

RESEARCH AND PRACTICE OF GRADE TRAINING SYSTEM FOR BAOSTEEL PROFESSIONAL AND TECHNICAL PERSONNEL

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Abstract: *In the light of the realities of Baosteel Group Co., Ltd., the paper briefly analyzes the aim, the guideline and basic principle to build the grade training system for Baosteel Professional and Technical Personnel. The paper presents a structure model demonstrating the relationship between their post competence and their knowledge. In addition, a course development model called “standard + α ” is described in the paper. In the end, the paper offers four opinions in terms of grade training practice.*

Keywords: *grade training system course development model*

As the current global steel industry scale extends with increasingly fierce competition, Baosteel Group Corp., Ltd has drawn up a new round development strategy, and put forward the talented person's strategic target, i.e., At the end of the program for 2007-2012 years, Baosteel has to own a strong team of greatly professional management personnel with international-oriented quality and outstanding leadership, a strong team of technical personnel with independent creative ability in the steel field, and a strong team of operating personnel of study type, technique type, who has precise operation ability. Under this background, it has been one of our top priorities to standardize corporate training and integrate current training resources to establish a sound training system. According to the frame of the sound training system, it has become an increasingly significant task for those who are engaged in continuing engineering education to take great efforts to research how to set up a grade training system, which is compatible with corporation development strategy and can satisfy the needs to tap talent potential of Baosteel professional and technical personnel.

I .The guideline and the target of setting up a grade training system for Baosteel professional and technical personnel

It is our main task to put into practice the grade training system for Baosteel professional and technical personnel in building a classified and grade training system for Baosteel working staff and in carrying out the grade training for managerial, technological and operating personnel respectively. It is a creative job to implement the training that aims to systematically enhance the competence of Baosteel professional and technical personnel with different positions and in different levels. Also it is an effective way for Baosteel to foster high quality professional and technical

personnel to meet the requirements of company strategic development. On the basis of current classification of professional and technical personnel in the main subsidiary and branch companies in Baosteel, it is proper to classify the professional and technical personnel into four grades, namely core grade (chief engineer), elite grade (supervisor engineer), backbone grade (section engineer) and potential grade (assistant engineer).

The first thing to do in establishing the grade training system for the professional and technical personnel is to meet the requirements to carry out corporate development strategy so as to provide support for the development; Secondly, the system should match the demand of the implementation of corporate HRD programming so as to prop up the development of the creative type of the technique talented persons; Thirdly, the system should be match the company's request to the employee knowledge structure and post competence, to offer support to enhance the post quality and competence of technical personnel; Fourthly, the system should be in consistent with Baosteel training development requirement, to support the establishment of top-grade enterprise training base. These four requirements are factors we can't ignore to build the training system and set the training direction. The guidelines of establishing the grade training system for Baosteel professional and technical personnel are the demonstration of these four requirements.

The target which sets up the grade training system for Baosteel professional and technical personnel is to build a grade training system with Baosteel characteristics that conforms to Baosteel development strategy, with a commission to enhance trainees' professional technique ability, team cooperation ability and their executive power.

II. The principles of establishing the grade training system for Baosteel professional and technical personnel

There are three principles of establishing the grade training system for Baosteel professional and technical personnel on the basis of the above-mentioned targets and guidelines, taking into consideration the requirements of the company human resource department concerning basic post quality, professional technique ability and special knowledge application ability of technical personnel.

The first, "Post Qualification" Principle: In accordance with the post competence requirements of the professional technical engineers at different level, the post qualification training system is set up to meet the requirements of post promotion.

The second, "Professional Competence Enhancement" Principle: In accordance with competence enhancement requirement, the post competence enhancement training system is designed to strengthen core competence and professional competence enhancement. The core competence belongs to standard competence. As to the professional competence, the requirement depends on different field, showing competence with individuality.

The third, "Knowledge Expansion" Principle: In accordance with knowledge expansion, concepts transformation and applied tools mastery, the special I knowledge training system is meant to master post-related special knowledge and

enhance the ability to apply special technology.

III.The design and main content of the grade training system structure

In line with the principles to establish the grade training system, the system structure is composed with four grades and three training series. The four grades respectively refer to core grade (chief engineer), elite grade (supervisor engineer), backbone grade (section engineer) and potential grade (assistant engineer); three training series respectively refer to post training, competence enhancement training and special knowledge training.

1. Post Training

The post training is designed equip the professional technical staff with basic quality and basic competence to be promoted to a higher grade post. The training content demonstrates “post qualification” principle.

According to the post basic quality and competence requirement for the professional technical personnel on the part of corporate human resource department, the professional technical personnel should meet the demands in profession quality, professional team leadership and tools usage skills and problem-solving abilities. Besides, higher grades namely supervisor engineers and supervisor engineers should have the ability to track and master technology related to product and customer's technique. Hence, the post training content should consist of four modules, specifically professional quality, team leadership, tools and approaches and technology related to product and customer's technique. The former three modules are the main content of the post training, which are theory oriented and take the face-to-face teaching form; the latter module is for investigation or practice, sending the trainees to our strategic customer unit to study and communicate.

