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CONTENTS

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   OBJECTIVES

   HYPOTHESES

   RESEARCH METHODOLOGY

   RESULTS & DISCUSSION

   FINDINGS

   RECOMMENDATIONS/SUGGESTIONS

   CONCLUSIONS

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- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

IDENTIFYING TECHNOLOGICAL PARAMETERS EFFECTIVE ON COMPETITIVENESS OF SMALL AND MEDIUM-SIZED RESIN COMPANIES ACCORDING TO UNIDO MODEL: CASE STUDY OF IRAN KEATON POLYESTER MANUFACTURING COMPANY

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ABSTRACT
Survival in the global competitive markets is among the most challenging aspects of business in the today's world. Changing customer needs makes them to consider competition parameters such as price, quality, delivery time, etc., to outrun their rival companies. One of these parameters, one with priority in resin industry, is quality of the products. In addition, technological advances can boost competitive advantages due to its impact on the quality of the products. There are some constraints acting upon the advancement in technology, which includes time and space for small businesses. Thus, there will be a need to a strategy for companies to identify the key technological advances that they want to improve. One of the important tools in building technological strategy is CAPTECH model, introduced by United Nations Industrial Development Organization (UNIDO), which is crucial in detecting the technological needs and gaps effective on competitive factors. From a CAPTECH point of view, technological parameters include operational infrastructures, product technology, process technology, skill and knowledge platforms, procedures and systems, informational support, and optimization and logistics. Technology parameters are indicative of that level of technology with fundamental role in developing a competitive advantage for companies. To assess the technology, we are to assess its parameters. These parameters, for their direct impact on factors of competition, are important. Therefore, the problem to which the present paper seeks an answer is that 'what are the technological parameters having impact on the competitiveness of Iran Keaton Polyester Manufacturing Company?'

KEYWORDS
technology, technology assessment, technology strategy, competitiveness, CAPTECH methodology.

INTRODUCTION
The more crucial a technology in producing a competitive advantage in a business, the more important its development in business will be. If a technology is not pivotal in boosting the competitiveness and advantage, its development necessitates no priority for a company, and so, it will not be enough fuss over that in the company. Prioritizing and planning for the development of a technology should be proportionate to its role and weight in producing competitive power for an industrial complex. Only after this will the technological development lead to improved productivity and increased production in a given business and possibility of increased allocation of resources for next level of technological developments (Jafarnezhad, 1999).
Applying changes into the current level of technology to next optimum level requires clear objectives of changes, specific strategies, and accurate management of them. The path to gaining access to new technologies in a company directs to management of applying changes to technology. Only this path leads to improved level of technology. However, technological changes and its improved level, prima facie, is not a valuable thing, but its importance emanates from improved competitive advantages achieved in this way by the companies (Renasi et al, 2010).
Identifying the parameters of technological change and developing a technological strategy in a business lead to competitive advantage and technological innovation of a kind and benefit via grasping the opportunities for technological changes. This is an example of technological entrepreneurship.
In the present study, first a literature review of the subject is presented. Then, methods of research are introduced and, in the end, the findings of the study are given.

REVIEW OF LITERATURE
Chun and Chun (2000) introduced an algorithm for determining the quantity of tangible and intangible advantages in a fuzzy environment. They propounded the application of fuzzy theories in hierarchical structural analysis. From an analytical perspective, the decision-makers are asked to estimate their opinions on the relative importance of diverse factors qualitatively and not merely in numerical values. The descriptive and linguistic variables fall in a continuum of extreme, very high, moderate and low that are converted to fuzzy numbers, because assigning a number to a spectrum of items indicates much quality about items. Adding the hierarchy gives preferred weight of any technology, which is called fuzzy proportion parameter. This parameter for each technology is categorized

