

The Skills Evaluation System Promotion Program (SESPP) implements seminars and Skills Evaluation Trials (SET), conducted by Japanese experts, in Vietnam, Cambodia, Indonesia, and Myanmar, in order to transfer Japan's skills evaluation know-how to these countries.

JTB Corporation has been entrusted the project, and has established the SESPP Secretariat at the Kasumigaseki Division.

J-Skills News, published four times a year, covers issues such as approaches taken by businesses, in order to promote utilization of Japan's skills evaluation.

□ Training Report

Due to the spread of COVID-19, for this fiscal year, we have commenced remote training sessions through online connections between Japanese experts and on-site participants. This issue provides reports on CAD drawing in Indonesia and CAD drawing training in Vietnam.

■ CAD Drawing (Grade 2) Skills Assessor Training (SAT) and Skills Evaluation Trials (SET) in Indonesia

In the last year, SAT and SET for CAD Drawing (Grade 3) were implemented in Indonesia, and eight participants completed SAT.

At the public/private joint committee held in the previous fiscal year, Indonesia expressed its desire to increase numbers of talent capable of assessing CAD drawings, and in this fiscal year, with a view to developing assessors, remote Grade 2 SAT and SET were implemented from November 23 (Mon) – 27 (Fri), 2020, through connections between the Matsushita Gobel Foundation (YMG) in Jakarta and Japan's Panasonic Corporation.

As Grade 3 SAT and SET had only just been implemented in the previous fiscal year, for Grade 2 programs, advance practice assignments were implemented six times, allowing participants to deepen their understanding through preparatory studies prior to participation in the programs.

Mr. Kenji Nishitani (Panasonic Corporation) continued in the role of lecturer from the previous fiscal year.

Eight participants attended SAT. Seven examinees sat the SET examination, implemented over three days as a measure against COVID-19, and five achieved pass grades.

Mr. Nishitani, the lecturer, gave a favourable review of the program, stating, "I believe that the six advance practice assignments contributed greatly to the good results achieved by the examinees this time around. Initial scoring showed that all examinees had attained a pass level, and I believe this has been built upon a foundation of steady practice".



Japan-side lecture
(using mini-whiteboard)



On-site training (SET)



On-site training (SET)

■ CAD Drawing (Grade 3) Skills Assessor Training (SAT) and Skills Evaluation Trials (SET) in Vietnam (Hanoi)

Mechanical drawing using CAD is a job-trade in relation to which Japanese businesses have been demanding implementation of programs since 2018 and is an area of keen interest. From this backdrop, following discussions during the public/private joint committee held in the previous fiscal year, CAD Drawing (Grade 3) SAT and SET were implemented from November 30 (Mon) – December 4 (Fri), 2020, at the Hanoi Industrial Vocational College (HIVC).

However, due to the spread of COVID-19, the experts were unable to implement training on-site, so training was implemented online through connections between HIVC and Cosmotec Co., Ltd. of Koriyama City in Fukushima prefecture.

The training objectives were to provide guidance concerning methods of implementation for CAD Drawing (Grade 3) skills tests and practical tests, and to instil practical skills through Role Play (role exercises with participants in both assessor and examinee roles). Another objective was to instil implementation and operation capabilities related to skills tests and practical tests, by requiring participants to take charge of and put into practise tasks such as the preparation, implementation, and scoring/evaluation as an assessor, in the ongoing implementation of SET.

The training schedule consisted of a three-day period for SAT (Day 1: Training, Day 2: Role Play, Day 3: Scoring role exercises), and a two-day period for SET (Day 4: Implementation of practical tests and theoretical tests, Day 5: Scoring).

Nine participants, comprised of AutoCAD mechanical drawing instructors (lecturers) at the vocational college and other institutions, participated in SAT.

Meanwhile, ten examinees participated in the SET, and of these, three passed the theoretical test, and one passed the practical test (one examinee passed both tests).

Addressing the participants, Lecturer Mr. Noboru Yajima (Cosmotec Co., Ltd.) stated, “You are all instructors at schools, and you will all become assessors for skills tests in the future. Please work to acquire an assessor’s perspective”, while Mr. Fumio Inagawa (Technical Advisor, SESPP Secretariat) stated, “The provision of instruction for mechanical component drawing using third angle projection method, and for the reading and writing of assembly drawings, is important. By providing such instruction for trainees, we hope to improve skills related to mechanical drawing using third angle projection among those who wish to sit the exams”.

In response, participants expressed opinions such as, “We would like to study through practise exercises”, and “We would much prefer the implementation of on-site training rather than online training”.

Along with this, Mr. Yajima added a comment stating, “Through the specialist activities experienced this time, I have resolved to improve the content of future instruction in Vietnam, and hope that this will, to some extent, contribute to continued favourable relations between Japan and Vietnam”.



Lecture given by the Japan-side lecturer



On-site training (SET)



On-site training (Scoring)

□ Press Publications

- ◆ The CAD drawing training programs implemented in Vietnam and Indonesia this time around were reported in the media.

The news publications were as follows.

■ The Daily Jakarta Shimbun article (Extract: CAD Drawing Grade 2 Skills Assessor Training and Skills Evaluation Trials (SET) in Indonesia)

Implementation of National Exams for CAD Drawing – With the Cooperation of the Indonesia Mold & Dies Industry Association (IMDIA)

With the translation of Japan's skills examinations into Indonesian in 2006, skills examinations close to standards in Japan commenced in Indonesia. IMDIA Secretary Mr. Itsuo Tanigawa, states that with the implementation of this examination system, not only can successful examinees provide objective proof of their skills levels, in practice, they will also, "acquire the ability to handle working plans and improve work rates". These are the first domestic skills examinations to be conducted since the beginning of the Covid-19 pandemic. When calling for examinees, participating companies were informed in advance that health protocols would be observed.

