

Forum

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- **WorldSkills Competition**

812 competitors from 46 countries took part in the 39th WorldSkills Competition, held from November 14th to 21st, 2007 in Shizuoka Prefecture. Of the countries involved in the Skills Evaluation System Promotion Program, Thailand captured four silver medals, Indonesia secured one silver medal, and competitors fostered by the program also won medals. The activities of the participating nations are sure to provide a large impetus for skills advancement in Asia. The award recipients also include graduates of the Skill Evaluators Training. We would like to express our gratitude to the concerned parties who deliver and nurture participants for the event.



- **In Indonesia,**

cosponsored by the National Professional Certification Board (BNSP: Badan Nasional Sertifikasi Profesi) and the Indonesia Mold and Dies Industry Association (IMDIA), the practical test of the National Skills Evaluation on Metal mold finishing work was held at Toyota Motor Manufacturing Indonesia (TMMIN), and 22 test takers passed the test were certified by BNSP. In implementing this practical test, eight skill evaluators trained by this program were officially certified as evaluators by the BNSP and were in charge of operation of the skills testing and evaluation. (See pp. 7-8 of this paper for related article.)

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- **In Vietnam,**

cosponsored by the Ministry of Labour, Invalids and Social Affairs (MOLISA), a workshop on skills evaluation methods for machine assembling finishing work was held at Hanoi Industrial Technical College (HITC). (See p. 2 of this paper.)

Skills Evaluator Certification System

The trial evaluation for the “Skill Evaluators Certification System,” which evaluates and certifies the “work accomplishment ability” of graduates of the Skill Evaluators Training, who run (implement and assess) the skill evaluation trials, will be held in January 2008 with the cooperation of Siam DENSO. Note that in FY2008, this trial evaluation is set to run with the collaboration of the cooperating companies.

Workshop on Skills Evaluation Method in Japan (Chiba and Fukushima Prefectures, etc.)

A total of 24 individuals related to skill evaluation from China, Indonesia, Malaysia, the Philippines, Thailand, Vietnam, and Sri Lanka were invited to Japan for the Workshop of Skills Evaluation Method 2007 in Japan, which was held mainly at the Overseas Vocational Training Association (OVTA) in Chiba Prefecture from July 21st to August 2nd. This year’s Workshop themes were “press mold manufacturing” and “metal mold manufacturing for plastic casting”. The 24 participants selected by the governments of each country learned practical knowledge and skills for creating trade skills tests’ questions and practical test projects, as well as for scoring and evaluating them.

In inspection visit, the participants observed trade skills tests being carried out in Fukushima Prefecture, where they learned about the operation and implementation of trade skills tests in Japan. They also visited the outstanding company in molding manufacturing in Saitama Prefecture, where they gained overviews of die production, human resource development in the company, and the use of skills testing at the firm.



Workshop on Skills Evaluation Method in Hanoi, Vietnam

The enforcement of the vocational training law in June of this year will lead to the construction of a vocational training system in around 2013 that will include a skill testing system. Pursuant to requests from the Ministry of Labour, Invalids and Social Affairs (MOLISA), JAVADA held a workshop on skills evaluation methods for machine assembling finishing work at Hanoi Industrial Technical College (HITC) from October 10th to 13th with the aim of nurturing instructors for skill testing and vocational training. Under the guidance of Mr. Yoshio Abe, General Manager of Technical Skill Training Dept. of DENSO E & TS Training Center Corporation, and instructor Mr. Hiroyuki Sugiura, 30 persons in charge of education at universities and technical colleges learned enthusiastically about processing techniques and evaluation methods for practical test projects in skill testing.





Skills Evaluator Training

This fiscal year, 15 companies and a total of 60 trainees participate in training.

