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Official Report about the UNIDO TF/HUN/803/90
PROJECT ONE-WEEK ACADEMICAL SEMINAR

Containt

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- Analysis of one-week program
- The printed materials for students of this course

Made by:

PRODINFORM ÁMR - Secretariate,
as the Hungarian coordinator of the project.

I. The planned purposes of Academical Seminar

The one-week Academical Seminar is the first part of the UNIDO TF/HUN/803/90 project, which has the purpose of development of quality of Hungarian automobile spare-part and component manufacturers. With the aid of this UNIDO project, the skill-workers of the chosen companies got a possibility to know an up-to-date quality assurance and quality control system. Using of these systems gives a chance for the companies to be able to satisfy the highest requirements of the car manufacturer companies.

This project can be divided into two main parts. First part is the high level theoretical education, other hand the second part is a factory-site practical training. The one-week theoretical course was organized on 25-29. 03. 1991. in Budapest. The practical training is organized continuously from 2nd of April in 3 different places. This report gives information and analysis only about the one-week theoretical course.

The main goals of one-week Academical Seminar were the follows:

- to build up the foundation of three-month practical training,
- to convince the management of companies about the role of quality,
- the quality, as the most important fact of satisfying of market demands,
- to form the quality-oriented production view-point,
- to form the principle "conscious quality"

II. The way of education

For the asking of UNIDO the Academical Seminar was led by an expert of JUSE /Japanese Union of Scientists and Engineers/ Professor Ichiro Miyauchi. He has great experience with such kind of courses. Professor Miyauchi educated in English. His speech

was translated simultaneously into Hungarian. However among the participants there were some people, who understand in English and these people could follow the seminar in original language, prof. Miyauchi used overhead projector with hand-made sheets and flip-chart desk. He tried to use special Hungarian and Eastern European examples to make the figure of his speech more colorful. But sometimes the thinking on different interrupting topics was very hard to please.

On the lectures more than 50 people took part, who work at the management and the quality assurance area of 12 different companies. Nearby them 9 other Hungarian experts of quality assurance and control took also part on the lectures.

The complete series of the lectures has been recorded on video tape. This gives good possibility for watching it again if somebody is interested in for this project later.

The lectures were held on every day from 9 a.m. to 5 p.m., with an one hour lunch-break and with some short refreshment-break.

The first day the course was organized in the Ministry of Industry and Trade, on other days in the University of Economics.

On the first day the beginning of course was an opening ceremony. On this ceremony the representatives of all of the companies, which have some interest in the project, took a short speech. These were the follows:

- Dr. Sömjén, Tamás /the Vice - Chairman of UNIDO Hungarian National Committee/

After the greeting of participants, he spoke about the importance of UNIDO, about former roles of UNIDO earlier in Hungary. By the name of Government Agencies he hoped that this project results high level and important knowledge transfer not only for

the companies, which take part in the project, but also for the whole Hungarian industry.

- Pogány, János /Scientific Expert of UNIDO in Vienna/

He spoke about this concrete project. How this project was organized. He spoke particularly about the other firms, which worked together with the UNIDO in the organization phase of the project. He gave a historical background about the project. He summarized the final purposes and the requirements against the participants.

- Ichiro Miyauchi /Expert of Japanese Union of Scientists and Engineers/

He spoke about the history of his organization, JUSE, about the reasons and circumstances of foundation of his organization. He informed the participants about his earlier lectures, and about the theme of this project. He declared the importance of using of the new theoretical knowledge in the in-site practice.

- Mr. Hirota /quality assurance expert of SUZUKI Motor Co. Japan/

As the leader of three month practical training, he asked the active participation on every phase of the whole project. This is everyone's own interest. He gave his 30-year experience as guarantee for success of the project. He already worked in some dozen countries all over the world.

- Fábrián, Tibor /Director of PRODINFORM Technical Consultant Company/

He spoke about the PRODINFORM AMR Secretariate, as the Hungarian coordinator of the project. He spoke about the activities of his company, and about how the PRODINFORM joined to this project.

- Pláveczky, Gábor /Director of AUTOKONSZERN Rt./

As the representative of Hungarian manufacturers of automobile components and spare parts, he declared the importance of planned project, because today the largest problem with supplying of the car-manufacturers is the missing of well-developed quality assurance systems. He hoped, that this project will establish the basis of such a system at the participant companys.

After the opening ceremony Professor Miyauchi told the sharp timetable of his theoreticl course, and the general contains of such lessons. The project was begun directly with this.

