



A Study Of Knowledge Management In Steel Industry - Chennai

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ABSTRACT

Knowledge in the Production of Steel is created everywhere in the Production Process - intentional or unintentional - so that Knowledge Management in it is a value creator. Now with using "Knowledge Management" we want to describe here how to manage that a certain Knowledge is built and preserved, with a understanding of Knowledge that it is the result of actions that are oriented toward achieving an objective. As Ikujiro Nonaka and Hirotaka Takeuchi found that "The unique feature of knowledge as a resource lies in the fact that it becomes obsolete as soon as it is created" the value of knowledge lies in its creation. With setting oriented actions to achieve some objective we create knowledge. Once the objective is achieved, the knowledge created in hindsight becomes obsolete however without creating the knowledge the objective would not got achieved at all and would remain in theory.

Key word : Steel Industry, Knowledge Management

Introduction

Production of Steel is a process consisting of individual units that together creates the steel end product. Making a perfect steel product is dependent on the performance achieved in the individual units and the unison performance of all. Or in other words, a steel manufacturing process is as good as the single and the whole together. The quality of the end product is determined by the quality achieved in each individual step. Deviations are the norm as changing conditions are part of the production process. To achieve a defined end product the whole Steelmaking, Rolling and Finishing process is best seen as a path on which each single unit has its defined area of operation, together aligned such that a defined end product characteristic will get achieved with highest probability. To form such a production path the area of the Process Technology as well as the area of the Human System of the operating personnel call for special attention. Awareness over the whole Production Process and the own position in it, objective oriented communications between individual unit operations and the availability and actual use of intelligent Process Equipment, Automation and Information Technology create the best available area for production of steel where Knowledge is a vital and product determining factor.

Knowledge in the Production of Steel is created everywhere in the Production Process - intentional or unintentional - so that Knowledge Management in it is a value creator. Now with using "Knowledge Management" we want to describe here how to manage that a certain Knowledge is built and preserved, with a understanding of Knowledge that it is the result of actions that are oriented toward achieving an objective. As Ikujiro Nonaka and Hirotaka Takeuchi found that "The unique feature of knowledge as a resource lies in the fact that it becomes obsolete as soon as it is created" the value of knowledge lies in its creation. With setting oriented actions to achieve some objective we create knowledge. Once the objective is achieved, the knowledge created in hindsight becomes obsolete; however without creating the knowledge the objective would not got achieved at all and

would remain in theory.

Obsolete however will not mean without value, with obsolete we mean that it becomes basis for creation of new knowledge that in turn again is creating new value. So in the production of Steel this will mean that with the creation of such knowledge this process is required to change Technology, Production Practices and the individual and collective Skills of the Operating Personnel. So the employed Technology, Structures and Personnel require freedom to change, the boundary conditions of the whole Steel producers Organization needs to be oriented as the enabler of knowledge creation.

Opposite this flexibility is the character of the Production Equipment which usually is Capital Investments with long term perspective. So within the time frame of a single Equipment life time its technological and metallurgical capabilities describe a certain frame within flexibility is possible, and outside which modernizations will be required. The conditions describing this frame we call the Technological Boundary Conditions as these define what is possible and what would become possible if these conditions are changed. Corresponding with these boundary conditions those are defining also what type and amount of Knowledge is possible to create. Proactive and applied Knowledge Management therefore means to become aware of Technological Boundary Conditions and to compare those to what is required to build a certain type of Knowledge in the whole Steel Production Process or a single unit of it.

Production Practices are another area of application for active Knowledge Management. With use of Level 2 Process Optimization Systems that allow the maintenance, development and online comparison between the actual Process states and those "Best and Until Now Known Practices" these systems allow navigation of the Operating Personnel to perform production. However the Quality of a single production unit needs alignment with the whole production process from front to end. To achieve a high probability to produce a single end product requires that all single production units produce or refine the associated intermediate product with its characteristics along the best course of Quality.

Knowledge Management in Form of development, refinement or invention of Production Practices requires also to take the holistic view of the complete production route and to work with probabilities at the gateway between production units. Probabilities here mean that heats characteristics will make it more or less probable to the following production step to be able to again produce an intermediate product that has high probability of being turned into the end product of specified characteristics.

Communications exceeding simple forwarding of electronic data structures representing heat information from one production units Automation or IT System to the following production unit into the complete production route are the next area of application in active Knowledge Management. Communications of the Operating Personnel of the complete production route are vital to enable active Knowledge creation. Instead of island behavior of the individual production units the human individuals' better form a common system, as the production route and its Technology already does. Through this the tacit knowledge of every Individual in the plants operation, the knowledge that resides in the heads, will get allowed to emerge in changing practices between these. No single technology is more flexible than we humans working in cooperation and collaboration.