and then preferred category of each technology is determined. From an economic assessment perspective, an analysis of a fuzzy liquidity is applicable here. Due to some uncertainties imbedded in the economic analysis of engineering prevalent on the prediction of future of liquidities and because liquidity is defined as a complex series of numbers and probability distribution, the outcome of the analyses may suffer ambiguities. To establish a quantitative relationship between uncertainty and indefiniteness, a model of trigonometric fuzzy numbers, each vertex of the triangle denoting the most probability value, most pessimistic value, and most optimistic value denote liquidity. With this algorithm, the ambiguity imbedded in the evaluation of data is determined effectively and for the sake of certainty, it can be processed for arriving at an effective and convincing decision-making (Journal of Materials Processing Technology, 107: 2000). Law, Ridgway, and Atkinson (2000) introduced a tool developed from the techniques of application of quality functions. This tool facilitates the rapid evaluation of the possibility of thixoforming process in manufacture of products. Newer technology are developed in order to be exploited by companies in their decision making and convert their limited resources to maximum competitive advantage, though a holistic evaluation of the technology requires long hours and high costs (Lowe, Ridgway and Atkinson, 2000). Multimatrix analysis tool is developed using QFD techniques and is applied to evaluate the potential products in innovative metal molding methods. This tool is not a surrogate for comprehensive economic analyses. The level of activity in allocation of the material, the importance of weighting and relationship are also important, without which the tool may suffer precision and accuracy. According to the findings of Lowe, Ridgway, and Atkinson (2000), this tool is applicable in evaluation of innovative technology. For example, high-speed mechanization enjoys advantages (such as high-speed production cycle) and suffers downsides (such as high costs of machinery and providing tool for industry) according to which tool can be evaluated Vis-a- Vis related properties of the products (such as material, geometry, and machinability).

Amy H.I. Lee,Wei-Ming Wang,Tsai-Ying Lin (2010) noted that in order to keep up with the pace of competition in global competitive markets, companies should always develop their new technologies in order to have the upper hand. Gaining new and essential technology, especially those applied in production of advanced products, is important. The technical knowledge of the use of technology should be transferred from suppliers to engineers and contractors of the company to be used effectively. In their study, Lee et al (2010) expounded the technological transferring and developing a comprehensive framework to evaluate and choose from new technologies and machinery. The key factors effective on newer technology transfer for the first time were collected via a literature review of the subject and interviews with experts in Taiwan Transistor and Thin Layer Liquid Chrystal Displayer Industry (TFT-LCD). Fuzzy Delphi Method (FDM) is applied to choose the most crucial factors. Later, planning and interpretive structural modelling (ISM) was applied to determine the internal relationship between main components. A fuzzy analysis network processing (FANP) is developed to evaluate the performance of suppliers of technology transferring provisions. The findings of Lee et al (2010) provided a firm base for companies to evaluate the purchase of new equipment. They also functions as a reference tool for suppliers of this equipment to improve the quality of technology transfer to customers (Amy H.I. Lee, Wei-Ming Wang,Tsai-Ying Lin,2010). In their study, Trail and Silva (1996) highlighted the importance of use of standard parameters in estimating the competitiveness of companies and deemed it the main component of examination of competitive advantage. The notion of global competition is fundamentally based on trade. They also indicated that goods produced solely for global markets should be evaluated on a scale proper for measuring the global competition. Due to the special attention lavished to the internal and external content of these products, diverse forms of traditional trade exchanges are criticised. An experiment carried out on the food industries of France, Germany, Italy, and Britain, indicated that, reformed parameters are essentially different from traditional parameters. During this experiment, the competitive advantage is credited as a dynamic concept, which should not be viewed from a traditional perspective. In respect to foreign products, multi-national companies should be depicted by the same definitions. The current vogue of traditional trade based on diverse aspects is indicative of fundamental differences in the level of aspects under study and also, and most importantly, in trade level. For example, UK food industries are not competitive enough due to shortages and disorders in trade. Considered collectively, the performance of companies producing food items, it has been competitive. Among the disadvantages of the experiment above, was the fact that the sources of competitive advantage of food industries is not mentioned, so there is no strategy for improves in competitiveness of the companies mentioned in the experiment. The emphasis upon the updating the measures of evaluation of food industry is put in order to survive in the global competitive markets, to which no strategy is provided. The importance of choosing a proper parameter to analyse how and when a company enters competition is the most valuable part of the study above.

