto the concrete wall surface, install torque controlled expansion anchors and push-in/drop-in anchors to fasten an angle bracket onto the wall. For torque controlled expansion anchor, 20Nm torque should be achieved.

Duration: 3 hours

Construction Plant Mechanic Intermediate Trade Test Practical Test Mock Paper (Cont.)

Notes:

- (1) Candidate should read the attached “Notes to Candidate” before commencement of work and comply with all test related rules and requirements.
- (2) To achieve overall “Pass” grade in practical test of trade test, candidates should satisfy ALL testing requirements as stated below:
 - obtain “Pass” grade in technical skill section (i.e. achieve minimum 60 marks out of 100 marks, and no serious mistakes made in technical aspect and at works during the test,
 - meet the specific requirement(s) in specified item(s) of assessment criteria, and
 - obtain “Pass” grade in safety assessment (remarks: candidates will be deemed as candidates will be deemed as “Fail” if he/she fails to carry out necessary safety precautionary actions during the test).
- (3) For the details of assessment criteria for practical test, please refer to “Major Assessment Criteria of Practical Test for Construction Plant Mechanic Intermediate Trade Test”.

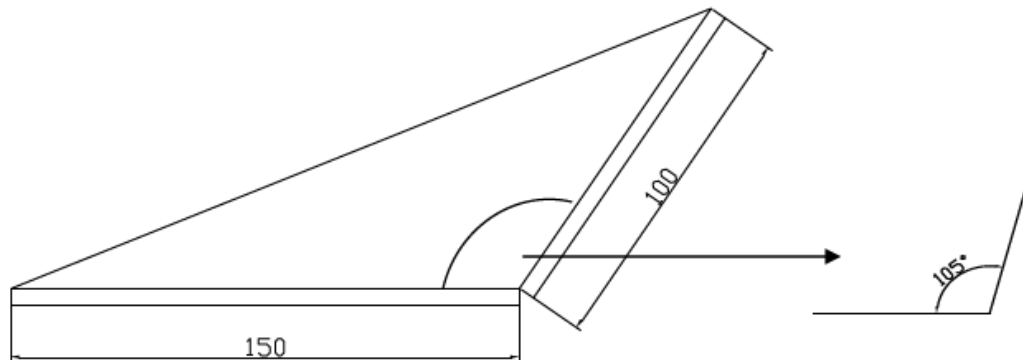
Precautions

This document is provided as reference for test preparation only. Under all circumstances all content in the official test papers, including but not limited to the terms and conditions therein, prevails. There are different versions of the test paper, content include but not limited to tools, materials, equipment, drawing, construction details or procedures and different simulated site environments. Candidates should refer to the official test documents during testing.

The CIC reserves the right, at its sole and absolute discretion, to change, update or delete the contents in this document at any time without prior notice.

Drawing 1 for Construction Plant Mechanic Intermediate Trade Test

Mark, saw and file a 5-mm thick M.S. plate in a triangular shape as shown below:



Drawing not to scale.

