

Customer's satisfaction the element of proquality strategies of organization

M. Dudek-Burlikowska* , D. Szewieczek

Division of Materials Processing Technology, Management and Computer Techniques in Materials Science, Institute of Engineering Materials and Biomaterials, Silesian University of Technology, ul. Konarskiego 18a, 44-100 Gliwice, Poland

* Corresponding author: E-mail address: marta.dudek-burlikowska@polsl.pl

Received 30.01.2008; published in revised form 01.05.2008

Industrial management and organisation

ABSTRACT

Purpose: A new approach to customer's requirements in company using Quality Function Deployments methods has been presented.

Design/methodology/approach: The possibility of use of Quality Function Deployment methods are connected with continuous quality improvement of organization. Interdependence of the quality research methods and customer's requirements have been taken into account.

Findings: At the present time the enterprises should integrate quality management and quality control with customer's requirements and also with quality methods. Such strategy will enable to achieve success for these companies.

Research limitations/implications: QFD is a very important method which should be employed in companies for a new product and customer's needs in the whole product life cycle. Aim of QFD is identification of the affirmative features of product, of the range of interest in product on market and also definition of the method of accomplishments of these aims.

Practical implications: The example of implementing QFD shows product design and development technique that compares the fit between customer needs and product features. Usage of this method allow to keep a customer focus, reduction in the product development cycle, increasing customer satisfaction, providing opportunities for cost reduction.

Originality/value: Usage of Quality Function Deployment Method in polish companies have been presented. It helps define what the customer is really looking for in the way of market driven features and benefits.

Keywords: Quality management; Quality function method (QFD); Customer's requirements

1. Introduction

Quality in contemporary world is one of the most important tools in competition market and international trade.

Aim to the possible best quality of final product is a factor, which to a great degree decides both about achievement of the customers' confidence and about the company's position on market [1].

The product of good quality and satisfied client are the most important objectives which sets the company tending to success [1,2].

The achievement, by the economic unit, of assumed qualitative aims demands a very good organization of all activities inside the company [3].

It means that technical, administrative and human factors influencing on the quality of company's products must be subjected to system of control. This system of control aims at definition of quality defects and first of all at prevention of their formation [1,2,4].

Research and estimation performed in continuous and systematic way permits in proper time to monitor the actual organization state and in effect contributes to development of products of optimum quality and the enlargement of the customers' satisfaction [2,5].

In this paper selected problems, connected with customers' requirements of quality products and usage of Quality Function Deployment Method have been presented.

Also the proper practical example of QFD method possible to be used in Polish companies have been given.

2. Quality Management System and customer focus

In the time of today's economic changes customer is the one of the most important parts of direct environment of company (Fig. 1) [6].

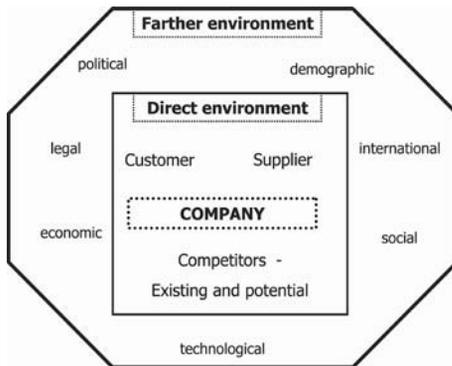


Fig. 1. Environment of company [6]

The organization neglecting the customers' needs or not perceiving the need for change of orientation to customers inevitably will lose its position on market. Understanding customers needs has the key meaning for the definition of proper strategies. This proper strategies permit to hold or to raise the company's position in its direct environment [2,6,7].

P. Kotler shows that each employee of organization must obey two rules: The first: Customer is always right. The second: If customer is not right look at the first rule [4].

The organization's task is to form the strategies of the definitions of the customers priorities and the measurement of their satisfaction based on the quality criterion. This form of activity is connected with designing and manufacturing of product, which marks corresponding optimum level of quality determined by customers. Relations between the quality management systems and customers reflects the model of process-based quality managements systems. According to ISO 9000:2000 organizations rely on customers. Therefore [7-11]:

- Organizations must understand customer's needs.
- Organizations must meet customer requirements.
- Organizations must exceed customer expectations.

