



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

Prestressing Operative Skilled Trade Test Mock Practical Test Paper

此文件關於預應力（拉力）工工藝測試考題。如有需要索取此文件的中文版本，請致電 2100 9232 與工藝測試中心聯絡。

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Enquiries

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Trade Test Paper

Trade: Prestressing Operative

Skill Level: Skilled Worker

Question: Complete the following items according to the plans and requirements:

1. According to Shop Drawing 1, install tension conduit (flexible conduit) (50 marks) at the specified levelling, draw 17 wires, install tension head (拉力頭) with wedge on the pig mouth head (豬咀頭) and connect grouting pipe (灌漿喉) at appropriate location inside an approximately 5m long beam structure completed with bar bending and pig mouth head (豬咀頭).
2. According to Shop Drawing 2, use appropriate machinery to install (50 marks) the pneumatic jack and conduct tensioning on a concrete structure.

There are two groups of tensioning positions in the structure. The first has 1 wire and the second has 5 wires.

After installing the pneumatic jack, tension the first group of wire to 15 Bar and the second to 15 Bar.

Release all wires to original condition after completion.

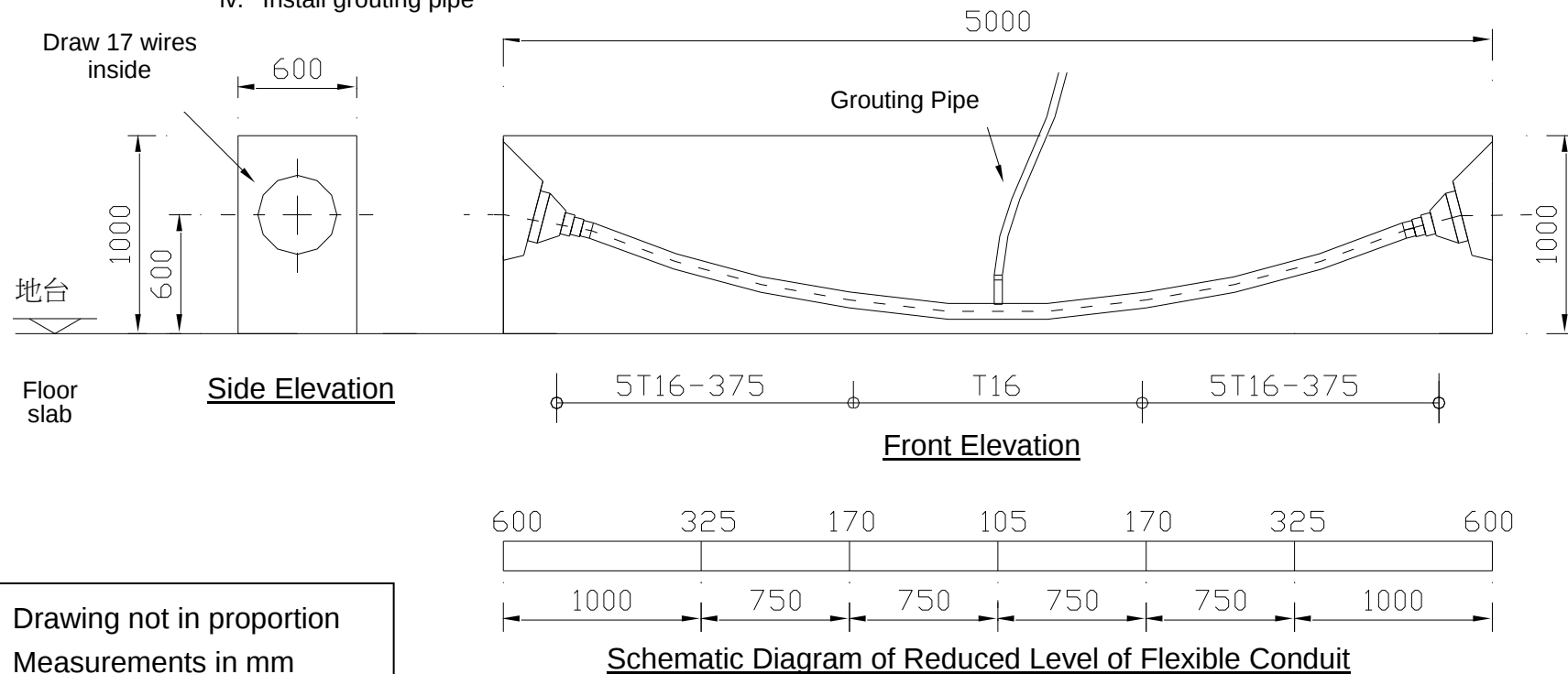
Test Time: 3 hours

- 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.

Remarks:

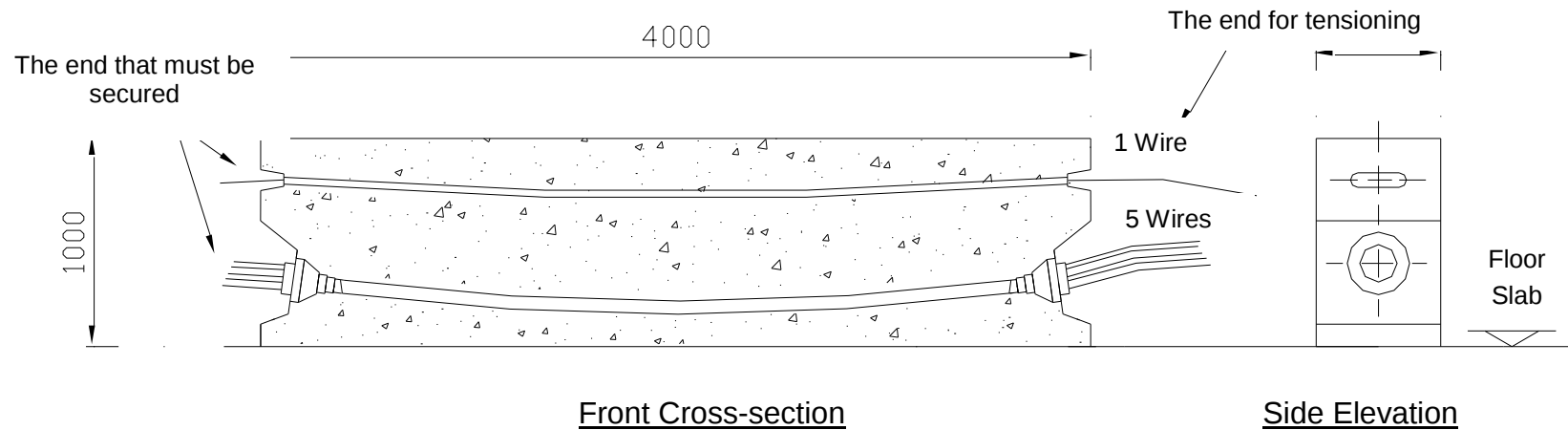
1. The tension beam is fitted with bar bending and single-sided formwork
2. There are formwork on both ends and fitted with pig mouth head (豬咀頭)
3. The reduced level of flexible conduit is marked on the formwork
4. Candidate must complete the following work:
 - i. Securely fix the flexible conduit according to the levelling (error of ± 5 mm)
 - ii. Draw 17 wires
 - iii. Install tension head (拉力頭) with wedge
 - iv. Install grouting pipe

Prestressing Operative Trade Test Shop Drawing 1



- Remarks:
1. Two groups of wires must be installed in this concrete structure; the first group has 1 wire and the second has 5 wires.
 2. Candidate must install tension head (拉力頭) and wedge in the upper and lower pig mouth head (豬咀頭).
 3. Candidate must use appropriate machinery to conduct tensioning.
 4. Candidate must release tension and resume original condition after completion.

Prestressing Operative Trade Test Shop Drawing 2



Drawing not in proportion
Measurement in mm

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
 - h) 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