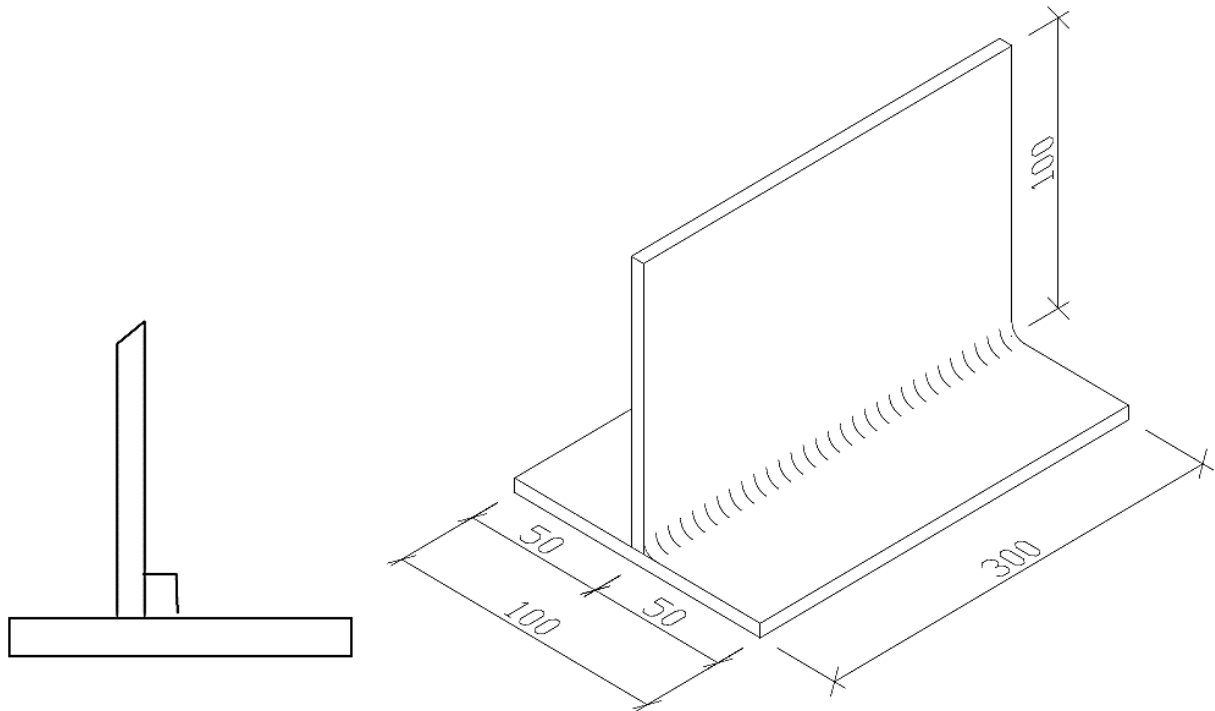
All dimensions are in mm.

Specifications and Requirements

1. Complete the work task with correct dimension according to the drawing.
2. The edge of the finished product should be filed and smoothed.
3. Tolerance in dimension and angle are $\pm 1\text{mm}$ and $\pm 2^\circ$ respectively.

Drawing 2 for Construction Plant Mechanic Intermediate Trade Test

Fillet weld on the both sides of M.S. plate:



Drawing not to scale.

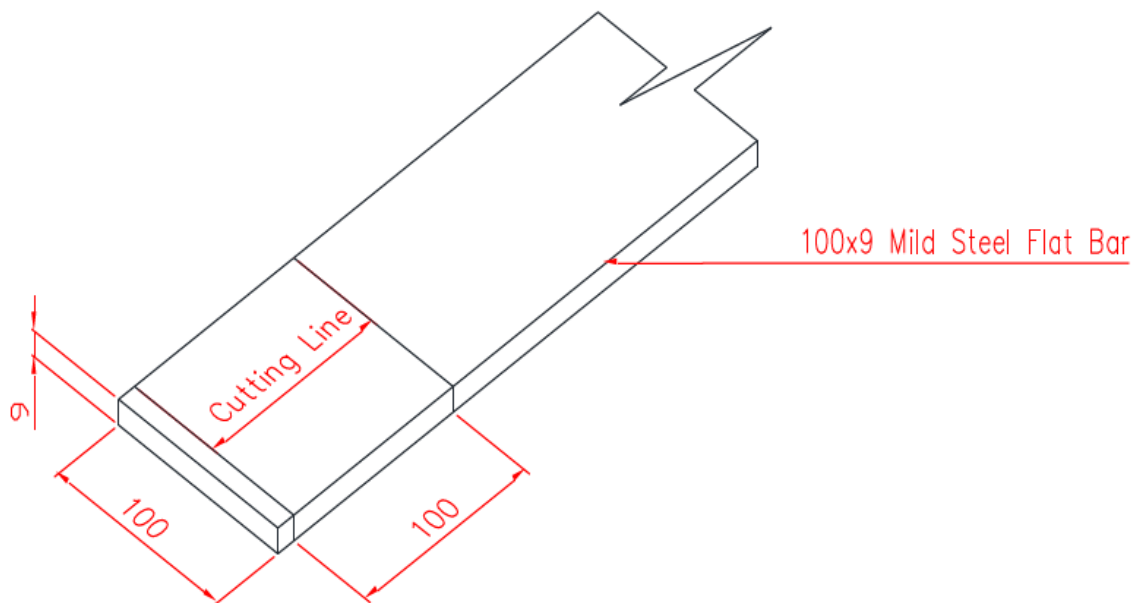
All dimensions are in mm.