Company List

Company name	Company name
EBARA CORPORATION	NISSAN MOTOR CO., LTD.
KYOSAN DENKI CO., LTD.	VICTOR COMPANY OF JAPAN CO., LTD.
KUROI ELECTRIC CO., LTD.	HITACHI, LTD. HITACHI WORKS
SUNRISE INDUSTRY CO., LTD.	FUJI BRAIN TRUST CO., LTD.
JTEKT CORPORATION	PRONICS CO., LTD.
GAC CORPORATION	MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. HUMAN RESOURCES DEVELOPMENT COMPANY
DENSO E&TS TRAINING CENTER CORPORATION	MAZDA MOTOR CORPORATION
TOYOTA BOSHOKU CORPORATION	
Total 15 companies	

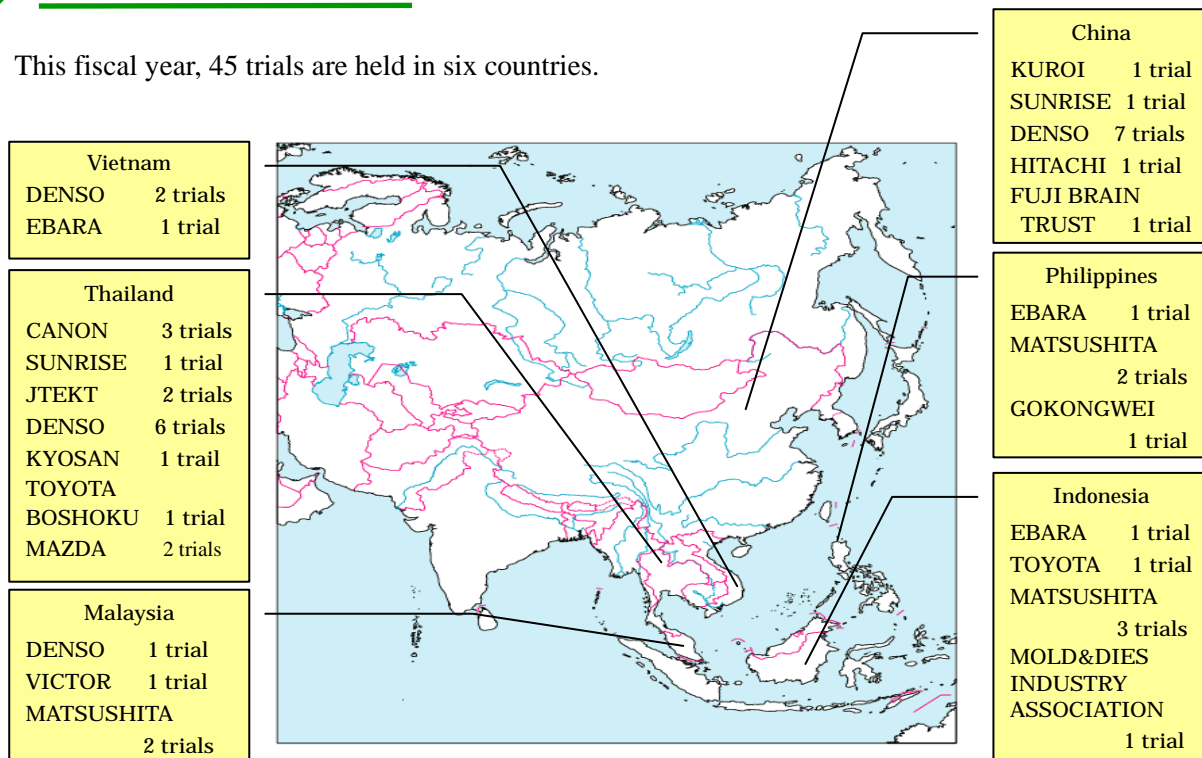
Country List

Country name	Persons	Country name	Persons
Indonesia	11	Philippines	4
Thailand	17	Malaysia	5
China	22	Vietnam	1
Total 60 trainees			



Skills Evaluation Trials

This fiscal year, 45 trials are held in six countries.





Skills Certification System of Thailand Automotive Industry

- by Mr. Kenzo Mori, Deputy General Manager, Consulting GENBAKANRI School, MONOZUKURI University, the Nissan Learning Center, Nissan Motor Co., Ltd.-

To support the tightening industrial human resource demand in Thailand with its remarkable automotive industry growth, and maintain and enhance its global automotive industry competitiveness, a project known as the Thai Automotive Human Resource Development Program (TAHRDP) is currently being advanced with the cooperation of the Ministry of Industry, Ministry of Labour and Social Welfare, and the Thai financial world. The Japanese government is actively supporting this project, which commemorates 120 years of the amity treaty between Japan and Thailand in 2007. One of its main projects is the creation of a skill testing system advanced primarily by a team of specialists from the



Thailand Automotive Institute (hereinafter, TAI) and Nissan Motor.