Rivard et al. (2006) believed that the share of information technology in business could be assessed from two perspectives: strategic situationism that lends much importance upon the market forces, and a view of the situations, which assumes company the core of the studies carried out. They contributed to understanding of the share of information technology in firms' performance playing a complementary role between two perspectives. Sponis (2001) endorsed the Porter's competition framework as a legitimate one. He investigated the salubrious effects of information technology through setting business strategies and through the effect of company's assets on its performance. Reeda et al. (2000) believed that although management of quality can produce competitive advantage, it is interesting enough to mention the fact that not a single theory exists about it or little research has confirmed this belief. So Reeda et al., (2000) is an attempt to credit this claim. With the application, formulation, and putting confidence in theories of market-based competitive advantage, firm-based and system theories, they concluded that the so-called undocumented theory could be confirmed. They also found that the components of total quality management (TQM) are able to produce cost-based or distinction-oriented advantage, and that it can bring about an innate indirectness and complexity to the TQM process. TQM has the potentials of barring the imitation of the system by the rival companies, a quality that is crucial to the sustainability of the firm. The most vital part of the study by Reeda et al. (2000) was to account for the relationship between TQM and sustained competitive advantage, and to determine the issue that, from a theoretical perspective, is the hypothesis that strategy is able to produce sustainable advantage verifiable. Having reviewed the literature of the subject, they present arguments that show how a TQM produces cost-based or distinction-oriented advantage. The research, among others, by Powell (1995), Flym et al. (1955) indicate the possibility of a link, but for the sake of certainty, the hypothesis that TQM can produce cost-based, and/or distinction-oriented advantage, should be verified by an approach that investigates the things in more detail. There is also a need to practical research on the sustainability of the TQM-based advantage.

Nasierowski (1991) put emphasis on the outstanding innovations and soaring product quality among the technological advances of Mexican companies. His research is a quantitative and qualitative. He investigated the fundamental components of technological advances, the pace of accord, the level of skills and unified plans, two theories of business process reconstructed (BPR) and total quality management in Mexican environments. He observed that whenever plans are implemented with the purpose of increase in quality and executive components of technology in Mexico, trouble should be expected. The issues in Mexican industries are a relatively low level of technology and quality. Beyond a planned programming, a need to cultural conditions specific to the situation in order for TQM and BPR to succeed. The reforms in these theories are necessary before being used in Mexican environments, since they differ in terms of their theoretical undergirds. TQM and BPR should be considered as theories helpful in technological and quality reconstruction. They suggest different formulations and conflicting solutions:

Rearing versus Education; permanent recruiting versus recruiting in times of need; collective effort versus smoothing hard work; specialization versus eclecticism; more control versus decreasing control bottlenecks; cycling work hours versus emphasis upon productivity; reimbursements based on seniority versus reimbursements based on the results of the activity. In whole, although these methods propose common solutions, for example, staff, power transfer, a change of values from protectionism to productivity, managers as mentors, more level organizational structures, directors' board versus the inspector's guide etc., and these theories can function complementary to other theories.

In his study, Sultan (2007) investigated the four factors of effective agents, demand situations, related industries and company's strategy and competitiveness and structure of the company, drawing upon Kaplan model as his base of study. He indicated that, with the emergence of modern economy in the world, the impact of information technology and communications as venues to success are agreed upon. The impact of IT can be traced in its role in different aspects of competitive advantage including time, cost, and flexibility. Competitive advantage framework used by Sultan (2007) consists of concepts of foreign macro-environment, Porter's five factors, and the chain of value, strategy, competitive advantage, and ICT. In his research, the government is credited with being the agency of providing the condition conducive to gaining access to better technology, because the government should regulate the business environment to have the potential of receiving ICT. Among the roles assigned to government, are well-objected plans to eliminate the market disorders, effective policies in ICT use including developing and improving the legal and infrastructural networks and environment, increasing technologic depth and providing a favorite business environment. Companies active in developing countries need to have knowledge of when and to what extent they are to use technology. Some restrictions on the way of using superior technology of IT are higher costs of Internet, linguistic problems, and a lack of understanding of techniques of electronic trade and technology necessary to perform that. Sultan (2007) then examined some factors in small- and medium-sized companies in production line and proposes some guidelines to improve the technology level in these companies. He used factors in diamond model and five factors in Porter competitive advantage framework. His results from SWOT included updating and simplifying the laws and regulations, updating organizational structures, boosting entrepreneurship and staff conditions, developing organizations to sponsor small and medium-sized companies, improving the active cluster of a core unit, and enhancing the technological potentials of the companies. His method included both qualitative and quantitative ones and the sampling was carried out randomly. He divided his sample population to 3 categories according to different geographical conditions. Then he carried out a random sampling in each category. In Italy, Turkey, and Jordan, he used questionnaires to collect data. He proposed four approaches for measuring the competitiveness of a company, which included survival, organization, simple auditing measures, and comparative auditing measures.