Specifications and Requirements

1. Complete the work task with correct dimension according to the drawing.
2. E6013#10 electrode should be used to weld the work pieces.
3. Remove all welding dross after completion.

Drawing 3 for Construction Plant Mechanic Intermediate Trade Test

Please refer to below drawing to cut the work piece by using oxy-acetylene cutting device:



Drawing not to scale.

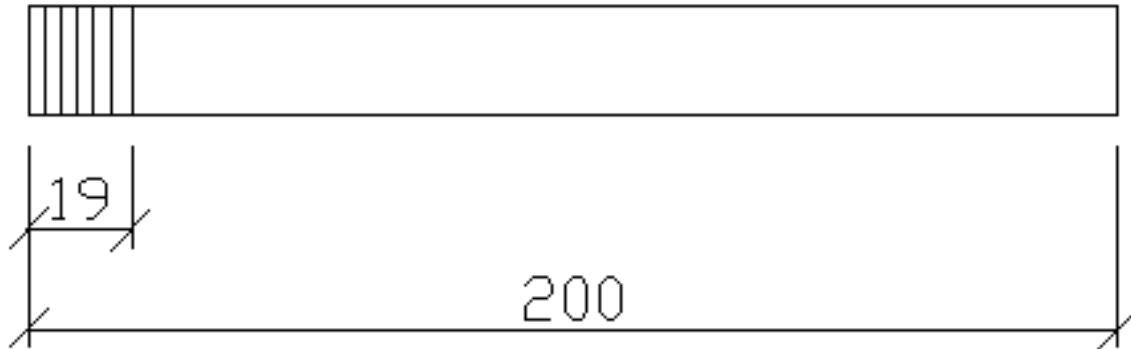
All dimensions are in mm.

Specifications and Requirements

1. Select the appropriate tools and device, then adjust the required air pressure of the cutting torch.
2. Cut the work piece along the lines drawn on the plate.
3. Candidate is required to work on the floor, whatever using the fix and unfixed posture for cutting.
4. Tolerance of kerf's straightness shall not exceed $\pm 3\text{mm}$.
5. Tolerance of width of kerf shall not exceed $\pm 4\text{mm}$.
6. Tolerance of perpendicular of kerf shall not exceed $\pm 2.5\text{mm}$.
7. The slag attached on the bottom of kerf shall be removed.
8. Restore all welding devices and tools to original setting after completion of work.

Drawing 4 for Construction Plant Mechanic Intermediate Trade Test

Please refer to below drawing to cut and thread the G.I. pipe:



Drawing not to scale.