Japanese specialists giving instruction: metal die finishing (left) and numeric control lathe (right)

The goal in creating this system is for the concerned parties to experience the following benefits:

- 1) Increase the social position of skilled workers → Stimulate work morale (benefit for workers)
- 2) Enhance output per unit labor expense → Improve business resource efficiency (benefit for managers)
- 3) Heighten purchase strategy success ratio → Stable supply of high quality (benefit for customers)

Creation of the Thailand automotive industry skills inspection system began in the second half of FY2003. Nine tests by work process (counting tests of different skill levels, the total is 19 tests) have already been launched and are being carried on by TAI.

The number of passing test-takers as of this printing is shown in the following table, with a grand total of 1142. The industry is also taking major note of these new graduates.

Metal press work (Lv. 1 to 3)	Plastic injection molding (Lv. 1 to 3)	Iron casting (Lv. 1 to 3)	Manual lathe (Lv. 1 to 3)	Manual milling machine (Lv. 1 to 3)	Metal mold finishing (top level)	Machine assembling finishing (top level)	Numeric control lathe (top level)	Numeric control milling machine (top level)
251 graduates	356 graduates	164 graduates	160 graduates	160 graduates	12 graduates	11 graduates	13 graduates	15 graduates

In collaboration with JAVADA, the test practical projects used questions from the Japanese National Trade Skills Test. This was intended to ensure a high level of test reliability and difficulty on par with the Japanese testing system so that graduates' ability would be recognized in Thailand and internationally.



Deputy Prime Minister Khosit (7th from left)

We are currently working to add four new subjects to the tests (electronic equipment assembly; sequence control; drafting: written; drafting: CAD) in this fiscal year.

We also plan to add another four new subjects to the tests in FY2008 (pneumatic device assembly, hydraulic device assembly, machine maintenance, electrical maintenance). To introduce these four process tests overseas, some additional

conditions are required in terms of practical verification over the projects in the tests implemented in Japan. We are working with help from JAVADA and the committee for each occupation to prepare these tests alongside this fiscal year's other activities.

On July 23rd, Thai Minister of Industry and Deputy Prime Minister of Industry Khosit Panpiamrat and about 1400 other key government, business, and academia figures—including from the automotive industry—gathered to participate in a successful TAHRDP seminar, further raising momentum for human resource development in the Thai automotive industry.

“Ebara Skill Asia 2007 (Ebara Asia skills competition 2007)” Hosting the “Ebara Workshop (Workshop on Skills Evaluation Method in Indonesia)”

- by Mr. Masanori Yunoki,
General Manager Production Engineering Division, Technology Education & Training
Office, Ebara Corporation -

On March 1st and 2nd, 2007, we held Ebara Skill Asia 2007 (Ebara Asia skills competition 2007), bringing together 18 distinguished technicians from four Asian production centers of Ebara Corporation (the Philippines, Vietnam, China, and Indonesia) to P.T. Ebara Indonesia—the company’s overseas pump manufacturing hub. Ebara Workshop was held concurrently with 75 participants, including seminars on overseas production center skill education and training, and skills evaluation, as well as technical educational and training demonstrations.



First, an explanation of Ebara Skill Asia: Ebara Skill Asia is based on sub-competitions at each manufacturing center. The centers have participated in the JAVADA Skills Evaluation System Promotion Program and have held skill evaluator training and skill competition for three years. The accumulated experience in evaluation systems for skill evaluator cultivation and skills competition hosting—as well as competition management—naturally raised the bar for skilled factory work at the centers. Evaluator training in Japan started in FY2003, with 10 graduates from the Philippines, 6 from Vietnam, and 14 from Indonesia. The first skill competitions at the production centers were held in FY2004 in three countries. Total participants (contestants) across FY2004, FY2005, and FY2006 came to 644 (380 employees) in Indonesia, 110 (150 employees) in the Philippines, and 58 (95 employees) in Vietnam. These participant



numbers show that the competition is of great interest to employees and represents an opportune chance for them to develop their skills and level-up their factory work technique.

