

GUIDELINES FOR APPLICATION FOR REGISTRATION AS SPECIALIST PROFESSIONAL ENGINEER IN ACCESS PLATFORM ENGINEERING

Introduction

1. A PE in mechanical engineering may apply to be registered as a specialist professional engineer in access platform engineering if he has a valid practicing certificate and meets the following set of conditions as specified in the Fourth Schedule of the PE Rules 1991 as follows:

Set (B)

- (i) the applicant has not less than 5 years (in aggregate) of such experience in access platform engineering or in any field related to access platform engineering (whether in Singapore or elsewhere) as may be acceptable to the Board, of which at least 3 years of such experience was obtained whilst practising as a registered professional engineer in Singapore; and
- (ii) the applicant has sat for and passed a specialist registration examination on access platform engineering conducted by the Board.

Examination

2. One of the requirements as mentioned in para 1 above is that an applicant must sit for and pass a specialist registration examination on access platform engineering conducted by the Board. The specialist registration examination on access platform engineering conducted by the Board is an oral examination and will be conducted together with the professional interview for registration as specialist PE in access platform engineering in a single session. The syllabus for the examination is as specified in Annex A below.

Report

3. An application must be accompanied by a Summary of Postgraduate Professional Experience and a Report on Postgraduate Engineering Experience that describes in particular the experience that the applicant has acquired in access platform engineering or in any related field. It should include the tasks that the applicant has been involved in, the levels of his responsibilities, the identification of special engineering problems encountered and the demonstration of the use of engineering knowledge, experience and judgment to resolve them etc. The Report shall be about 2,000 words and must not be a mere inventory of work done.
4. The Summary of Postgraduate Professional Experience and Report on Postgraduate Engineering Experience must be verified by registered Professional Engineer in Singapore, accompanied by the professional engineer's stamp. The Report on Postgraduate Engineering Experience must also be signed by the applicant himself or herself.

Interview

5. The Board would require an applicant to undergo an interview. The interview would cover the following:
 - a) to determine the type and duration of practical experience in access platform engineering or in any related field;

- b) to assess the basic understanding, and scope and depth of the applicant's practical experience in access platform engineering or in any related field, in particular, to establish the level of responsibility – i.e. whether the applicant's nature of work is at subordinate level or at the level of making technical decisions and to establish whether his experience is sufficient to enable him to act and take technical decisions independently.
6. The applicant could be queried on his/her involvement in one or more phases of a project such as planning, design & analysis, construction, and operation & maintenance in relation to access platform engineering or in any related field.
7. An applicant is required to demonstrate that he/she has substantial practical experience and knowledge as to be competent in core areas of access platform engineering or in any related field mentioned above. In addition, the conduct, attitude and professionalism that the applicant displays during the interview would also be considered.
8. When registering a professional engineer in the specialised branch of access platform engineering, the Board may impose such conditions as it thinks fit.

Fees

9. The fees for an application to sit for the specialist registration examination in the branch of access platform engineering is \$450. The fees for an application to register as a specialist professional engineer in access platform engineering is \$300.

Application

10. Applicant may login to PEB website > Login to PEB Portal (E-Services) to submit your application. For more information on registration as a Specialist Professional Engineer, an applicant may refer to "User Guide to Apply for Specialist Professional Engineer (SPE) Registration" available in PEB's Website > Resources. All documents are to be uploaded into the PEB Portal.

SYLLABUS FOR SPECIALIST REGISTRATION EXAMINATION IN ACCESS PLATFORM ENGINEERING

Codes and Standards Related to Access Platform Engineering

The applicant shall have an in-depth understanding of the relevant local and international codes and standards including but not limited to the following:

1. ANSI A92- Elevating And Vehicle Lift Devices
2. AS 1418.1- Crane, Hoist And Winches
3. BS 1495- Lifting Platform - Mast Climbing Work Platforms
4. BS 5974- Code Of Practice For Temporarily Installed Suspended Scaffolds And Access Equipment
5. BS 6037-1- Code Of Practice For The Planning, Design, Installation And Use Of Permanently Installed Access Equipment, Part 1: Suspended Access Equipment
6. BS 7981- Code Of Practice For Installation, Maintenance, Thorough Examination And Safe Use Of Mast Climbing Work Platforms
7. BS EN 280- Mobile Elevating Work Platforms. Design Calculations. Stability Criteria. Construction. Safety. Examinations And Tests
8. Code Of Practice On Safe Lifting Operations In The Workplaces
9. DIN 1055-4- Action On Structures – Part 4: Wind Loads
10. EN 1808- Safety Requirements On Suspended Access Equipment – Design Calculations, Stability Criteria, Construction – Tests
11. ISO 2408- Steel Wire Rope For General Purposes
12. SS 343: Specification For Lifting Gear
13. SS 567: Code Of Practice For The Factory Layout- Safety, Health And Welfare Considerations
14. SS 595: Singapore Standards For Steel Wire Ropes For Hoisting
15. SS 598: Code Of Practice For Suspended Scaffolds
16. SS 616: Code Of Practice For Safe Use Of Mobile Elevating Work Platforms

Other Relevant Areas in Access Platform Engineering

1. The applicant shall be knowledgeable in the following areas:
 - a) work platform suspended by ropes such as gondola and building management units
 - b) work platform operated by rack and pinion such as mast climbing work platform (MCWP)
 - c) hydraulic work platforms such as mobile elevating work platform (MEWP)
 - d) storage and retrieval system on rails or on wheels
 - e) work platform suspended by chains

- f) boatswain/ bosun chair
 - g) Material hoist operated by ropes, rack and pinion or hydraulic means
 - h) Workplaces lifts operated by rack and pinion
2. The applicant shall have an in-depth understanding of the design and working principles of the lifting platform and be conversant with the essential parts of the lifting platform including:
- a) safety devices
 - b) hydraulic system
 - c) hydraulic system
 - d) rack and pinion mechanism
 - e) tie backs
 - f) functions and controls system
 - g) boom system
 - h) turntable system
 - i) hoisting system
 - j) wire ropes
 - k) outrigger system
3. Conversant with the testing and examination of lifting platform including visual examination, functional test and load test.

Welding and Non-destructive Testing (NDT)

The applicant shall be knowledgeable in the following areas:

1. General principles of NDT
2. Typical welding methods
3. Welding process knowledge
4. Welding metallurgy
5. Typical welding faults and its identification
6. Welding codes (including ASME Codes, AWS Standards, API Standards)
7. Uses and limitations of various NDTs
8. In depth knowledge of various NDTs

Metallurgy and damage mechanism

The applicant shall be knowledgeable in the following areas:

1. Material strength and properties
2. Classification and engineering properties of metals, as well as composites
3. Various damage mechanisms
4. Heat treatment