

CEE as Customized Seminar Devoted to Enterprise's Needs ---- Practice of CEE in WISCO

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Abstract: *Nearly three decades have passed since the Wuhan Iron & Steel Corporation (WISCO for short) first started CEE in a well-planned manner. WISCO has recently put out a new CEE model called customized seminar, the core of which is need-oriented to enterprise. Seminars of this type are all "custom made" to best fit the needs of enterprise for its development strategy, technical updating and of staffs for individual career planning. This paper describes the dominant characteristics of the customized seminar in support of the enterprise development and its administration; further explores the roles it plays in the above three aspects.*

Key words: *continuing education; needs; customized seminar*

The customized seminar is referred to as a continuing education mode formed by WISCO during long-term continuing engineering education for the purpose of adapting to the growth of WISCO from the "double 7 million tons" (annual output of iron and steel in 1980s) to the strategy for development of central and southwest China conglomerate, from human resource management to human resource development, from meeting the employees' career needs to answering the employees' professional development needs. The core of this mode is need-oriented, tailoring the seminar programs maximally in accordance with the needs of development strategy for the enterprise's scientific and technological innovation, and career development of the employees, and the promotion of the joint development of the enterprise and its staff. The customized seminar mode is thought of as an innovation of CEE management mode of WISCO. The basic flow of it is to apply the modernized training management method to introduction of project management into continuing education management by means of a wide variety of training programs such as programs survey, program menu, program demonstration, market promotion, customized seminar order, project agreement, program execution and effect assessment of continuing education, and to strengthen the survey into production, operation and technical progress needs of the enterprise as well as individual needs of employees to set up a complete system for continuing education. The customized seminar tailoring the training courses to the requirements can effectively and directly serve for the enterprise's development and continuous improvement of economic benefits, also can actively adapt to enterprise's needs. The mode has played an important role in accelerating the rate of scientific and the technological innovation, promoting the development of human resource and satisfying the professional development needs of specialized technical personnel of WISCO.

I. Obvious features of customized seminar mode adapting to enterprise's need

In terms of CEE in an enterprise, whether it can adapt to the needs of the

enterprise, and whether it can be merged with the whole development strategy of the enterprise, have always been brought into focus, and are also the embodiment of its efficiency. The customized seminar has its own distinct features in adapting to the needs of the enterprise.

1. Interaction of analytic process of need. Interaction of customized seminar mode is represented by interaction among the enterprise, employees and varied steps of analytic process as well. Interaction with enterprise refers to the change in needs due to development strategy, scientific and technological growth of the enterprise; interaction with employees is embodied by training needs due to the change in their current knowledge structure, capacity and post transfer of the employees. Interaction between varied steps of analytic process is incarnated by the mutual influence on such steps as program survey, program menu, program demonstration and market promotion.

2. Practicability of contents of need analysis. Practicability of need analysis contents of customized seminar is incarnated not only in the analyses of the current situation of the enterprise and its employees, but in the analyses of the development requirements of the enterprise and its staff, aiming at analyses of the current posts, and the changing posts.

3. Market nature of need analysis pattern. The customized seminar analyses pattern is an analysis of “being pulled by market demand”. According to the requirements of training market, the analyses of main body of market must be done—training teachers and training resource, but object of market must also be analyzed—enterprise and training cost, to make the analysis suitable for the requirements of training market rules.

4. Accuracy of need analysis result. Accuracy of results lies in the exactness of information. Need information for customized seminar not only comes from training faculty, but also from the enterprise; not only from the trainers, but also from the trainees; not only includes information of training contents, but also that of scientific and technological growth of the enterprise. These abundant and authentic information has made it possible to ensure the accuracy of the analysis results.

II. The analysis on way of customized seminar mode conforming to enterprises' needs

It is very important to find certain approaches and carriers to guarantee the need analysis to be full and authentic. The customized seminar mode can meet the needs of the enterprise mainly via the following means to narrow the gap between training and needs of the enterprise.

1. Survey—the start point of need analysis. The survey level of customized seminar need includes centralized survey organized by the training organization and individual one done by the trainers as well as the independent one by the trained units. The survey forms can be needs survey and strategic analysis; statistics based on questionnaires and interviews; analysis of data and incident analyzing. The multi-levels and multi-forms of survey into needs have provided a firm basis for scientifically determining of the menus. Before WISCO determines the annual order of continuing education seminar, the training organization will go deep into the plants and mines to organize discussions and questionnaires among the employees. In the process of seminar, the trainers will often go down to the workplace to keep track of the latest development of science and technology as well as the needs of employees, to learn about the needs for seminar comprehensively, and to determine and revise the order of seminar.

2. Program—the bridge of need analysis. What subject to be chosen in the seminar and the pertinence and effectiveness of the program will directly influence the outcome of the seminar. The survey into needs of customized seminar mode is carried out in conformity with the training programs, which erects a bridge for the

information interaction between the training organization and trained units. Program selection of continuing engineering education of WISCO is built around the front line tasks determined by its development strategy, including the practical trans-subject programs determined by the scientific innovation, and the programs to be complemented and extended in line with the individual needs of employees, establishing a seamless connection between the program selection of seminar and the enterprise's needs .