A study by Savioz and Blum (2002) is an attempt to propose a modern notion as an opportunity perspective, which suggests collection of data related to technology in decision-making about the future changes. It case-studied a company in Switzerland and indicated that by managing the knowledge and collecting data related to technology, managers can succeed to make decisions on technological changes in complex environments. Ellen and Moors (2005) argued for the technological strategies leading to fundamental innovations in the industry of aluminum manufacturing. They developed a concept to analyze the technological strategies in Netherland and Norway, which provides tools for technological policies in order to produce sustainable businesses. Overall, they suggested that access to technology and research networks, different domains of knowledge, adapting to future environmental events are effective factors on technological strategy. Francis C.spital, Deborah J.Bickfor (1992) investigated 120 business units to find a relationship between the success of these businesses in dynamic environments and technological and competitive strategies applied to products. In these businesses, the strategies leading to success are as follows:

1. Innovations in products of higher technology;
2. Different services for products of lower technology;
3. Strategies of handling costs in products of lower technology;
4. Strategy to focus in dynamic environments.

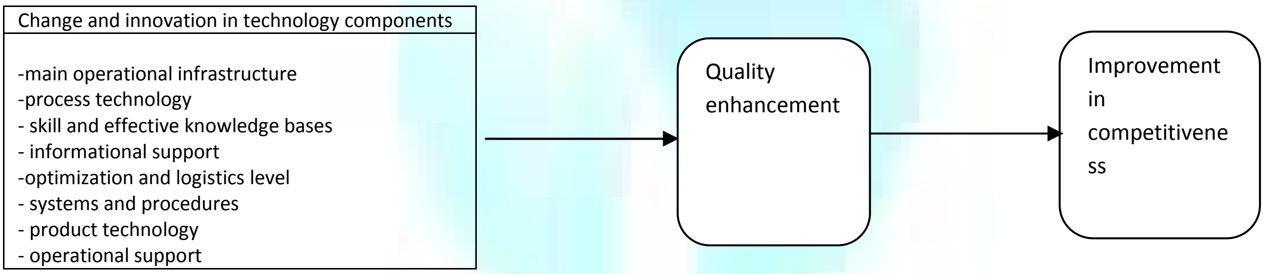
He indicated that there is a powerful link between technological strategies and success in business.

Lucas (1994) presented a model based on successful business, which stated that the market needs necessitates advances in technology and this in turn, makes companies to adopt their proper market strategies. Technology in access improves the power to design better products and so it is effective on attaining market objectives.

THEORETICAL FRAMEWORK

There are many theoretical frameworks of definition of technology and its components. The present study is based on the standard model of detection of technological needs of UNIDO (CAPTECH). This model presents an applied framework to evaluate the technological needs of industry and has eight components given below. The model was developed in 2000 and Hejazi explained definitions and methodology, Binesh and Renasi in their book entitled *Evaluation of Technology in Small- and Medium-sized Companies* (2009). As seen in the model below, any change in any technological component can wield impact on the enhancement of competitive quality of business. However, due to constraints in resources, technological quality priorities should be specified and evaluated. The priority is set based on the maximum weakness in the component and maximum impact on the quality enhancement. This leads to technological entrepreneurship because of change in any components of technology.