Two Ebara Skill Asia contestants each are chosen from the set of superior performers at the sub-competitions at each of the four Ebara Asia manufacturing centers (three centers in the JAVADA SESPP skills competition and an independent Ebara competition at a production center in China, for a total of four), with three trades: machine inspection, machining lathe, and

assembly finishing, for a total of 18 people, with some trades not participating at certain centers.

The contestants and we instructors stayed at the Seminar House Lodge surrounded by greenery near the factory, which is about 30km from Jakarta. Although the competition period was brief, we enjoyed highly positive interactions even with four different languages flying about, thanks to the warm hospitality of the 18 competitors from four countries and our hosts at the Indonesia production center—and despite worries of language barriers and other issues, since this was Ebara’s first opportunity to meet with overseas production center technicians and the first time for the centers to welcome us.

The day before the competition, two machining lathe competitors from the Philippines had to practice late into the night to work out the differences in the operation of the Japanese lathe they would use for the competition and the Taiwanese one they were used to. The Indonesian competitors stayed with them and gave them guidance on the machine until late. The common language between Indonesian and Tagalog was

technology and skill.

The three trades' projects in the competition were practical tests with difficulty between that of levels 2 and 3 of the Japanese National Trade Skills Test. We assess that the high-scorers in the competition have the ability to take level 2 of the Japanese National Trade Skills Test. In the competition, Indonesia took first and second place in machine inspection. Indonesia also took first and second place in the machining lathe category. Vietnam placed first and second in machine assembly finishing.

This latest Ebara Skill Asia taught me various things. First of all, that the competition raised the general level of skill at overseas centers. Secondly, that we were able to use the same standard to evaluate skills among each of the overseas centers. Third, that technical exchange among the centers was possible. Fourth of all, by holding Ebara Skill Asia at a high level, this was a chance for each center to focus from the system of old skill contests to the original goal of implementing a company-wide skill testing system.

This time we went straight ahead with Ebara Skill Asia and gleaned the above results. However, what left an impression was that the technicians from each country were able to interact through their skills—I felt this at the Seminar House Lodge, the preparatory practice sessions, and the competition itself.

I will now turn to the “Ebara Workshop (Skill Evaluation Method Workshop),” which was held concurrently. Based around the main theme advanced by JAVADA of SESPP, the workshop program incorporated presentations on the topics of “Overseas Skill Transfer, Skill Education and Training, and Technique Transmission,” “P.T. Ebara Indonesia Skill Education and Training,” and “Technical and Skill Competency,” a practical demonstration of skill education and training, and a tour of the P.T. Ebara Indonesia plant—all over a two-day period. We announce the importance of continued skill education and training as well as proper skill evaluation for manufacturing.

This workshop seminar was attended by a total of 75 people, including members of Badan Nasional Sertifikasi Profesi (BNSP), the Japanese Embassy in Indonesia, Japanese and Indonesian corporations, and Ebara Skill Asia contestants.

It was the first day we had presentation in the morning and skill education and training in the afternoon with basic skill training in finishing processes with supervisors overseeing instruction to five trainees on work with hammers, chippers, hacksaws, files, and scrapers. The subsequent plant tour included a casting factory and a machine assembly factory, and in particular JAVADA workshop graduates explaining the new assembly line in a machine factory, which was designed by the project JAVADA overseas workshop graduate participated. On the second day, the trainees were taught about square production issues and got to see the production process for such objects.

Through this Ebara Skill Asia and the Ebara Workshop, I think the common theme of skill education, training and evaluation systems was concretely introduced by presentations, competition viewing, and skill training viewing, which made it easy to understand. I would finally like to express my hope that this competition and workshop will contribute to the progress of industry and companies in Indonesia.



Workshop on Skills Evaluation Method in Indonesia Implementation Report On Developing Skill Evaluators for “Level 3 Metal mold Finishing”

**- by Mr. Akio Tanaka,
Assistant Manager, Human Resources Development Department, Toyota Motor
Corporation -**

To strengthen industry competitiveness in Indonesia, a government-private sector joint forum between Indonesia and Japan has been formed with die industry development as one of its cornerstones. The forum resulted in the establishment of the Indonesia Die and Mold Industry Association, which places die technician training as its top priority, advancing the implementation of the Japanese trade skill test system as an effective way to achieve this.