(1) Professional quality module

Through studying this module, the professional and technical personnel at different grade are expected to widen their horizon, expand their knowledge, hold the development features of economy, industry and technology and set up the overall points of view of engineering and economic activities. They are likely to enhance the problem-solving abilities by use of philosophical wisdom, develop their philosophy quality, set up engineering philosophy view. After the study, they are believed to master the relationship between recycle economy and sustainable development of steel industry, to get acquainted with basic theories of recycle economy and foster a scientific development concept.

(2) team leadership module

The module is designed to help the professional and technical personnel at different grade to know the factors of team management, to master the approaches and techniques in motivation, team communication, cooperation and management, to enhance team organization and leadership.

(3) tools and approach module

The module helps the professional and technical personnel at different grade to promote their abilities of strategic thinking, policy-making, product development and

risk control in manufacturing business process. The module also helps them to promote their abilities of rational application of creative measures and tools to solve technological innovation problem.

(4) production and customer technology module

The module can make the professional and technical personnel at different grade perceive the trend of industrial product development and application, the trend of customer needs, get familiar with customer technology and promote their profession sensitiveness and their abilities to sense the market demands.

The above mentioned four modules comprise the main content of the model for post training courses development for Baosteel professional and technical personnel.

2. Competence Enhancement Training

The post competence enhancement training is designed for the professional and technical personnel at four post grades. The training content design should demonstrate the “professional competence enhancement” principle.

In accordance with the guideline of establishing the grade training system and “professional competence enhancement” principle, our grade training system project development team have put forward a structure model demonstrating the relationship between the professional and technical post competence and their professional knowledge after much research, data analysis and much discussion, taking into consideration the current situation, the progressiveness and development requirement of Baosteel professional and technical personnel at different grade. This structure model shows the correspondence between the “standard+ α ” competence target of different grades and academics knowledge. So-called “standard” competence means the problem-solving capabilities in the workshop, innovation and development capabilities and their abilities to adapt to the internationalization, which are the compulsory post core competence of the professional and technical personnel when they perform their post responsibilities, and hence bear the cross-field universality and standardization. “ α ” refers to the professional technological abilities. The competence demands differ in accordance with the different fields they are in, which embodies the competence individuality. The various professional knowledge included in the structure model showing the relationship between the post competence and professional knowledge has provided the course designing personnel with a scientific basis to develop the training courses. The structure model points out to the technical working staff at a certain grade the requirement to acquire the targeted competence, but the more significant is that it provides the compulsory knowledge or courses to achieve the target competence. We can say that the structure model actually is a course development model.

Based on the above-mentioned course development model, the post competence enhancement training consists of four modules, namely workshop problem-solving competence enhancement training, innovation and research competence enhancement training, internationalization adaptation competence enhancement training and professional technology enhancement training. The former three modules highlight the training in the core competence that professional and

technical personnel should acquire. They belong to the standard content in the post competence enhancement training. However, the latter one module highlights the professional technology, stresses the enhancement in professional competence. It belongs to the professional training module with individuality. It is so-called α module.

(1) Workshop problem-solving competence enhancement training

The module assigns case study about the workshop problem-solving measures, with an aim to inspire the trainees to master the best thinking procedure and related decision-making approach, thus enhancing the competence to find problems, improve problem-solving efficiency and quality, avoid risks, reduce cost and solve problems that arise in workshop.

(2) Innovation and research competence enhancement training

By studying the theories and approaches of innovation and research, the trainees can understand the overall situation of corporate innovation and development in an accurate way, can inspire new ideas, new ways, thus enhancing the competence of innovation and research and development.

(3) Internationalization adaptation competence enhancement training

The training content in this module can provide an insight into the basic common sense in the international exchange activities; can make the trainers get to know the international etiquette and related laws and regulations. The trainees are expected to enhance the competence in cross-cultural communication, information processing and international operation.

(4) Professional technology enhancement training

The professional and technical personnel can choose to attend technology course and business practice course. The technology course covers more than ten main metallurgical courses including iron and steel metallurgy, pressure processing, product and application technique, metallurgical machinery, automation technology, computer and information, safety technology, energy technology, environment protection and clean production, chemistry, etc; The business practice course mainly includes production management, finance, law, trade, human resource, strategy and technology, etc.

3. The Specific Knowledge Training

Aim to meet the corporate requirements of establishing uniform management mode and corporate culture, the specific knowledge training is designed to carry out the cross-post and cross-grade training in the whole company. The training consists of five modules, respectively “corporate culture”, “Baosteel modern management”, “the six sigma precision operation and management”, “Baosteel comprehensive management system” and “Baosteel international oriented operation capabilities”

IV. The Grade Training Practice and What We Have Learned from it

The establishment of the grade training system structure and the development of course model have laid a basis for the practice of the grade training afterwards.