FIGURE 2.2: CAPTECH MODEL FOR COMPETITIVE QUALITY



Fundamental operational infrastructures

Quality factors in operational infrastructure component include aspects of certainty to answer the following questions:

- The equipment and infrastructure making an industry should have maximum accord with the capacity and the sort of goods produced;
- The criterion should be the performance of machinery and equipment;
- The machinery should be evaluated in terms of its performance in control of important quality parameters.

PRODUCT TECHNOLOGY

Product technology applied to compare the level of technology used in manufacturing the product in the world, in quality phase, denotes the comparison of the level of design of the product to the best in its kind.

Evaluation tables in this stage of the study according to priority included the following: out-dated designing technology (poor product), product with preliminary design, and products with good primary design and tested in the laboratory, and most sophisticated product with most complete design. The acceptance of any product should be carried out according to criteria set by the quality control unit. For each step of product manufacture, plans should be set. Designs should be approved and controlled. Controlled properties of the product should be included in designing. Quality of product after every step, any technical change or after any new activity or process should be controlled.

PROCESS TECHNOLOGY

Process technology is a level of technology according to which processes are executed and is an indication of the level of effectiveness of process to meet design demands. Scoring the processes includes according to priority the following: traditional processes without documentation, documented processes, processes of how technologies, what technologies, permanently controlled processes, advanced processes with real-time controls. The questions should be posed about the use of control sheets, Parreto histogram, and methods of controlling of automatic processes. Methods of rapid recognition of the product disproportionate to primary design would increase the points of the process.

SKILL AND KNOWLEDGE BASES

It denotes the level of skill and performance of the staff members. Education, experiences, knowledge, and capability of the staff are only possible through investigating of their profiles. Their competence to handle modern technology and new tools relevant to their field of expertise, their familiarity with product and drawbacks of quality defects, the proportion of the number and competence of staff members in any stage and their activity signifies the points of the process.

SYSTEMS AND PROCEDURES

This component, in practice, functions as factor of certainty to accurate execution of necessary processes. This includes different stages of archiving and documenting systems, storing, the reserve, and systems of quality control. The existence of any system and procedure and their application are evaluated through the following:

- The existence of a logical and executive organizational echelon in the company;
- Codified sheet of tasks
- Quality regulatory measures
- Procedures necessary to ensuring the accordance of tasks and responsibilities
- Documentations relevant to quality of designs
- Definition of quality control in any stage (documentations necessary to produce and preserve quality including charts, executive methods, guidelines, inspection limits, and decision-making laws.)
- Recording the errors and problems occurred in the quality system;
- A logical trend to achieve the level of relevance of the product and needs of the design according to customers' needs;
- A trend in organization to issue and move documents; preserving and updating documents of definitions; tracing of the product in different stages of production; of handling the daily stuff, of controlling machinery and equipment and repairs; of ISO9000 system to control secondary contractors periods; of trends of sampling and giving results; quality and quantity control in different stages of company activity; and documentation of defects and reports to eliminate them.

INFORMATIONAL SUPPORT

It means the ability to convert data to practical and purposeful information to accelerate the management reactions and problem solving. Its evaluation in the competitive quality phase is carried out in the followings:

- Collection and recording of data in any stage, external data related to rival companies and market and other sectors;
- The ability to convert recorded data to information
- Evaluation of system of formal reporting in organization to inform the managing board about the different sections and problems and current performance;
- The level of awareness of managing board about the current problems;
- The ability to analyze problems, predicts possible defects and designing product, causal relationship tables and methods of problem solving and the method of distributing of information to related sections in the organization;

OPTIMIZATION AND SUPPORT

Support functions as a mechanism of accelerating the activities and facilitating practices and consists of followings:
Written standard activities, work systems, discipline and appearance, proactive keeping practices, use of jigs and fixtures, guidelines for flawless doing things, regulations, primary inspections, tools of material use, identification labels, cards of history of formats and identification labels. Optimization consists of the knowledge of using best practices and technologies. Its evaluation is carried out through the followings: production basket with balance of produced items, the decrease in diversity of products, control of current assets, design of working stations and assembly lines. In the domain of quality, optimization is estimated through the followings: a written standard procedure for any activity. It includes executive steps, definition of responsibilities in a reasonable working system, a series of working regulations, internal control of practices, using PM systems (proactive measures), using fixtures and guides and controlling their accuracy, materials to identify the product, including labeling sheets, and control and upkeep of equipment (Hejazi et al, 2009).