3. Measurement and monitoring of the customer satisfaction level using QFD method

Demands concerning monitoring of customer's requirements level, which we find in ISO 9000:2000 standard and ISO 9001:2000 standard are universally taken as altogether new, not occurring till now in any of the ISO series 9000:1994 standards. In compliance with obligatory standards "Customer Satisfaction define as

customer's perception of the degree to which the customers' requirements (need or expectation that is started generally implied or obligatory) have been fulfilled [6,8,9].

Note 1: Customers' complaints are a common indicator of low customers' satisfaction but their absence does not necessarily imply high customer satisfaction. Note 2: Even when customer's requirements have been agreed with the customer and fulfilled this does not necessarily ensure high customer satisfaction". Point 8.2.1 ISO 9001:2000 standards described that: "The organization shall monitor information related to customer's perception as to whether the organization has met customer's requirements as one of the measurement of the performance of the quality management system. In the next step the methods for obtaining and using this information shall be determined [8-9].

Elaboration and implementation of the most effective methods of the measurement of the customer satisfaction is a difficult and very important task. Obtaining information about customer's requirements is a base for reaching of the optimum level of the product quality to offer the client. In accordance with standard ISO 9000:2000 and economy, in present times it is necessary to create such products, which will fulfill the customers' requirements to much higher degree than customer could expect. In such case continuous improvement of the quality management system is necessary to produce better products. This functioning refers to Japan's quality management school - assuming improvement in all that can be improved [11-15].

One of the methods more and more often applied in organizations is Quality Function Deployment method.

The QFD provides a systemic approach to determine, prioritize and translate customers' needs to product design parameters. All this performances corresponding on each stage of product life cycle, beginning from research and development, across designing and manufacture all the way to marketing, sale and distribution. Quality Function Deployment or so-called "customer's voice" – this is method of product planning and in particular of planning of such products' property which is quality (Fig. 2) [6,13].

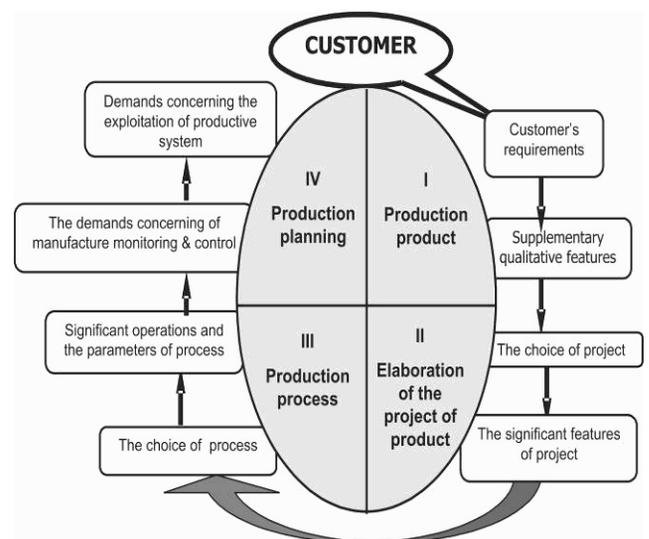


Fig. 2. Implementing of customer's voice in company [6]

