

Professional Engineers Board Singapore



**Annual Report
For Financial Year
2019**

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■ PRESIDENT AND MEMBERS OF THE BOARD

President



Er. Ho Siong Hin

Members of The Board



From left to right

**Er. Au Kow Liong
Er. Chan Ewe Jin
Er. Chan Jacqueline**



From left to right

**Er. Chew Keat Chuan
Er. Dr Chiew Sing Ping
Er. Chua Tong Seng**



From left to right

**Er. Khew Teck Fook, Edwin
Er. Lau Joo Ming
Er. Dr Lock Kai Sang**

Members of The Board (Cont'd)



From left to right

Er. Neo Tee Boon
Er. Shahrom Bin Mohamed Ariff (From 1 January 2018 to 22 April 2019)
Er. Tan Shu Min, Emily



From left to right

Er. Dr Wong Liang Heng, Johnny
Ar. Chan Li Chen, Angelene

Registrar



Er. Tay Chiou Peng, Raymond

■ MISSION, KEY OBJECTIVES AND FUNCTIONS OF THE BOARD

Mission

To safeguard life, property, and welfare of the public by setting and maintaining high standards for registering professional engineers, and by regulating and advancing the practice of professional engineering.

Key Objectives

- To maintain an internationally acceptable standard of assessment which emphasizes quality academic education, examination, and practical experience that ensures only competent individuals are accepted for registration as professional engineers.
- To maintain a process that ensures professional engineers demonstrate a high standard of professional development, and conduct and ethics that meet the expectations of clients and consumers.
- To develop responsible self-governance of the profession through judicious administration of the Act and Rules on professional conduct and ethics.
- To coordinate and facilitate cross-border mobility of qualified professional engineers.

Functions

- To keep and maintain a register of professional engineers, a register of practitioners and a register of licensees.
- To hold or arrange for the holding of such examinations as the Board considers necessary for the purpose of enabling persons to qualify for registration under the Professional Engineers Act.
- To approve or reject applications for registration under the Professional Engineers Act or to approve any such applications subject to such restrictions as it may think fit to impose.
- To establish and maintain standards of professional conduct and ethics of the engineering profession.
- To promote learning and education in connection with engineering, either alone or in conjunction with any other professional body.
- To hear and determine disputes relating to professional conduct or ethics of professional engineers or to appoint a committee or arbitrator to hear and determine those disputes.
- To license corporations, partnerships and limited liability partnerships which supply professional engineering services relating to any of the prescribed branches of professional engineering work in Singapore.

- Generally to do all such acts, matters and things as are necessary to be carried out under the provisions of the Professional Engineers Act.

■ REGISTRATION AND LICENSING

Registration of Professional Engineers

In year 2019, the Board conducted 38 professional interview sessions for 169 applicants while a total of 103 candidates were registered as professional engineers during the year. Table 1 shows the number of new professional engineers registered in the last 5 years.

Table 1: Number of Newly-Registered Professional Engineers by Year

Branch of Engineering	No. of Professional Engineers Registered				
	2015	2016	2017	2018	2019
Civil	51	55	57	59	60
Electrical	20	28	21	35	26
Mechanical	15	13	21	21	16
Chemical	-	-	63	78	1
TOTAL	86	96	162	193	103

As at 31 December 2019, there was a total of 4208 professional engineers on the register of professional engineers and a total of 2545 (60.5%) professional engineers on the annual register of practitioners. Table 2 shows the breakdown of the number of registered professional engineers and practitioners in the 4 main branches of engineering (namely, civil, chemical, electrical and mechanical).

Table 2: Number of Registered Professional Engineers as at 31 December 2019

Branch of Engineering	Total No. of Registered Professional Engineers		No. of Practitioners (Professional Engineers in Each Branch with Practicing Certificates)	
	Number	Percent (%)	Number	Percent (%)
Civil & Structural	2068	49.1	1356	65.6
Electrical	956	22.7	600	62.8
Mechanical	943	22.4	523	55.5
Chemical	160	3.8	61	38.1
Others ¹	81	1.9	5	6.2
TOTAL	4208	100	2545	

¹ Others include Aeronautical, Electronic, Industrial, Information Technology, Manufacturing, Marine, Naval Architecture and Production.

Registration of Specialist Professional Engineers

As at 31 December 2019, there was a total of 416 professional engineers on the register of specialist professional engineers and a total of 373 (89.7%) of them had practicing certificates. Table 3 shows the breakdown of the number of registered specialist professional engineers.

