

Introduction of the Institution of Professional Engineers, Japan (IPEJ), and Representations of PE

Brief History of P.E.Jp and IPEJ

- Jun.1951** "*Gijutsushi-kai*" was founded in order to help establishment of consulting engineers' framework in Japan.
- May 1953 The English name "Japan Consulting Engineer Association (JCEA)", for "*Gijutsushi-kai*" was adopted.
- May 1957 The PE Act - "*Gijutsushi Act*" (Act No.124/1957) was enacted.
- Jul. 1958** **The first examination of PE was administered.**
- Mar.1959 The JCEA was authorized under the PE Act.
- Apr.1983 The PE Act was revised to become the PE Act of 1983 (Act No. 25/1983).
- Feb. 1984 The JCEA was designated as the official national organization with the authority to provide administrative functions for the PE examination and accept registrations for P.E.Jp certification.
- Apr. 2000 The PE Act was partially amended to become the PE Act of 2000 (Act No. 48/2000).
- Nov. 2000 The APEC Engineer assessment and registration was formed.
- Jan. 2001 The JCEA was renamed to "The Institution of Professional Engineers, Japan (IPEJ)".
- Apr. 2006 APEC Engineer assessment and registration was expanded to include all Technical Disciplines and Optional Subjects of P.E.Jp.
- May 2007 IPEJ's new logo mark was established.
- Apr. 2011 IPEJ is officially recognized as a Public Interest Incorporated Institution..
- Jul. 2011 Eight IPEJ branches merged to form the new IPEJ's Regional Headquarters.
- Apr. 2012 IPEJ's prefectural branches were organized.

Administration of Japanese P.E.Jp System

- **The Minister of Education, Culture, Science and Technology (MEXT)**, administers the P.E.Jp systems in accordance with the P.E. Act (Act No.25/1983)
- The Institution of Professional Engineers, Japan (IPEJ), a Public Interest Incorporated Institution, manages examinations and registration for the P.E.Jp as a nationally recognized organization designated by MEXT.



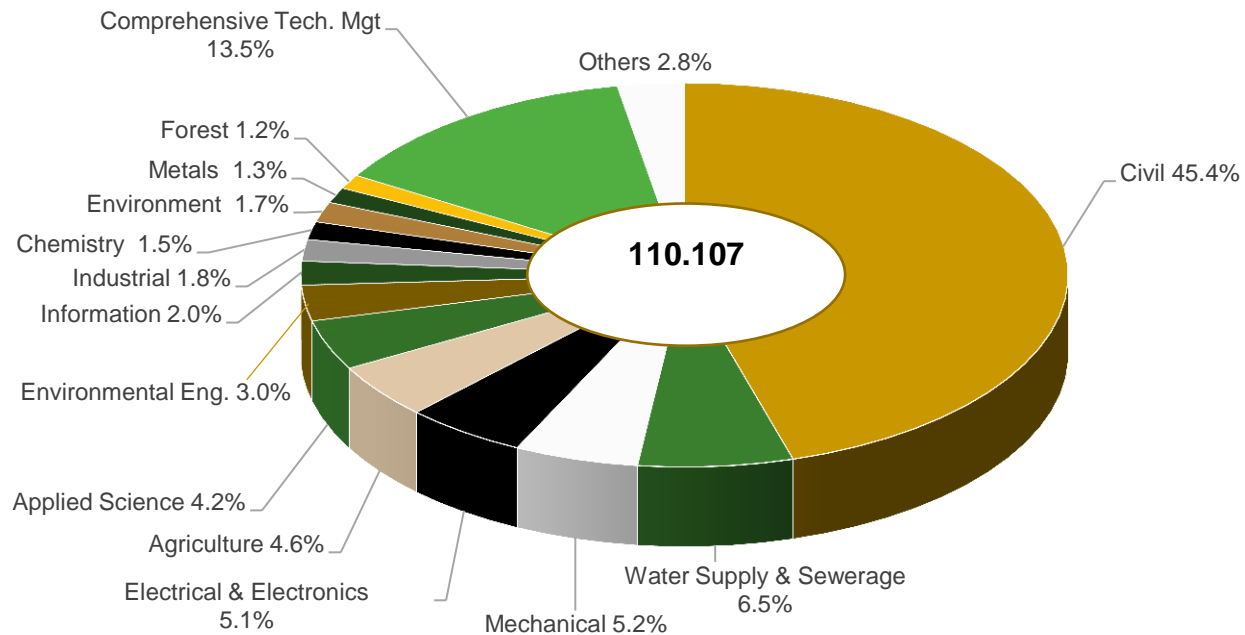
Professional Engineer, Japan (P.E.Jp)