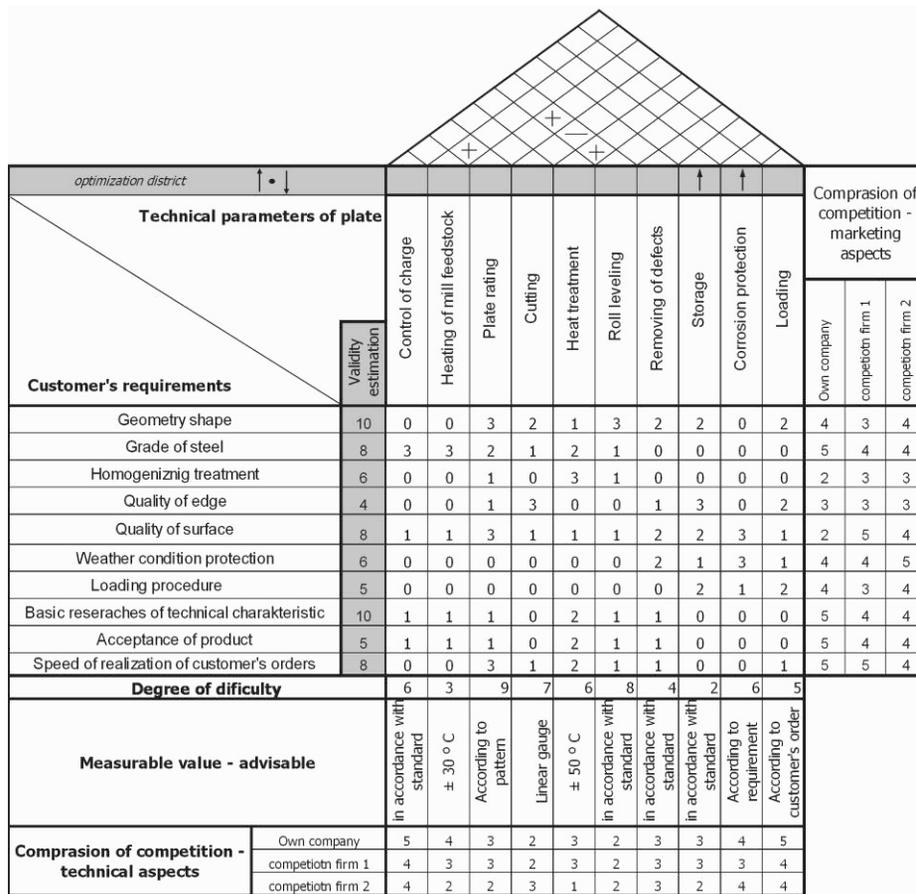


Fig. 3. House of Quality for hot rolling steel

Main aim of QFD is identification of the affirmative features of product, of the range of interest in product on market and also definition of the method of the accomplishments of these aims. The process of the identification of the affirmative features of product as well as of finding of the methods of their reaching is a continuous process. Features and factors which at first are “unique” with passing time begin to be considered as “elementary”. For necessities of method QFD so-called “House of Quality” is the created. It is a matrix which shows correlations between the customers’ needs (the rows of matrix) and the features of planned or existing product or process (the columns of matrix), completed with additional tables and diagrams [6,11,12].

4. The practical application of QFD method – Customer’s Voice in polish company

To the analysis of Customers’ Requirements related to hot rolled steel the Quality Function Deployment method has been used. Product - the hot rolling steel: breadth 1000-2500mm, length 2000-12000mm, thickness 5-32 mm with grade of steel :

20 MF according to standard PN-92/H-84009. House of Quality for hot rolled steel has been presented (Figure 3).

The building of The House of Quality covered the following 14 phases:

- *Phase I:* The demands and desires of customer have been established.
- *Phase II:* The importance of demands of customer have been classified. And also the priorities of the individual customer requirements have been established.
- *Phase III:* The scale of the importance of own activity at customer with his requirements has been compared.
- *Phase IV:* Fulfilled demands of customer have been assigned to corresponding parameters of product. Answers to question have been established – What does customer expect? And how will it be realized by product ?
- *Phase V to VII:* Measurable (standard) values of parameters, the possibilities of achieving the aim, difficulties in technical realization have been defined.
- *Phase VIII:* The dependence field between phase I and phase II.
- *Phase IX:* Comparison between company’s product and competition products – based on customer’s estimation.
- *Phase X:* The analysis of estimation achieved by customer.
- *Phase XI:* Comparison between company’s product and competition products – based on technical parameters.

- *Phase XII*: The mutual dependence field between technical parameters of hot rolled steel.
- *Phase XIII*: The critical points of sales.