In introducing the system, the association is implementing one of the three trades chosen as most intimately related to the development of human resources for die production in each of the three years from 2006 to 2008. These three trades are machine inspection, metal mold finishing, and machine maintenance. Concerning machine inspection, in 2006, environmental improvements available for trial and skill evaluator development with nine evaluators were carried out with JAVADA's support and the cooperation of Panasonic and the Matsushita Gobel Education Foundation (YPMG). After that, skill evaluation trials were implemented, turning out 38 certified graduates in February 2007. Subsequent periodic trials saw some tens of challengers.

Pardoning the long preface, 2007 is the second stage of the project, with metal mold finishing level 3 placement skill evaluator development and skill evaluation trials scheduled. Toyota Indonesia which had undertaken these propositions requests for support from JAVADA and Toyota in Japan, and took charge of those this time. This workshop ended last July. The following is a report of the activities so far.

Indonesia requested to start with the practical test for level 3, so we begun by arranging it from the Japanese metal mold finishing level 2 tests. We cannot determine this all by ourselves, so we consulted surveys of the local situation and asked the opinion of Die and Mold Industry Association Director Mr. Tanikawa before creating the test. Finally, we developed it where the test-taker must produce a die from a supplied die punch.

According to the test project, we developed scoring criteria, scorecards, and operation criteria. In addition, we created a manual for making the test projects to respond the request from Indonesia though it's not directly related with test operation.

There are currently 137 Japanese National Trade Skills Tests, and although we are not in a position to make light of the difficulty resulting from the differences in the trades, we believe that unless the test-taker has intensive daily practice using files, the metal mold finishing test is not one that will be easily passed with a little practice, but a rather difficult trade test that will not be mastered without a great deal of training. In cultivating local skill evaluators, we did not stop at a mere workshop on evaluation techniques, but also focused on skill training, laying out a long-term schedule that incorporates instruction along with a self-study period.



Period	Jan. - Feb.	Mar.	Apr. - June	July	Aug. - Sept.	Oct.
Implemented Content	Training environment creation Project preparation	Skill development training (2 wks.)	Self-study	Skill evaluator technique workshop (2 wks.)	Test-taker guidance Self-study	Skill evaluation trial (1 wk.)

Local instruction

The first step of the training was to run a workshop centered on skill training in March, having test-takers understand and acquire basic skills, practice repetitively, then take on the level 3 test. Through this training, the trainees could immediately grasp the difficulty of the practical test projects, highlighting each person's weaknesses and coming challenges. The instruction policy was that in order to become an evaluator of a trade skill, the candidate must have the necessary level of skill personally—they themselves must be able to pass the test they are evaluating. This will allow evaluators to be instructors that expand the horizons of Indonesia in the leaders in metal mold finishing instruction. We implored them strongly to these ends in our instruction.



The participants found this to be a “very good training.” They said “the time period was too short” and they “wanted to do more.” With these evaluations, the first step of the training was completed.

The second step was held in July and focused on evaluation training. Although we were half-enjoying and half-worried as to how they would fare against each of the test projects set forth in March, all participants had improved significantly and we were impressed with their high level of dedication in taking on the challenges.

This time we presupposed they had the skills, going on to train them primarily in measurement training, scoring and evaluation methods, and trial administration methods. For the latter half of the training, we split the eight evaluators half-and-half into an A group playing the role of the evaluators and a B group acting as test-takers. This simulated an actual trial, allowing the trainees to practice skill training and evaluation training as well. Through this training, they learned the skills and techniques that had been the goals from the beginning: 1) to have the skills to pass the test themselves, 2) to be able to evaluate correctly, and 3) to be able to conduct trials.

The eight participants came from five companies: Astra, Denso, Epson, Toyota, and YPMG. Their ages varied widely from 20 to 50, and while the work requiring physical strength made for quite difficult training for older participants, everyone attained near passing level and no one shrank from the challenge. On the final day we were able to award each participant a certificate of completion.



Next come preparations for the skill assessment trial via the third step in October. We believe the eight technicians we have cultivated are sufficiently ready to perform as evaluators. However, there are still more challenges to pit them against to expand their horizons. They also need to learn tool and measuring instrument maintenance and how to support test-takers (lecture sessions). We will continue collaborating with the Die and Mold Industry Association toward a successful Skills Evaluation Trial No. 1.

We would like to have your comments, opinions, and suggestions for future topics. Please contact us.

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