



PROCESS EVALUATION AND STANDARDIZATION IN THE IMPROVEMENT OF A STEEL SMELTING COMPANY

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ABSTRACT:

The paper presents basic changes in business processes for example Arcelor Mittal Poland. Arcelor Mittal Poland produces about 6.7 M mt crude steel. All Poland's steel makers produced 10 M mt crude steel. When we are analyzing ownership structure of iron and steel sector in Poland we see that Arcelor Mittal Poland has 67% (by maximum crude steel capacities). The key element of improvement of the management system in the enterprise is Deming cycle: plan do, check, act (PDCA). Arcelor Mittal Poland – market leader - uses modern information system SAP. The management system SAP uses the best available IT tools. The system is based on management standards and procedures effective in the corporation. Besides the enterprise realizes Kaizen principles, workers put in order and improve processes in their work. Kaizen methods in based on 5xS that mean: sort, systematize, sweep, and sanitize, self-discipline. The first area where Kaizen methods were implemented was department in Sosnowiec (2006). Many problems, such as safety issues, are solved by employees. Because first actions in Kaizen are trainings for the management and personnel. Employees teach how to take care of workplace. More over the enterprise increases the production and provide better and better products and materials. According to UE directive on construction, each new product and material needs to have CE certificate before it is introduced on the market. Now, all products in steel plants are required to have a CE symbol. To improve the sell system staff realizes principles of Businessman Code. Basic principles of the code are presented in the paper. The enterprise realizes such standards: PN EN ISO 9001- Quality Management System, PN EN ISO 14001- Environmental Management Systems). Managers and workers complete their education. They improve their qualifications and capacities to work in new systems. The enterprise realizes cycle of courses on the job and off the job. In the company works the Academy of Manager – key element of Knowledge Programme. Arcelor Mittal Poland tends to Total Quality Management. Adjustment to global standards is a necessary and improvement aspect of maintaining competitive edge.

KEYWORDS:

Kaizen principles, method 5xS, information system, Quality Management System, Environmental Management System, Knowledge Programme

1. SITUATION IN POLISH STEEL MARKET

The last decade brought about a variety of changes in Poland. They also concerned processes within smelting companies. In the free market environment companies were faced with new challenges and unprecedented rate of changes that often posed a threat to their existence. As a way out of their predicament they introduced changes to their basic and auxiliary processes. The smelting sector

responded in the same way. While taking over smelting plants, foreign investors began to pay more attention to the modification and standardization of business processes. The specific processes were first evaluated and then standardized. The involvement of the management in the implementation of changes and development of the companies was self-evident. A number of companies succeeded in creating a uniform process structure (process map). Below you can find an analysis of changes in processes at Arcelor Mittal Poland, the steel producer.

2. PROCESS IMPROVEMENT

The steel company Arcelor Mittal has the biggest share on the Polish steel market (67% owner of the facilities according to the steel production capacity). The strategic objective of the ArcelorMittal Corporation is to strengthen its position as the world leader in steel and smelting product manufacturing. In order to achieve its strategic objectives the company focuses on personnel development and business process improvement. The process improvement signifies "continuous improvement of evaluated business processes in accordance with the Deming cycle: plan, do, check, act" [1]. The process starts with selecting and defining critical business processes that lend themselves to being continuously improved through improvement actions. In the company in question such processes were identified and, subsequently, works on the development of a standardized computer system, using the SAP programme, commenced. The SAP system is used by approx. 12 million users in over 1500 companies worldwide. The system supports the management of basic business processes, such as purchase, production, sales and service and features the latest achievements in the IT sector [2].

The next step in the business process improvement carried out by the company was organizing the system according to the Kaizen principles – 'the 5 S's'. The Kaizen philosophy consists in small, gradual changes that improve business processes. The purpose behind the system is to limit everything that is a waste, namely unnecessary actions, excessive supplies, stoppages etc. Starting from 2006, processes have been analyzed at all company's production plants. Actions taken include thorough cleaning of workplace, sorting and separating essential items from those that are not essential as well as creating cleaning timetables. At every workplace only essential tools and items are to be kept. The action has already been carried out at a cold strip mill in the Sosnowiec plant [3].