On the day of the exams, the venue implemented thorough infection prevention measures for the five examinees, such as individual partitioning using Vinyl Curtain etc. Secretary Tanigawa expressed his desire to "continue implementation of examinations", even with the COVID-19 Crisis, through proper hygiene management, and stated the need to further raise examination system standards closer to those of Japan through efforts such as the reinforcement of guidance for "assessors" who will check the answers given by examinees.



(Reference) The Daily Jakarta Shimbun article <https://www.jakartashimbun.com/free/detail/53679.html>

■ The Fukushima Minyu Shimbun (CAD Drawing Grade 3 Skills Assessor Training and Skills Evaluation Trials in Vietnam)

Skills Assessment Examinations in Vietnam, Cooperation by a Koriyama Company, Mechanical Drawing Tests

Assessor training and skills testing intended to transfer Japan's manufacturing skills evaluation systems to Vietnam were conducted this month, through connections between "Cosmotec", a Koriyama company operating in the field of mechanical development, and the Hanoi Industrial Vocational College (HIVC) in Vietnam.

This is a part of a project undertaken by the Ministry of Health, Labour and Welfare (MHLW) in relation to the Association of Southeast Asian Nations (ASEAN).

The aim is to transfer Japan's skills evaluation systems in order to develop seasoned skilled workers.

This project began in 2002, and according to the MHLW, to date Japanese style National Skills Tests have been conducted in Indonesia for seven job -trades, such as "Mechanical Inspection", and in Vietnam for two job -trades, "Turning" and "Milling Machines".

This is the first time that skills tests for "Mechanical Drawing" have been conducted. With a local corporation set up in Vietnam, Cosmotec, which also provides skills guidance for mechanical drawing, worked in cooperation with the MHLW, and supervised the creation of mechanisms for skills tests, such as the translation of examination questions and consideration of evaluation methods, etc.

The skills tests were conducted from November 30 to December 4, through web connections between the HIVC and Cosmotec.

About ten employees from local Japanese companies sat the theoretical and practical examinations.

Training was also provided for HIVC related personnel in charge of scoring, covering explanations of evaluation methods, etc.

Mr. Noboru Yajima, President of Cosmotec, spoke of his views on the program, "If we can raise skills levels through Japanese style skills tests, and further reinforce the connection between Japan and Vietnam..."



President Yajima (right) and others checking the examination venue

□ CAD related Work of Mechanical Drawing

This section is an introduction to Japan's skills testing system, which applies to the CAD related work of mechanical drawing (CAD Drawing) implemented in Indonesia and Vietnam this time around.

Mechanical drawing examinations have been implemented continuously since the first skills certification examination for mechanical drawing implemented in FY1959.

Today, the exam is implemented as a mechanical and plant drawing skills certification examination.

Mechanical and plant drawing applies to work involving mechanical drawings and plant drawings (plant drawing of piping).

Mechanical drawing applies to component drawings and assembly drawings for mechanical equipment, etc. used in the machinery industry field, while plant drawing applies to areas such as component drawings and assembly drawings of various equipment and apparatus in chemical plant facilities.

There are three job-trades of certification examination, "Hand-writing Work of Mechanical Drawing", "CAD related Work of Mechanical Drawing", and "Plant Drawing Work of Piping". In addition, while "Hand-writing Work of Mechanical Drawing" and "CAD related Work of Mechanical Drawing" both use the same practical test questions, the former requires drawing by hand using drafting instruments and apparatus, while the latter requires drawing using CAD software.

For CAD related Work of Mechanical Drawing, the examinee is required to complete specified drawings (principal view, side view, plan, etc.) for components indicated in assembly drawings of mechanical equipment using CAD software.

Recent numbers of mechanical and plant drawing skills certification examination examinees and those achieving passes, are as follows. (Totals for all grades)

FY2018	<u>Examinees</u>	<u>6,086,</u>	<u>Passes</u>	<u>2,408</u>
FY2019	<u>Examinees</u>	<u>5,819,</u>	<u>Passes</u>	<u>1,486</u>

The formats for theoretical tests and practical tests, and examination subjects, etc. of CAD related Work of Mechanical Drawing, are as follows.

[Theoretical Test]

Test format

Grade 1: True-false and multiple choice (50 questions. Exam time: 1 hour 40 mins)

Grade 2: True-false and multiple choice (50 questions. Exam time: 1 hour 40 mins)

Grade 3: True-false (30 questions, Exam time: 1 hour)

Examination subjects (Common subjects)

1. Drawing - General, 2. Materials, 3. Strength of Materials - General, 4. Welding – General, 5. Related basic knowledge

Specialist subjects

1. JIS standards related to mechanical drawing methods, 2. Knowledge of machine elements and processing methods, 3. Knowledge of machine tools, measurements, and materials testing, 4. Electrical knowledge, 5. CAD knowledge

[Practical Test]

Grade 1: Practical test questions (incl. calculations) and creation of drawings of components specified from the assignment drawing (drawing of assembled mechanical equipment). Test time: 5 hours

Grade 2: Practical test questions and creation of drawings of components specified from the assignment drawing (drawing of assembled mechanical equipment). Test time: 4 hours

Grade 3: Practical test questions and creation of drawings of components specified from the assignment drawing (drawing of assembled mechanical equipment). Test time: 3 hours

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