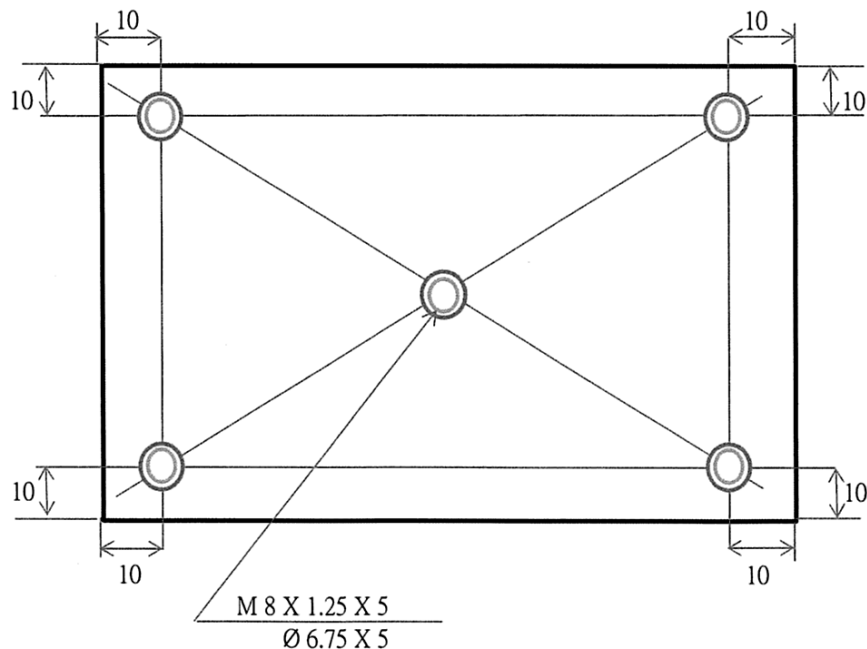
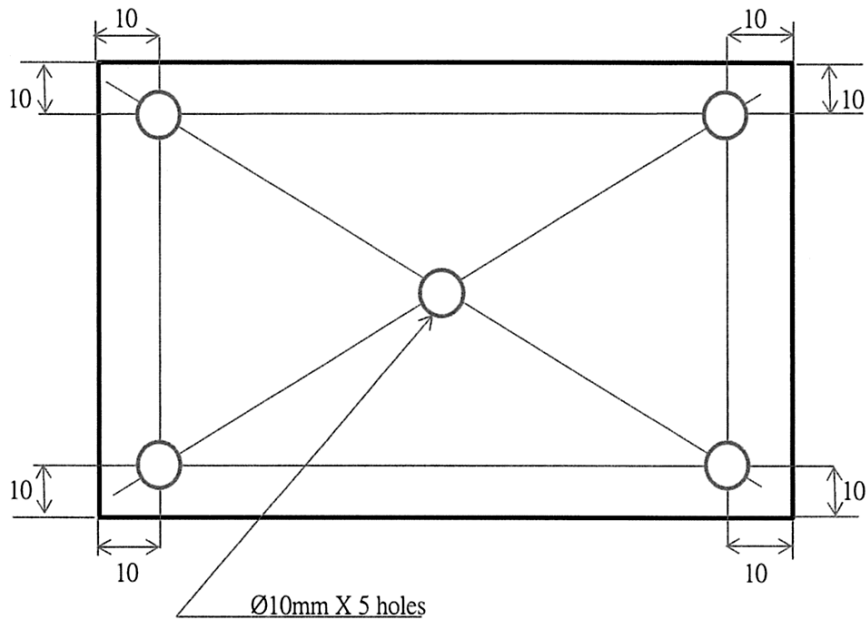
All dimensions are in mm.

Specifications and Requirements

1. Use proper tools to cut a piece of 200mm long G.I. pipe of 20mm diameter.
2. Select and install the proper die set, then use it to thread the pipe, and install it to a given coupler.
3. Remove the threading set after completion of work and return to original setting.

Drawing 5 for Construction Plant Mechanic Intermediate Trade Test

Select the proper drills and tap by referring to the below drawing, mark and drill 5 holes in each of the 2 workpieces with specified diameter, and provide thread for bolt of M8 x 1.25mm pitch using the proper tap.