3. Feedback—the guarantee of accuracy of need analysis. The need analysis process of customized seminar mode is a process to collect and analyze the information continually. Information feedback will pass through the whole process of need analysis. The information source of the specific feedback includes program survey, program menu, program demonstration and market promotion. The information feedback shall finally be provided for determining the seminar training menus, with the loop locked information channels giving a guarantee of accuracy of demand.

III. Main aspects for filling enterprise's needs by customized seminar mode

Theory guides the practice and practice gives birth to the formation of theory. The customized seminar mode has come into being with the development of WISCO, playing an immeasurably active role in meeting and adapting to the development needs of WISCO.

1. The customized seminar mode is merged and connected mutually with the development strategy of the enterprise. Continuing education of the enterprise varies with the change in its development strategy. As the first iron & steel base after foundation of new China, the development strategy of WISCO has experienced two great changes, namely from digesting and absorbing the imported technology in the 1970s to the strategy for “double 7 million tons”(annual output of iron and steel products), and again from adapting to the requirements of new policies on iron and steel and the currently industrial layout of iron and steel made by the state to making of development strategy for central and southwest China conglomerate for the need of its strength.

The customized seminar mode of continuing education of WISCO depends on the change in development strategy of the enterprise. Digestion and absorption of the imported technology in the 1970s is the start phase of its continuing engineering education, and also the impetus of starting of WISCO CEE. By 1978, systems of “1.7m” rolling mill engineering had been taken for a trial run and put into production successively. To ensure the success of trail run and production, WISCO started with the training to a large scale for the specialized technical personnel and technical workers so as to guarantee the success of production of “1.7m” rolling mill engineering in one trial. Since the 1980s, a series of training programs for the process and equipment of “1.7m” rolling mill engineering have been offered to make it possible for “1.7m” rolling mill engineering quickly to acquire the designed production capacity and for the trained workers to digest and absorb the newly-imported technology and innovate. In the meantime, the training organization of WISCO for scientific workers has been created, thus marking the start of the continuing engineering education of WISCO .

The execution of the strategy for “double 7 million tons” (annual output of iron and steel of WISCO) has become the development stage of continuing engineering education of WISCO. During the 7th Five-Year Plan carried out in china's national economic construction, WISCO consciously planned and performed the continuing engineering education. In this period, WISCO focused its attention on the transformation of technology for double 7 million tons and planning to be the first class state-owned enterprise and winning the quality management prize of large enterprises,

while continuing engineering education, whose scale, level and efficiency of running the school made great progress, was developing tremendously. During the 1990s, the technical transformation of WISCO to a large scale, such as open hearth to converter in No. 1 Steel Making Plant, newly-built No. 3 Steel Making Plant, No. 2 Hot Rolling Mill and expansion of Silicon Steel Plant, tremendously quickened the pace of the development of continuing engineering education.

The implementation of development strategy in central, southwest China is a mature phase of WISCO's continuing engineering education under the new circumstances. Centered around the development strategy pattern in central, southwest China, WISCO puts forward a strategic objective: "rank among World top 500 to be the first class international corporation with powerful innovation capacity and market competence". To turn WISCO into the international first class iron and steel enterprise and the production base for famous brands, the business needs abundant human resources with initiative and inventiveness. In order to ensure preserving and increasing the value of human capital of specialized technical personnel, WISCO will have to enhance enterprise continuing education to realize the second exploration of human resource and make efforts to establish a highly qualified specialists group comprising senior management and operation experts, senior engineering and technical experts and senior manipulative skill experts as well as the qualified, reasonably structured, professionally supported and sufficiently backed up first class international talent team with innovative spirit and capacity, and with the highly qualified specialists group as the core. In this phase, WISCO's continuing education will keep up exploration of corporation human resource to be the start point and provide powerful intelligence support for the enterprise's implementation of development strategy. Therefore, scientific and technological innovation and talent exploration has become the theme of continuing education while the enterprise's development strategic need is responsible for the formation and development of customized seminar.

2. Customized seminar depends on scientific and technological innovation mutual of the enterprise. The continuing education of WISCO has evolved from several phases such as digestion of imported equipment, promotion of large scale technological transformation and acceleration of technical innovation with independent intellectual property. Along with the expanding of WISCO's size and the increase in production capacity, WISCO accelerated the rate of its research on and production of high-tech and high-additional value products. The focus of continuing engineer education has been on the WISCO's key scientific and technological projects and key technical innovation.

Different from other forms of education, continuing education requires that the programs to be studied be closely associated with the practical condition of the enterprise, tackling the difficulties in the production and operation of the enterprise. Customized Seminar in its task survey and implementation course places great emphasis on technical innovation services to WISCO. In 2007, WISCO has organized the technical innovation trainings for nearly 3000 employees in order to develop the technical personnel's innovation capacity and to combine the technological innovation with special seminar and to integrate enterprise's technical transformation with research on new technology.