Another process that has been improved, by introducing a computer service system and simplifying procedures, is customer service. Within the "Customer service strategy" adopted by the company, comprehensive service, short deadlines for order processing and focus on customers' and contractors' individual needs are to be achieved. The company assures that "customer's requirements are clearly identified and agreed so as to be feasible". As part of continuous improvement of the *Quality Management System* the principles of customer service system, functioning in the company, have also been defined in the "*Quality Book*". The basic principles of the system are [4]: active market research for the establishment of company's development directions in line with customers' expectations, registration of all queries, analysis of all purchase orders to ensure their complete and timely processing, immediate replies to customers' inquiries, negotiating the terms and conditions of sales agreements with the customers, consistence with legal regulations, order confirmations, conclusion of written agreements with customers, constant evaluation of customers' satisfaction, raising the skills and qualifications of employees, improving the service system. The basic indicators in the customer service process presented in the *Salesman's Code* are:

- ✚ transparency (full information available at one place, a single employee responsible for the whole process of contact with the customer, information on the progress of customer's case available at all times, clear and ordered picture of all activities related to customer service);
- ✚ easiness (customers' orders processed in the shortest time possible), effective post-sales service, responsive to customers' requests, full responsibility for solving customers' problems, optimal accessibility of customer service – telephone, fax, the Internet, e-mail, service in a language of choice (e.g. English);
- ✚ involvement (ability to fulfill order processing deadlines, centralized and defined liability, investments in raising skills and qualifications of employees handling customer service);
- ✚ politeness and warmth ("smile via the phone, e-mail", treating each customer with respect, committed and well-defined employee, in-depth knowledge of the service package/each customer's identity/activity, good relations based on trust and transparency);
- ✚ access to full data on the customer at each work station); professionalism and multidirectional character (precise and adapted processes that make it possible to answer any questions from the customer in the shortest time possible, respect and regard shown to the customer);
- ✚ openness to change, innovation and dynamism (customer service employees are flexible in terms of customers' requests). It is worth noting that the quality of customer service contributes greatly to building corporate culture.

Taking into account individual needs of particular contractors the company systematically launches new products. The company has its *Technology and Product Development Office*. Much effort has been made to create an atmosphere of innovation and creativity in the company. New types of steel are being introduced (last year 19 new types of steel were used in production), products are being tailor-made to meet customers requirements. Additionally, technical and technological processes have been improved. The company operates in compliance with the international ISO:9001 and ISO:14001 standards. It also conforms to the regulations and directives of the European Union regarding environment protection. The products of Arcelor Mittal receive certificates of conformity (CE).

As part of procedure improvement internal communication rules have been simplified. As a result, electronic mail, the Internet and Intranet are now in use (e-learning, on-line). Every employee that uses the Internet may now learn English (www.globalenglish.com) or take advantage of a number of specialist trainings. Even work-related problems may be solved through the net using an e-mail address of a helpline. In August 2006, comprehensive trainings procedures for the management of each level were launched under *Managers Academy* programme (Mittal University). The programme is to promote the change-oriented attitude among the management. The procedures were divided into three thematic blocks: attitude and knowledge, managerial skills and professional skills [5].

Moreover, the inappropriate working conditions detection procedures have been simplified at Arcelor Mittal. Now, under the so-called "*help us improve working conditions*" programme, each employee may report detected irregularities. What is more, competitions with awards for the most innovative employees are held. For the company to operate efficiently a number of control procedures have been put in place (audits, tests, inspections, etc.). Systematic and thorough controls concern first and foremost key business processes.

Many auxiliary processes have been outsourced. In 2007 outsourcing was applied in a few more plants, including: Tube Rolling Mill in Krakow, Rail Transportation in Sosnowiec, Krakow and Świętochłowice and Coking Plant within the Krakow facility. The outsourcing policy is to bring about a reduction in employment by around 1700 employees.

3. SUMMARY

The article discusses only selected business and auxiliary processes, such as product sales, communication, and workplace cleaning. In the process improvement philosophy, it is important to understand the whole customer chain that is being customer-oriented. For it is the customer that determines a company's market position. Both internal and external customers are to be considered.

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