Knowledge itself is created by Individuals, a organization or technology by itself is unable to create Knowledge on its own without Individuals. For the Organization it is to be the platform and the basis to stimulate and support the knowledge-creating activities of the individual and to provide the fitting contexts for them. Organizational Knowledge creation is then the process that lets emerge this type of knowledge from these Individuals into the higher organizational context and this requires cooperation and collaboration at first. Anything added to it, may it be Organizational Structure or Technology is better to be a helper for this. Dialog, Disagreement and considerable Conflict allow to question

Need For The Study

While the concepts of knowledge management are frequently applied in service organizations for the development of the employees. This project is investigating the implementation the study of study of knowledge management in steel industry. This paper supports operational flexibility allowing organizations, business processes and people to respond to challenges in a competitive and demanding business environment. This paper provides a knowledge framework that supports knowledge discovery, business collaboration, communities of practice, access to expert knowledge and innovation management across their organization. To provides a flexible environment and framework for enterprise knowledge management that integrates content, business processes and people as they apply their experience and competences

Difficulty in Knowledge Management

There are many problems associated with identifying these knowledge assets and being able to use them and manage them in an efficient and cost-effective manner. Enterprises need:

- To have an enterprise-wide vocabulary to ensure that the knowledge is correctly understood;
- To be able to identify, model and explicitly represent their knowledge;
- To share and re-use their knowledge among differing applications for various types of users; this implies being able to share existing knowledge sources and also future ones;
- To create a culture that encourages knowledge sharing.

Knowledge engineering methods and tools have come a long way towards addressing the use of a company's knowledge assets. They provide disciplined approaches to

designing and building knowledge-based applications. There are tools to support the capture, modeling, validation, verification and maintenance of the knowledge in these applications. However these tools do not extend to supporting the processes for managing knowledge at all levels within the organization.

At the strategic level the organization needs to be able to analyze and plan its business in terms of the knowledge it currently has and the knowledge it needs for future business processes. At the tactical level the organization is concerned with identifying and formalizing existing knowledge, acquiring new knowledge for future use, archiving it in organizational memories and creating systems that enable effective and efficient application of the knowledge within the organization. At the operational level knowledge is used in everyday practice by professional personnel who need access to the right knowledge, at the right time, in the right location.

Scope Of The Study

We believe that the knowledge modeling scope that exist to support the use of the knowledge, along with traditional business management techniques, provide a starting point to manage the knowledge assets within a company. Therefore the techniques we employ for managing knowledge within the organisation are drawn from these two distinct areas:

- The techniques that have been used previously from business management, for example, SWOT (Strengths Weaknesses Opportunities Threats) analysis, balanced scorecards (Kaplan, Robert S.; Norton, David P. (1996)), modeling languages such as: IDEF (Process Flow and Object State Description Capture Method, Mayer, R., Cullinane, T., de Witte, P., Knappemberger, W., Perakath, B., & Wells, S. (1992)) and RADs (Role Activity Diagrams, Ould, M. (1993));
- The knowledge techniques that have been used previously for the disciplined development of knowledge-based applications (Benus, B. (1993) and Schreiber, A. T., Akkermans, J. M., Anjewierden, A. A., De Hoog, R., Van De Velde, W., & Wielinga, B. J. (1998)).

Our recommended approach is a multi-perspective modeling approach. Several models need to be developed, each of which represents a different perspective on the organization which can be characterized as "How, What, Who, Where, When and Why"

- How the organization carries out its business - modeling the business processes
- What the processes manipulate - modeling the resources
- Who carries out the processes - modeling capabilities, roles and authority
- Where a process is carried out - modeling of the communication between agents
- When a process is carried out - this specifies the control over processes

Objectives Of The Study

- To identify the method of knowledge management in the organization
- To assess the effectiveness of the employee.
- To find out the reason for why training is conducted.
- To find out the expectations of employees on training and development.
- To suggest efficient knowledge management plan

Limitations Of The Study

To serve customers well and remain in business companies must: reduce their cycle times, operate with minimum fixed assets and overhead (people, inventory and facilities), shorten product development time, improve customer service, empower employees, innovate and deliver high quality products, enhance flexibility and adaption, capture information, create knowledge, share and learn. None of this is possible without a continual focus on the creation, updating, availability, quality and use of knowledge by all employees and teams, at work and in the marketplace.

Research Methodology

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation.

Research is an academic activity and as such the term should be used in a technical sense.

Population

The size (in terms of manpower) of the company/division selected for the study refers to the population. The population of 100 associates is taken for the study.

Sample Design

The sample design is a defined plan determined before any data are actually collected for obtaining a sample from a given population. A sample of 120 associates was selected from the total population of 150 associates on convenient basis.