METHODOLOGY

In this study, first, using a literature of the subject including competitiveness in business, factors effective on it, show technology as the key factor in enhancement of competitiveness and strategy needed to achieve that. Before interview and primary investigations, the company is asked to give a list of its needs in written form. So, the first stage is to send a standard letter and then an appointment with company managers to explain the needs of the researcher and the objectives of the study. Then, an investigation of explicit documents and processes of the company is carried out. Because the competition factor under study is specified, the evaluation of competitive factors and setting priority on them is not the subject of the present study. To specify the quality standards is part of the objective of the study, which provides a background to achieve favorite results. Meeting and interviewing with staffs and managers of the company are carried out using constructed questionnaires. This is carried out with the aim of identifying the different operational phases. All the staff in operational lines is interviewed. Next, interview and visit all the input lines of organization are carried out.
The study population executives and line managers, the company produces polyester resins industry in Iran is Keaton. The factory and the headquarters of the questions we cover.
The case study is the investigation of the samples is determined. Participants in the interviews included senior managers and experts from different units is saturated in the quality of data used.
The coding method was used to determine the components comprising the following steps:
- Overview of articles and how they are segmented
- Select the number of data and their
- Merge the code in the main categories of information
- Reduce duplication and identify those issues with the removal of the major categories
- Into the main categories

DISCUSSION AND CONCLUSION

This paper is an attempt to technological parameters influencing the quality of the competition. Selected technological parameters of the standard model are Captech UNIDO. The qualitative interviews conducted in three phases and during the third stage. The first phase consists of related literature was reviewed to identify indicators of quality in the industry. In the second phase of interviews for understanding processes affecting the quality of our work is done. The qualitative part of the third phase, the parameters of the technology platform to identify different standard was based on indices. In the next section to identify, the indicators and the coding parameters in each stage of the technology were according to their backgrounds.

RESULTS OF SECOND PHASE OF INTERVIEWS

TABLE 1.4: IDENTIFYING THE FACTORS AFFECTIVE ON THE COMPETITIVE QUALITY, FIRST STEP

First step: raw material provision
This stage includes the purchase of raw material in powder and liquid forms from petrochemical companies. The high quality material is often imported from Netherland. Some companies with long history of imports of raw material of fiber glass, are direct importers of polyester resins and diverse forms of glass fibers and other composites from famous manufacturing companies in Turkey, Taiwan, South Korea , China, etc.

TABLE 2.4: IDENTIFYING THE WORKING STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, SECOND PHASE

Second stage: quality control
The purchased material should have necessary standards. The level of acidity should be between 800 and 1200. If not meeting the standards, material is turned back to reservoir.

TABLE 3.4: IDENTIFYING THE WORKING STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, THIRD PHASE

Third stage: production
First, the melted material is poured from a lifting machine via a funnel-shaped apparatus into a reactor (a reservoir of 10 meters high and 8 tonnes of weight). Then hot oil inside the zigzag tubes surrounding the reactor add to the temperature up to 100 degrees centigrade for the initiation of the process. A mixing shaft with 3 blades moving in all the length of the reservoir mixes the material. However, the temperature should be raised gradually to 240 or 240 degrees centigrade. Care should be taken that the increase of 10 to 20 degrees is gradual. since it plays a crucial role in this stage of the operation, which needs a gradual rise in temperature.

TABLE 4.4: IDENTIFYING THE WORK STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, FOURTH STEP

Fourth stage: dehydrating
The water content of the mixture is separated via a container in the underside of the reservoir. This water darkens the resin. Dehydration is carried out through mixture as vaporization and then through liquidation is reserved in other container. In this stage, the mixture should release 500 kg of water. The more the release of water, the more the temperature will increase and that is effective on the production time.