- Professional Engineer Japan (abbreviated to “P.E.Jp”) is the **national qualification for engineers** stipulated by the Professional Engineer Act in Japan.
- **P.E.Jp is defined as an engineer who is engaged in the professional practice of rendering services for science and technology** in planning, research, design, analysis, testing, evaluation, and training in such work, which requires application of extensive scientific and technical expertise.

21 Disciplines of P.E.Jp

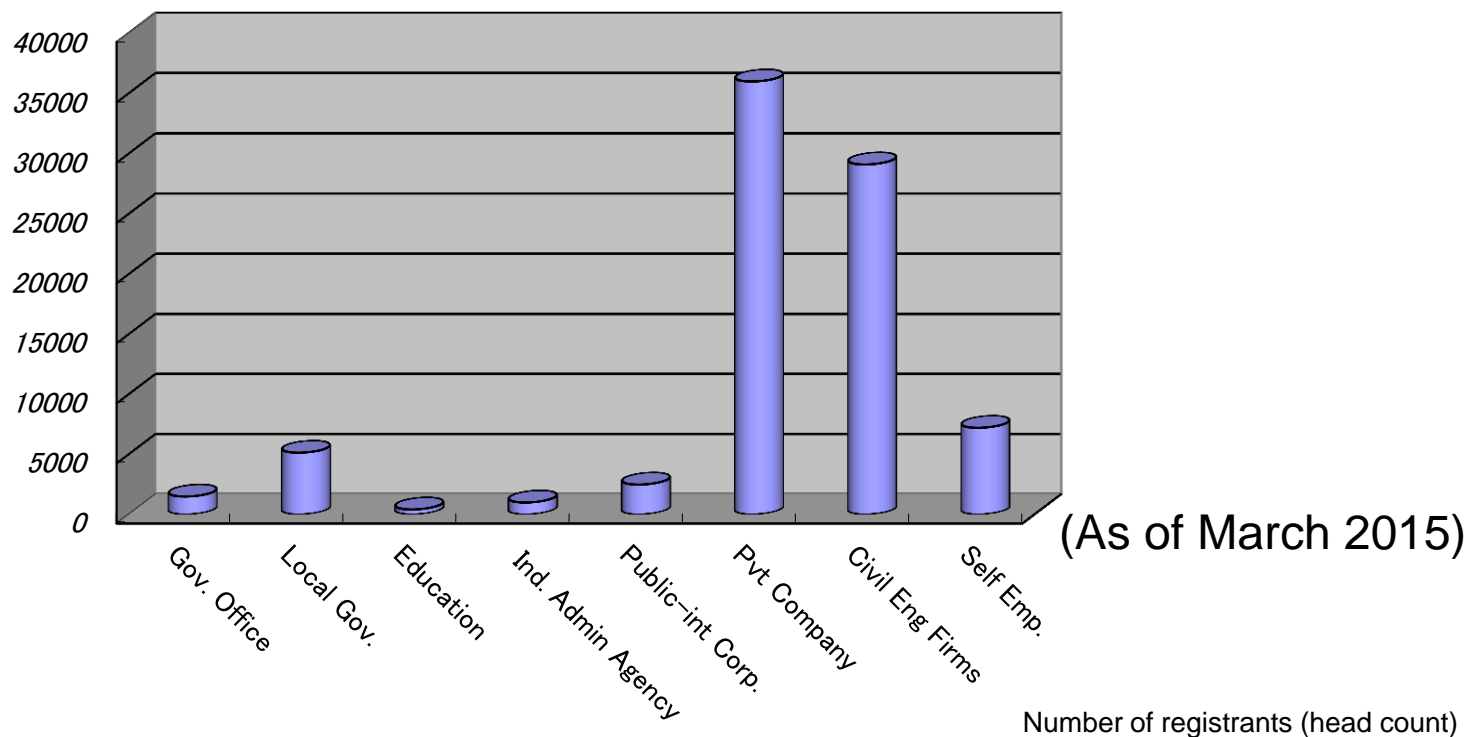
- Mechanical Engineering
- Marine & Ocean
- Aerospace
- Electrical & Electronics Eng.
- Chemistry
- Textiles
- Metals
- Mining
- Civil Engineering
- Water Supply & Sewerage
- Environmental Engineering
- Agriculture
- Forest
- Fisheries
- Industrial Engineering
- Information Engineering
- Applied Science
- Biotechnology & Bioengineering
- Environment
- Nuclear & Radiation
- Comprehensive Technical Management