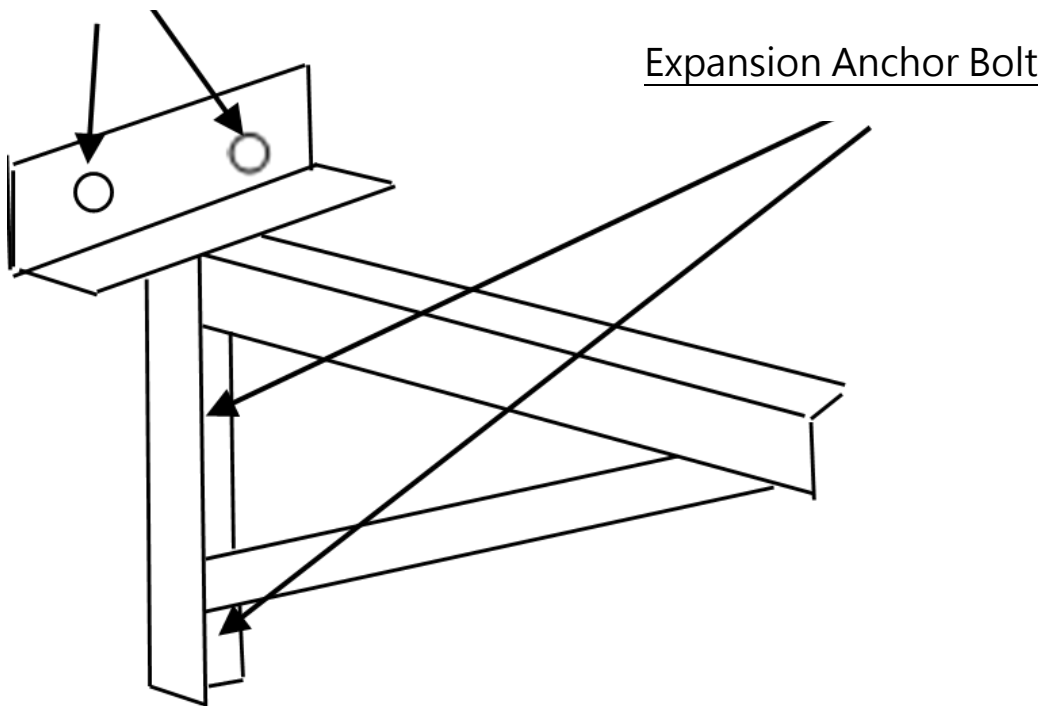
Drawing not to scale.

All dimensions are in mm.

Drawing 6 for Construction Plant Mechanic Intermediate Trade Test

Using the proper tools to mark and drill holes onto the concrete wall. Install different types of anchor bolts, i.e. torque controlled expansion anchor bolt and push-in/ drop-in anchor bolt, and fasten an angle bracket with 20Nm torque for torque controlled expansion anchor.

Push-in/ Drop-in Anchor Bolt



Drawing not to scale.

Notes to Candidate

1. Candidates should read the test papers carefully and ask the invigilator for any queries.
2. Practical test making scheme is based on the following criteria:
 - a. Understanding of drawing and specification
 - b. Preparation works before commencement of test
 - c. Working procedures, accuracy and quality of works
 - d. Proper handling and use of materials
 - e. Proper use of tools and equipment
 - f. Housekeeping after completion of test
 - g. Safety precautions
3. Candidates should study the drawings and specifications attached to the test paper, if any, before the test begins.
4. Candidates should carry out the test according to test papers, working drawings and specifications provided.
5. Candidates shall bring their own safety shoes and appropriate workwear, other safety equipment will be provided by HKCITTC. Candidates must take all necessary safety precautions to ensure work safety.
6. All tools and materials required by the test will be provided by HKCITTC, candidates should check and ensure their adequacy and quality. All the tools must be returned to HKCITTC after the test. The candidates may ask the invigilator for any problems.
7. Candidates are required to handle and move the tools and materials for use in the test, and to carry out associated works.
8. All candidates must stop when time is up.
9. Candidates are required to return the test paper to invigilator after the test.
10. Invigilator will take record photos periodically during the test.
11. Candidates are not allowed to take any photo or video with cameras or mobile phones.
12. Candidates are not allowed to use their mobile phones during the trade tests, except for emergency situation.
13. Offering bribe to invigilator is an offence in law and HKCITTC will report to the ICAC for any such case.
14. Subject to certain situations and/or conditions of the date of event, trade tests/courses could be at any moment suspended or postponed at discretion of the invigilators. Examples of such situation/condition could be, but not limited to, (a) sudden operation disruptions to classrooms, test venues, test equipment or tools etc. due to unforeseeable mishaps; (b) sickness or injury of candidates, students or elated staff of the HKCITTC; (c) adverse weather condition. The HKCITTC will rearrange another appointment, for free, with the candidates/students affected. Whilst every effort is made to ensure the smooth running of trade test/courses, the HKCITTC will not resume any liability any loss/damage directly or indirectly related to such arrangement.

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.