5. Conclusions

Elaboration and implementation of indeed effective methods of measurement of satisfaction of the customer is of huge importance, being very complicated at the same time.

Each organization must value the importance of that measurement and in long perspective try to work out its own tools and methods of the measurement of customer's satisfaction. However, before the organizations acquire such capital of knowledge, they have to use existing methods such as QFD (Quality Function Deployment) or CRM (Customer Relationship Management).

Using QFD in organizations proves their interest in quality of product, quality monitored by client. QFD is one of the most powerful methods to help capture customers requirements.

Quality Functional Deployment (QFD) is a method that promotes structured product planning and development – enabling the product development team to clearly specify and evaluate the customers needs.

Usage of Quality Function Deployment method in Polish companies helps define what the customer is really looking for in the way of market driven features and benefits - it lists customer requirements, in the language of the Customer and helps the organization translate these requirements into appropriate new product characteristics.

Improving each element of the proquality strategies in organization it is worth mention the words of E. W. Deming [16]: "Each organization has its own client. If someone does not know who the customer is, what his expectations are, the one does not understand own work".

References

- [1] S. Tkaczyk, M. Dudek, Quality continuous improvement of production process in aspect of usage quality researches and estimation methods, Proceedings of the 11th Scientific International Conference "Achievements in Mechanical and Materials Engineering", AMME'2002, Gliwice – Zakopane, 2002, 567-570.
- [2] M. Dudek-Burlikowska, D. Szewieczek, Quality estimation methods used in product life cycle, Journal of Achievements in Materials and Manufacturing Engineering 24/2 (2007) 203-206.
- [3] T. Karkoszka, D. Szewieczek. Risk of the processes in the aspect of quality, natural environment and occupational safety, Journal of Achievements in Materials and Manufacturing Engineering 20 (2006) 539-542.
- [4] E. Skrzypek, Quality and efficiency, UMCS, Lublin 2000.
- [5] J. Michalska, D. Szewieczek, The improvement of the quality management by the activity-based costing, Journal of Achievements in Materials and Manufacturing Engineering 21/1 (2007) 91-94.
- [6] M. Dudek-Burlikowska, Using of quality function development as a factor of improving of Quality Management System in university focus on student. Nationwide Science Conference: „Quality of life”, UMCS, Lublin, 2007, 11-18 (in Polish).
- [7] L.A. Dobrzański, M. Roszak, Quality management in university education, Journal of Achievements in Materials and Manufacturing Engineering 24/2 (2007) 223-226.
- [8] Standard EN ISO 9000:2005, Quality management system – Fundamentals and vocabulary, ISO 2005.
- [9] Standard EN ISO 9001:2000 Quality management systems – Requirements, ISO 2000.
- [10] J. Ketola., K. Roberts, Demystifying ISO 9001:2000 – part 1, „Quality Progress” 34-9/2001.
- [11] J. Ketola., K. Roberts, Demystifying ISO 9001:2000 – part 2, „Quality Progress” 34-10/2001.
- [12] A. Hamrol, „Quality management. Science and practice”, PWN, Warszawa –Poznań, 1998. (in Polish)
- [13] S. Tkaczyk, M. Dudek, Usage of QFD - Quality Function Deployment in polish metallurgical industry, Proceedings of the 10th Jubilee International Scientific Conference “Achievements in Mechanical and Materials Engineering”, AMME'2001, Gliwice – Cracow – Zakopane, 2001, 583-586.
- [14] I.J. Chen, R.L.Coccaro, K.A. Paetsch, A. Paul, Quality managers and the successful management of quality: an insight, Quality Management Journal 7/2 (2000) 46-52.
- [15] B. Krupińska, D. Szewieczek, L. A. Dobrzański, Improvement of technological processes by the use of technological efficiency analysis, Archives of Materials Science and Engineering 28/12 (2007) 751-756.
- [16] E.W. Deming, Quality, Productivity and Competitive Position, University of Cambridge, 1982.