Research Design

Research design is a conceptual structure with in which research is conducted. It constituted the blue print for collection measurement and analysis of data. The type of research design used is descriptive research. Descriptive research includes surveys and fact finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs, as it exists at present.

The study was conducted in the company to find out the self-perceptual abilities and to ascertain the stress levels of the employees in "Softech global solutions". The subject mainly relays on the primary data, which was obtained through personal interview method.

Sampling

The method of convenient sampling was adopted for this research. In an organization. It was not possible to collect the data during the night shifts so hence the data was collected from the available employees/associates in the day shifts from various departments. The total samples interviewed are 120 associates/employees.

Sample Size

The size of the sample chosen for study is 120 out of 150 associates who are available during the execution of the project survey within the stipulated time.

Data Collection

The data has been collected from both primary and secondary sources for the research work.

Primary Data

The primary data was collected by the research with the use of standard and accepted techniques i.e., through interview methods. A convenient sample has been followed for picking up of respondents. As the data cannot be collected during the night shifts so hence this method of convenient sampling is chosen and the data was collected from the available employees during the survey through personal interviews and discussions to understand their perceptions and ascertain the individual stress levels.

Secondary Data

Man power Report, company's website as well as other websites and from Animation Express (A Journal).

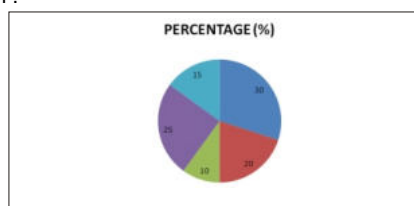
Data Analysis And Interpretation

1. The KM system helps in fast and better decision making.

Table 1 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	30	30
AGREE	20	20
NEUTRAL	10	10
STRONGLY DISAGREE	25	25
DISAGREE	15	15
TOTAL	100	100

Chart 1 :

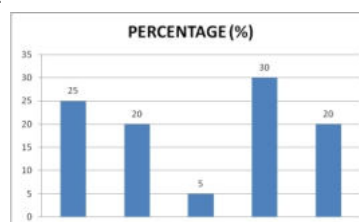


2. KM helps in enhanced productivity or service quality.

Table 2 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	25	25
AGREE	20	20
NEUTRAL	5	5
STRONGLY DISAGREE	30	30
DISAGREE	20	20
TOTAL	100	100

Chart 2 :

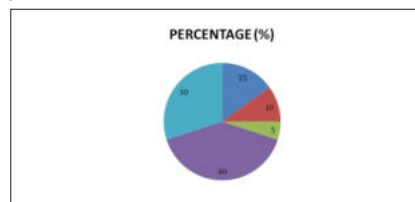


3. Implementing KM results in sharing best practices.

Table 3 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	15	15
AGREE	10	10
NEUTRAL	5	5
STRONGLY DISAGREE	40	40
DISAGREE	30	30
TOTAL	100	100

Chart 3 :

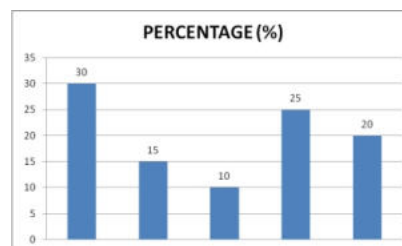


4. KM makes it easy to enter different market types.

Table 4 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	30	30
AGREE	15	15
NEUTRAL	10	10
STRONGLY DISAGREE	25	25
DISAGREE	20	20
TOTAL	100	100

Chart 4 :

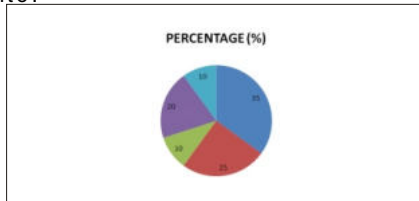


5. KM helps in increased innovation by the employees.

Table 5 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	35	35
AGREE	25	25
NEUTRAL	10	10
STRONGLY DISAGREE	20	20
DISAGREE	10	10
TOTAL	100	100

Chart 5 :

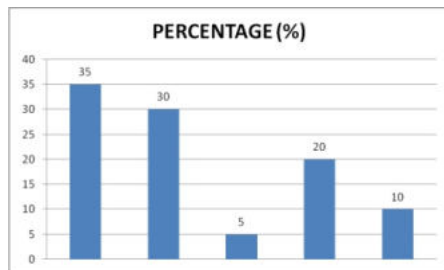


6. Application of KM system results in increased market share.

Table 6 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	35	35
AGREE	30	30
NEUTRAL	5	5
STRONGLY DISAGREE	20	20
DISAGREE	10	10
TOTAL	100	100

Chart 6 :