1. Post Competence Enhancement Training

According to the structure mode demonstrating the relationship between the post competence and the post knowledge of Baosteel professional and technical personnel, namely the “standard+α” course development model, in 2006, our project group working on the grade training system has completed the course structure design of four grades, and written an initial version of the teaching material called 《Baosteel Professional and Technical Personnel Grade Training Course Dictionary》. At the same year, we successfully held the comprehensive seminars for chief engineers and for director’s engineers coming from Baosteel Group Corp. Ltd. We have edited the related teaching materials and organized a teaching group consisting of the leaders concerned, academicians from the Engineering Institute, professors from the universities, Baosteel chief engineers and teachers from Baosteel Talents Development Institute. We can say we have a big step in the grade training for the professional and technical personnel at a trial stage.

2. Post Training

In September, 2007, the post training for the chief engineers from Baosteel Group Corp., Ltd was staged jointly by Baosteel Talents Development Institute and human resource department of Baosteel Group Corp., Ltd. There are 76 newly appointed supervisor engineers mainly from various branches, subsidiaries and from Baosteel Research Institute attending the training. In accordance with the training requirements of the four post training modules, our project group organized the technological staff, finishing the design, development and training implement of 9 courses such as “macro-economic situation”, “recycle economy and Baosteel sustainable development” and “new approaches to technological innovation”. Thanks to the fact that the training emphasizing the supplement of the post knowledge needed, expansion and fostering related competence, the post training for the chief engineers has effectively supported the enhancement of the professional quality of the trainers, the forming of team leadership, the competence of using tools and measures to solve the technological problems and the capabilities to properly hold customer information and customer technologies.

3. What We Have Learned from the Training

The establishment and the implementation of the grade training contribute to the scientific orientation, institutionalization and standardization of the training management; to the integration of the training resource like currently available courses, teaching staff to enhance the training level; to the faster speed to develop high quality talents with innovative ideas, boost the core competitiveness of the company, providing an effective support to the corporate strategic development.

The establishment of the grade training system is the primary premise for the implementation of the grade training in an overall way and creates favorable condition to carry out the training with a clear objective, providing a scientific basis for the course design, content arrangement and yearly training plan making.

Regulation making and much attention from the leaders are the powerful guarantee to carry out the grade training. The regulation matched for the training is a

must to initiate the grade training, because the regulation makes it possible to regulate the training practice. Besides, much attention of the leaders can strongly safeguard the regulation making and regulation enforcement.

It is essential to establish a seminar platform and regularize the training mode. “standard+ α ” course development model has created a lively study atmosphere for the professional and technical personnel to enhance “three competence, one level” namely enhancing workshop problem-solving competence, research, development and innovation competence, internationally adapted competence, and improving professional and technological level” The model has provided a open-minded academic atmosphere for the professional and technical personnel to view their opinions, demonstrate their talent and exchange experience. Due to the fact that the training mode is in the initial stage of practice, our training planners and organizers are expected to summarize the experience while practicing, gradually improving and forming the grade training mode with Baosteel characteristics.

V. Conclusion

In the recent two years, with the human resource department of Baosteel Group Corp., Ltd, Baosteel Talents Development Institute has done some exploration in establishing the grade training system for the professional and technical personnel, in studying and developing the grade training mode and initial practice of the grade training, laying some foundation to carry out the grade training system in all company. The paper briefly analyses and summarize the main part of the research result and what has been learned, with a hope to offer some help and inspiration to the readers. Besides, we hope the paper can function as food for thought, contributing our part to the continuous discussion and theory research on corporate training experience, to boosting the further innovation of corporate continuing engineering education, and to fostering high quality professional technical talents for the enterprises.

Curriculum Vitae

Fang Yuelun, chief trainer of Engineering Technology Training Center of Baosteel Talent Development Institute. He got the master degree of automation instrument from Northeast University. His main research is about the continuous engineering education and engineering technology training of the enterprises. His papers which has been published include: 《Exploration and practice on Baosteel Continuous Educaiton》; 《The function of innovation in enterprise’s continuous education》; 《Innovation is the motive force of the development of Baosteel continuous education》; 《The four models of Baosteel engineering technology training》 and etc.

Xu Yong, director of the Training Administration Department of Baosteel Talent Development Institute. He got the master degree of Mechanical Engineering from Northeast University. His main research is about the continuous engineering education of the enterprises. Up to now, he has published over 10 papers in this field, namely, 《Innovation is the motive force of the development of Baosteel continuous education》 (released in the 9th WCCEE in 2004) ; 《The application of 3Q seminar in Baosteel continuous engineering education》 (released in the third Global Engineering

Education Colloquium in 2004) ; 《To establish sustainable cooperative partnership between enterprises and universities》 (released in the 4th Global Engineering Education Colloquium in 2005) and etc.

Yijing Zhao, As an English major, she graduated from Henan Normal University in 1995. She loves her teaching job and is always ready to help her students. She furthers her English study at Shanghai International Studies University and got the master degree in 2006. While she has accumulated much teaching experience in Baosteel English proficiency training, she finds it interesting to attend on-the-job foreign language training and adopt efficient teaching method in her own classes. Over these years, the papers she wrote include 《The balance between work and family in the American society》、《The research of teaching methods》、《Learn spoken English by watching English movies》 .