III. Short introducing of educated knowledge

TQC

Conscious quality

Final goal is the "Q-defect"

"5S" method

"Quality circle"

Establishing of quality teams

"Puka-Yake" - "Fogr-poor" solutions

The TQC /Total Quality Controll/ method stands in the focus point of lectures of Professor Miyauchi. This method is used at the most of mass production company in Japan and other developed countries. This quality assurance and quality control method is able to work in the just - in-time component supply system it means, that the end-users don't run large stores, but they order from the suppliers only the necessary quantity of component to the job-lines. It means also, that the end-users have no time to check the quality of the ordered materials and equipments. So the suppliers must guarantee 100% fail proof quality. That is the reason, why only the selected final inspection is not enough. Only a general quality control system is able to satisfy the requirments, as the TQC.

The starting point was a historical background. How the role of quality has been changed in Japan from the World War II. After then he has drawn the picture of historical background of TQC. And he spoke about the connections between the TQC method and other quality assurance methods. He compared them too.

The basic works of establishing TQC began in the 50's, when two American experts visited in Japan. This was the period, when Japan spent a lot money knowledge from the developed countries of the world. This was the period, when they recognised, that how important for the customers the quality near by the technical knowledge of products. How hard to climb the hill of quality requirements. They took for more and more developed systems for this "mountain-climbing". And now the quality became the most important fact for the customers on the market. It means working without quality assurance systems is impossible. Especially in the car manufacturer industry, where a small mistake can result an accident or injure somebody.

The basis of every methods as like as the TQC, to form the conscious quality. To write in everybody's head that he or she personally responsible for the quality of the work, which was done by him or her. There is no chance to base the high level quality control on final inspection. By other words, the next worker is the consumer of a worker's production. This is the first principle for Everybody from a simply worker till top managers, which have to be convinced.

This way of thinking can lead to the "0-defect" production in a longer period. It means that everybody deals with the quality, not only with the productivity. The zero-defect production means, that everybody controls own work, and at the end of production line only defectless products appear, because the defects were controlled and filtered earlier. But for the production quality not enough to change the way of thinking in people's mind, we should change the circumstances of production too. They should be also on high level quality. For establishing the basic production circumstances very good tool the "5S" method. The "5S" comes from the first letters

of five Japanese words which contain the cleaning, good place occupation, good material handling, material transport, and worker's disciplines. Because the quality of production mainly depends of these facts. The substance of this method that everybody continuously maintain these facts with a quality circle. Namely there is no any absolute perfect solution. Every situation give chance for changing it better. The steps of this quality circles are the follows:

- looking for the problems of present situation,
 examine all factors of the production, mapping the reasons of problems;
- making a solution plan,
 for solve the mapped problems;
- doing the final plan
 strict doing everything, which is written in the plan;
- reaction
 analising the results after doing the plan. If the result is positive, then hold it on, if the result is negative then do the cycle again.

The most effective way of doing quality circles is form a quality team. These teams must be form for a direct problem solving.

The quality problems are not only solvables, but they could be prevented. A method for this is the "poka-yake". It means two things. First hand using of such kind of technologies. Which prevent themselves the defects, second hand automatization instead of dull and mechanical work phases.

After these methodological elements Professor Miyauchi dealt with the connection of quality and effective profit earning: and with the increasing role of quality in the satisfaction of customer desires. He educated how these elements influence each other.

Increasing of profit and increasing of quality were different purpose: some years ago. But he convinced everybody, that in good circumstances the maintenance of quality can result cost decreasing. If the quality increasing deals with not only the product, but with the production, then the company can reach this double goal. For example the machines which are in better condition, work with less out of order time, and can produce higher result.

Another side of problem of quality assurance is the role of it in the competition between the companies. Which produce same goods. To present market success goods not enough to produce a technicaly new thing, if there are problems with the quality of the new product. That's why in early stage of a new product /plannig/ should invite quality experts, and should form quality circles.

IV. Analysis of one-week program

The Academical Seminar could reach most of the purposes, which are written in the I. chapter. It was a very good theoretical basis for the three month practical training. With the aid of this UNIDO project, the skill-workers of the chosen companies got a possibility to know an up-to-date quality assurance and quality control system. Using of these systems gives a chance for the companies to be able to satisfy the highest requirments of the car manufacturer companies. Only one goal which is not really reached is the increasing of empathy of top management for the quality assurance, because most of the participants were mid-level managers.

The activity of the students were excellent. On the first day the accomodation was not exzactly optimal, because the site and shape of the room were not good for a lecture hall.

V. The printed materials for students of this course

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| 1. Quality Assurance /Japanese Concept/ | /English/ |
| 2. TQC Conceptual Operation /Management/ | /English/ |