Table 3: Number of Registered Specialist Professional Engineers as at 31 December 2019

Specialised Branch of Engineering	Total No. of Registered Specialist Professional Engineers		No. of Specialist Professional Engineers in Each Branch with Practicing Certificates	
	Number	Percent (%)	Number	Percent (%)
Geotechnical	113	27.2	98	86.7
Amusement Ride	18	4.3	17	94.4
Lift and escalator	97	23.3	90	92.8
Crane	59	14.2	52	88.1
Access Platform	66	15.9	61	92.4
Pressure Vessel	50	12.0	43	86.0
Protective Security	13	3.1	12	92.3
TOTAL	416	100%	373	

Licensing of Corporations and Partnerships

As at 31 December 2019, there was a total of 229 licensed corporations, partnerships and limited liability partnerships on the Board's register of licensees. Table 4 shows the breakdown of the licensees.

Table 4: Number of Licensees as at 31 December 2019

Type of Corporations/Partnerships	No. of licensees
Limited corporations	197
Unlimited corporations	4
Multi-discipline/Limited liability partnerships	28
TOTAL	229

■ DISCIPLINARY INQUIRIES

In 2019, Investigation Committees appointed by the Board completed inquiries on three complaint cases against professional engineers. Following the inquiries, two cases were referred to a Disciplinary Committee while a warning letter was issued to the other professional engineer.

In 2019, a Disciplinary Committee appointed by the Board completed two formal inquiries. At completion of the inquiries, one of the professional engineers was suspended from practice for a period of 2 years and another was suspended for a period of 6 months and fined \$10,000.

■ ACTIVITIES OF THE BOARD

Board Meetings

The Board held a total of 11 meetings in the year 2019.

Professional Engineers Registration Examinations

The Examination Committee of the Board, chaired by Board member Er. Dr Chiew Sing Ping, held 3 meetings in 2019 and oversaw the conduct of the Practice of Professional Engineering Examination (PPE) and the Fundamentals of Engineering Examination (FEE). The Practice of Professional Engineering Examination was conducted on 7 May 2019 for civil, electrical and mechanical engineering. The Fundamentals of Engineering Examination was conducted on 17 September 2019 for chemical and civil engineering, 18 September 2019 for electrical engineering and mechanical engineering. Summaries of the results of the two examinations are as shown in Tables 5 and 6 below.

Table 5: Results of PPE 2019

Branch of Engineering	PPE 2019		
	No. of Candidates	No. of Passes	Pass Rate
Civil	248	54	21.8%
Electrical	176	47	26.7%
Mechanical	113	32	28.3%
Overall	537	133	24.8%

Table 6: Results of FEE 2019

Branch of Engineering	FEE 2019		
	No. of Candidates	No. of Passes	Pass Rate
Chemical	10	10	100%
Civil	322	122	37.9%
Electrical	147	58	39.5%
Mechanical	157	91	58.0%
Overall	636	282	44.2%

Amendment to the Professional Engineers Rules

The PE Rules were amended and came into effect in April 2019. Companies which obtained a valid licence from PEB are allowed to indicate details on professional engineering services in the specific branches. Form 6 of the Second Schedule of the PE Rules was amended to allow a corporation to explicitly specify the branch(es) of engineering that it is authorised to provide in the licence issued.

ASEAN Mutual Recognition Arrangement on Engineering Services

The Board had been involved in the implementation of the ASEAN Mutual Recognition Arrangement on Engineering Services. In this regard, the ASEAN Chartered Professional Engineer (ACPE) Monitoring Committee Singapore, which had been authorised by the Board, continued to process applications submitted by professional engineers for registration as ACPEs. For the year 2019, 11 applications for registration as ACPEs were approved. As at 31 December 2019 the number of ACPEs from Singapore on the ACPE Register is 289. PEB had also authorised 1 ACPE (from Myanmar) as Registered Foreign Professional Engineer (RFPE).

PEB Seminar 2019

The inaugural PEB Seminar 2019 was held on 4 October 2019, which was attended by 470 participants. At the seminar, Er. Raymond Tay, Registrar of PEB, shared on lessons learnt from contravention cases. Er. Colin Yip, Associate and Building Digital Leader from ARUP Singapore spoke on transformative technologies in digital design/VDC/IDD and their application in projects. Er. Dr Nasim Shahzad, Group Executive Chairman of Meinhardt Singapore, gave his insights on the considerations in setting up and operating a private engineering consultancy in Singapore and venturing abroad.