Distribution of Registration in Technical Disciplines



Number of registrants (As of March 2015)

Employment Sectors of P.E. Jp



Government Office	Local government	Education	Independent administrative agency	Public-interest corporation	Private company	Civil engineering firms	Self employment	Head count registrants
1.7%	5.8%	0.5%	1.2%	3.0%	44.5%	34.4%	8.9%	77,394

Range of PE's Activities (Example)

Planning

- Factory Building
- Regional Development

Research

- Advanced Material Application
- New Products
- Pollution Control

Design

- Facilities
- Advanced Production Lines
- Advanced Electric Circuits
- Regional Development

Analysis/ Evaluation

- Market Research
- Feasibility Study
- Environmental Assessment
- Management analysis
- Project Evaluation

Testing

- Prototype Models
- Facilities
- Advanced Circuits
- Potential of Earthquake-proof,
- Fire-proof

Consultation

- New Product Development
- Production and Assembly Line Improvement
- Construction management

Obligations of P.E.Jp in accordance with PE Act

- **Prohibition of Acts to Damage Credibility (禁止信用失墜行為)**
No PE nor associated PE shall take action which harms the credibility and/or dishonors the reputation of other PEs and/or associated PEs. (Article 44, PE Act)
- **Obligation to Observe Confidentiality (保持秘密)**
No PE nor associate PE shall reveal or misappropriate the confidential information without justifiable reasons that have been caught in one's own business. This obligation shall remain after losing their certification of PE or associated PE. (Article 45, PE Act)
- **Responsibility for Public Interest (保持公共的利益)**
No PE nor associated PE shall engage in operations which harm the public interests. Such interests include public safety, environmental preservation, etc., during normal business operations. (Article 45-2, PE Act)
- **Obligation when Indicating Title of P.E.Jp (明示専門分野)**
When PEs use the title P.E.Jp in their business, they are also required to clearly indicate their registered technical discipline. No PE shall indicate any discipline(s) which they have not registered under. (Article 46, PE Act)
- **Responsibility for Developing the Professional Competence (専門能力研鑽)**
PEs shall, at all times, endeavor to continually increase their knowledge and develop their skills with regard to their profession. (Article 47-2, PE Act)

Competency required for PE

- Expertise
- Problem solving (Rational, Decision even in insufficient information, Risk hedge, Fails not too far)
- Management (Ability driving business around)
- Evaluation (Judgement of result's correctness)
- Communication (Theoretical, Logical, Showing examples, Clear ness, Persuasive)
- Leadership=Making Dicision
- Engineer's morals (Compliance、Confidentiality)

Management

- Outlook Planning
- Adjust by feedback
- Contract, Approvals and licenses, Preparation, Business around
- Financial outlook
- Countermeasure for accidents (machine damage, shortage in manpower, problems)
- Advice of analysis

Actually what should we do?

- Provide proper circumstance (Government 官)
Regulation
Avoid ill treatment of selecting engineers.
- Provide opportunities to learn (Academia 学)
Seminar, International conference
Encourage the ambition as engineers
- Provide actual trainings (Industries 産)
Jobs
Have a mind to grow engineers.