In the recent years, retraining courses of various levels have been offered for the new projects, such as No.2 Hot Rolling Plant and No.2 Cold Rolling Plant, and transformation constructions in No.2 Steelmaking Plant and Sintering Plant, integrating scientific and technological innovation with WISCO's large-scale technical transformation. The good examples of customized seminar can be provided by the application of configuration software in industrial control retraining course in support of the large scale transformation of Cold Rolling Plant; by electrical drive technique in cold rolling transformation retraining course in support of the transformation project of Sintering Plant; and still by retraining course for the soft start-up and frequency control

of exhaust fans in No.4 Sintering Plant; in support of the finishing mill system transformation project in Hot Rolling Plant, several retraining courses of hydraulic pressure AGC electrical control system, gauge control system, mechanic control system, etc. in support of 2# conticaster in No.2 Steelmaking Plant; continues casting and tandem rolling of thin slab technique retraining course and continues casting and tandem rolling of thin slab process retraining course in support of the silicon steel continue casting project; silicon steel thin band development seminar, silicon steel short flow seminar, etc, in support of the new projects in the coke company, the vacuum potassium carbonate desulfurization technology seminar.

New technology seminars have been conducted, combining with the enterprise's practical conditions. Continuing education should have interaction with the development of the enterprise, and therefore, seminar courses for application of new technologies in production are also one of the features of WISCO continuing engineering education. The attention of continuing engineering education in WISCO has always been focused on the generalization and application of new technologies and techniques in WISCO's production, for example, "new continues casting technique seminar", "new out-furnace refining technique seminar", "new clean steel smelting technique retraining course", "new technique of hot iron desulfurization retraining course", "6σ new management technology seminar", "new communication technology retraining course", "new steelmaking technology seminar", "new sintering technology seminar", etc. In addition, the "seminar of hot rolling of quality steel technology" and "seminar of cold rolling technology control of car panel" both have positive effects on the promotion of technical innovation with WISCO's independent intellectual property.

3. There will be the mutual-growth and mutual-prosperous relation between the customized seminar and needs of the enterprise staff. In the long-term practice of continuing education, WISCO has put forward the basic principle of "People-oriented, teaching for the need" to improve the learning, and practice skills and creativeness of professional technicians. "People-oriented, teaching for the need" has embodied the individual needs. The development platform between the enterprise and its employees has been constructed by means of the continuing education.

Continuing education is the effective method for the human resource development of the enterprise. The objective is to train more high-level talents. At the end of the "11th Five-Year Plan" of China, the main business of WISCO will have 50 senior business management experts, 200 senior engineering technical experts and 300 senior manipulation skill experts. Another objective is to increase the total number of high-level talents. At the end of "11th Five-Year Plan" of China, WISCO will have 100 PhDs, 500 masters and 5000 graduates. Still another objective is to improve the structure of talent team and establish a talent team with excellent qualification and reasonable structure, perfect specialty, ample reserve forces and initiative and inventiveness.

The training platform of high-level talents is being built in the continuing education to improve the learning skills for high-level management. In order to firmly establish the lifelong study concept and comprehensively enhance the whole qualification of high-level management, WISCO has organized the management reading activity in the entire company. The enthusiasm of independent learning for WISCO management has been greatly aroused in the course of selecting teaching materials and the independent learning by means of organizing the management to be tested in the reading activity, establishing the examination library, using the network examination system without paper, taking examinations and combining the exam scores with the post assessment.

The continuing education shall not only be involved in the human resources planning of the enterprise, but also in the career development of enterprise employees in an effort to attain the mutual development between the enterprise and its employees. Career development refers to the formal measures for gaining the

personnel with proper qualification and experiences when they are needed. All trainers of continuing education must take the initiative to involve themselves in the career planning and development of employees, and help the staff with the required knowledge and skills to reach their career planning and development through the continuing education and training. Over 200 seminar menus of the continuing education have been promoted every year by WISCO not only to meet the needs of production, operation and technical advances of the enterprise, but also the employees' needs of gaining a foothold in their posts.

IV. Conclusion

Over many years practices of continuing education has demonstrated that the customized seminar has played an active role in the aspects of meeting the needs of development strategy of the enterprise, technological innovation and employees' career development, and that the need-oriented customized seminar has maximally satisfied the needs of the enterprise and promoted the mutual development of the enterprise and its employees.

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Curriculum Vitae

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Wang Zhanhong graduated in Metallurgical Engineering at the University of Science and Technology Beijing. He dedicated years to research and administrative work concerning on CEE and Higher Vocational Education. Owing to the efforts, he understood well the needs for human resources in enterprises. He has done many research projects established by the Hubei Province as the Provincial Education Planning, including: "Research on School-running Features of Higher Vocational Education", "Research on Functions of CEE in Large and Medium sized State Owned Enterprises", "Research on Cultivation Modes in Higher Vocational Education", "Exploration and Practice in Customized Seminar Education WISCO", and so on.

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