TABLE 4.5: IDENTIFYING THE WORK STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, FIFTH STEP

The fifth stage: experiment
A sample of mixture from the faucet of sampling is carried out. This sample of resin should be acidic, having the acidic number of 20 to 22, and usually this number is even more, up to 40 to 50. Due to high temperature, if the acidic number is low, ester becomes jellified. With increasing temperature and simultaneous sampling, the acidity number lowers to favorite value from 60 to 50 and even to lower values.

TABLE 4.6: IDENTIFYING THE WORK STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, SIXTH STEP

Sixth stage: cooling
This phase is similar to warming described above using hot tubes containing hot oil. Through this operation, temperature decreases from 240 to 150. In the end of this operation, raw resin is called ester.

TABLE 4.7: IDENTIFYING THE WORK STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, SEVENTH STEP

Seventh stage: feeding or combining
A device called blender is installed under the reservoir, which is about one and half time greater than reactor reservoir. It is filled with stiring that combines with the ester inside to give the final product of resin. The stiring needed with temperature of 40 degrees centigrade is poured into blender and when its temperature rises to 50, the faucet of the reactor reservoir is opened and it is added to blender content. It is called feeding. This should be done step by step. A large thermometer is located in the process to control the temperature during the feeding process and keep it no more than 60 degrees. The whole content of the reservoir reactor should combine with that of the blender. The final phase of experiment 1. The acidity of ester is 10 units less than that of final product, e.g., it lowers from 30 to 20. 2. Viscometer measures the viscosity and the concentration of the resin. 3. The color achieved for the resin is also compared. It should be white, yellow or milky white, and should not be dark, which is indicative of high temperature and burning. It may be blue, which may indicate the burned resin inside.

TABLE 4.8: IDENTIFYING THE WORK STAGES EFFECTIVE ON THE COMPETITIVE QUALITY, EIGHTH STEP

Eighth stage: releasing
If meet the above standards, resin is released out of the reservoir reactor in gallons. Under the reactor, a scale is installed in order to measure the gallons weight as 200 kg. after release, the gallons are transported to depository. The temperature in depository should be cool enough for resin to remain in gelatin form. The life of the resin is about a year and it is stored in 25 degrees.

1.1.1. The results of the third phase of first interview

TABLE 4.9: THE TECHNOLOGICAL PARAMETERS EFFECTIVE ON THE COMPETITIVE QUALITY

Number	Technological parameters	
1	Basic operations	Precision in size, proportion of the equipment to capacity and the kind of production, investigation of insurability of the quality and its important components
2	Product technology	Conformity of the product and the qualitative measures, designs for different stages of production, the level of engagement of control properties in designing, quality assurance after any new activity or reconsideration of the production
3	Process technology	Use of automatic process control, proportion of process and primary design of the product, use of proper methods of quality assurance parameters which are controlled during the process, such as PEMEA and DOE
4	Skills and knowledge bases	The level of skill and knowledge of staff, their competence in using modern tools to improve the quality of the product, their ability to use statistical techniques, the level of their familiarity with drawbacks arising from quality defects, the proportion of number and qualification of the staff with their work.
5	Systems and procedures	A logical and executive organizational echelon, codified tasks sheets, quality disciplines and following them, documentation of quality planning, definition of quality control system for any working stage, the possibility of investigating errors in quality system, a codified procedure to proportion of design needs and customer needs, codified rules to update documentations, tracing products and control in any stage, periodic evaluation possibility, codified regulations to ensure the quality and quantity control
6	Informational support	Collection and recording of data in any stage, external data related to rival companies and market and other sectors; The ability to convert recorded data to information Evaluation of system of formal reporting in organization to inform the managing board about the different sections and problems and current performance; The level of awareness of managing board about the current problems;
7	Optimization and support	Written standard activities, work systems, discipline and appearance, proactive keeping practices, use of jigs and fixtures, guidelines for flawless doing things, regulations, primary inspections, tools of material use, identification labels, cards of history of formats and identification labels. Optimization consists of the knowledge of using best practices and technologies. Its evaluation is carried out through the followings: production basket with balance of produced items, the decrease in diversity of products, control of current assets, design of working stations and assembly lines.

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