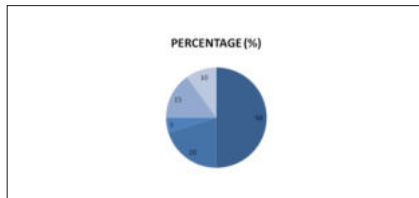


7. KM increases the learning/adaptation capability of employees.

Table 7 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	50	50
AGREE	20	20
NEUTRAL	5	5
STRONGLY DISAGREE	15	15
DISAGREE	10	10
TOTAL	100	100

Chart 7 :

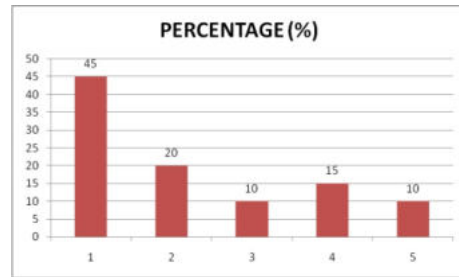


8. KM helps in better staff attraction/retention.

Table 8 :

OPINION	NO OF RESPONDENTS	P (%)
STRONGLY AGREE	45	45
AGREE	20	20
NEUTRAL	10	10
STRONGLY DISAGREE	15	15
DISAGREE	10	10
TOTAL	100	100

Chart: 8

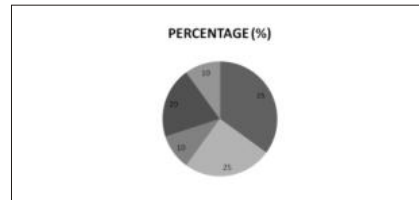


9. KM results in enhanced collaboration within the organization.

Table 9 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	35	35
AGREE	25	25
NEUTRAL	10	10
STRONGLY DISAGREE	20	20
DISAGREE	10	10
TOTAL	100	100

Chart 9 :

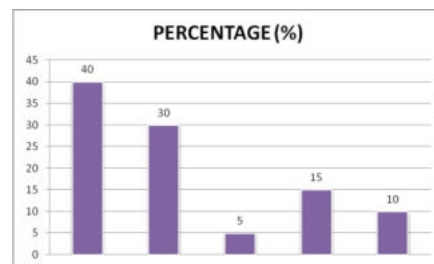


10. KM helps to address the communication gap in the organization.

Table 10 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	40	40
AGREE	30	30
NEUTRAL	5	5
STRONGLY DISAGREE	15	15
DISAGREE	10	10
TOTAL	100	100

Chart 10 :

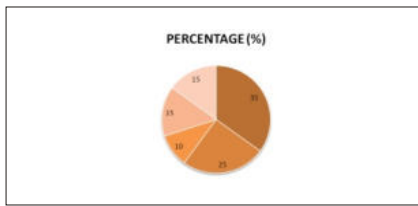


11. KM helps in constant and continuous transformation of individual learning to organizational learning and vice versa.

Table 11 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	35	35
AGREE	25	25
NEUTRAL	10	10
STRONGLY DISAGREE	15	15
DISAGREE	15	15
TOTAL	100	100

Chart 11 :

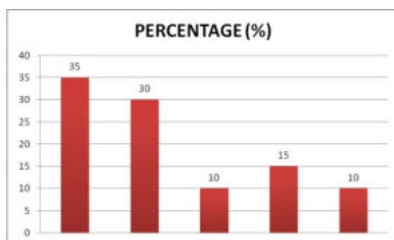


12 KM results in increased delegation of authority and accountability to individuals.

Table 12 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	35	35
AGREE	30	30
NEUTRAL	10	10
STRONGLY DISAGREE	15	15
DISAGREE	10	10
TOTAL	100	100

Chart 12 :

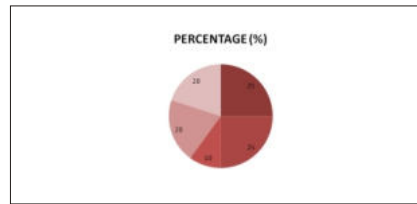


13. KM helps to achieve better ROI.

Table 13 :

OPINION	NO OF RESPONDENTS	(%)
STRONGLY AGREE	25	25
AGREE	25	25
NEUTRAL	10	10
STRONGLY DISAGREE	20	20
DISAGREE	20	20
TOTAL	100	100

Chart 13 :



Conclusion

Thus the project has brought out the various views of the respondents who had participated in the process. The study also analyses the approach of the KM process. The study also brings out the effectiveness of the KM and the suggestions given by the candidates. The various process involved in KM in the industry is also highlighted.

The industry of Information Technology can no longer sustain in market with the pace of proper recruitment process and it will not be fruitful without knowing the satisfaction level of the recruitment process. So analysis of recruitment process will help industry to attract more number of candidates.

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