PEB Day of Dedication 2019

The Professional Engineers Board (PEB) Day of Dedication (DOD) 2019 was held at the Mandarin Oriental Singapore on 9 November 2019 where over 240 PEs pledged to continue their services to society and uphold high standards of professional engineering practice. The event was graced by Mr Desmond Lee, Minister for Social and Family Development and Second Minister for National Development. The Day of Dedication is held to recognise new PEs as well as the contribution of PEs to Singapore's built environment and the community.

Ninety-six new professional engineers (PEs) were presented with certificates of registration for the chemical, civil, mechanical and electrical engineering branches. Twenty-one Specialist PEs were registered in five branches of specialised professional engineering, namely, (i) lift and escalator engineering, (ii) crane engineering, (iii) pressure vessel engineering, (iv) geotechnical engineering, and (v) protective security engineering.

In addition, 10 ASEAN Chartered Professional Engineers (ACPEs) received their certificates of registration, while 12 outstanding graduates from the NUS and NTU undergraduate and postgraduate engineering programmes were presented with Gold Medal Awards.

PEB Book Launch - Professional Engineers' Contribution to Nation Building

A new book, "Engineers as Urban Systems Innovators", was launched at PEB's Day of Dedication 2019. The book captures the key principles of building a liveable and sustainable Singapore with the focus on the efforts by PEB's Distinguished Professional Engineer Award recipients.

The book, a joint publication by PEB and the Centre for Liveable Cities (CLC), was unveiled by Mr Desmond Lee, Minister for Social and Family Development and Second Minister for National Development. Er. Ho Siong Hin, President of PEB; Er. Khoo Teng Chye, Executive Director of CLC; fellow distinguished professional engineers, including Er. Cham Tao Soon, Er. Chang Meng Teng, Er. Liew Mun Leong and Er. Tan Ee Ping, were present at the book launch. The past recipients for the Distinguished Professional Engineer Award also included Er. Tan Gee Paw and Er. Dr Shahzad Nasim.

PEB and four universities sign a Memorandum of Understanding

PEB signed a Memorandum of Understanding (MOU) with four universities, i.e. Nanyang Technological University Singapore (NTU), National University of Singapore (NUS), Singapore Institute of Technology (SIT) and Singapore University of Technology and Design (SUTD). Under the MOU, these local universities will conduct the Fundamentals of Engineering Examination (FEE) for their students. This will facilitate more local undergraduates to take the FEE in their final year of studies. The arrangement will give universities the flexibility to adjust the schedule of the FEE in order for it to fit into the school curriculum. Previously, the undergraduates would have to take the mass FEE organised by the PEB and most undergraduates would only take the FEE after they have graduated from the universities.

Innovative Professional Engineer Award

Two PEs, Er. Tan Kee Chong and Er. Teh Poh Suan, were presented with the inaugural Innovative Professional Engineer Award by Minister Desmond Lee. The award is for PEs exemplifying professionalism through innovativeness and entrepreneurship in delivering the outcomes of projects in which they were involved, and raising the standing and reputation of the profession.

In his speech, Minister Lee lauded Er. Tan Kee Chong for his work with industry stakeholders to test and integrate data loggers in various types of mobile cranes which allows logging of key operational data, including whether safety devices have been duly activated. This enables crane owners to take measures to curb unsafe practices before they cause workplace incidents, and optimise crane deployment and fleet management. Er. Teh Poh Suan's team piloted a solar leasing business model, where private sector vendors co-funded the capital costs of solar panel deployment. The private vendors recouped their initial investment by leasing solar energy to building occupants at a discount from prevailing energy tariffs.

PEB Scholarships and Gold Medals

In 2019, the Board awarded scholarships of \$6,000 each to 8 engineering undergraduates from National University of Singapore (NUS) and 8 engineering undergraduates from Nanyang Technological University (NTU). The Board also awarded Gold Medals to NUS and NTU graduates in civil, electrical and mechanical engineering, comprising 6 Gold Medals to BEng. graduates and 6 Gold Medals to MSc graduates.

Annual Appreciation Dinner

The Board held an appreciation dinner on 25 November 2019 to thank professional engineers who had rendered voluntary service to PEB. About 100 professional engineers who were members of the various committees of the Board and the professional interview panels attended the dinner.