

Improvement Journey of A Steel Plant Through Value Engineering

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Abstract

Organizations in any industry have competition. In order to remain a leader of the particular segment one need to work from many fronts. The important and sustainable is to create an environment of doing improvement in whatever they do. This subsequently becomes a culture. All the world class company inherit this trait. Here is a very unique technique used by a steel plant to achieve a culture of improvement.

Introduction

The steel plants are striving hard to consolidate themselves as a trademark in creating low cost environment. Keeping this in mind, producers competitively started producing quality products in the early sixties in accordance with two million ton expansion program. The steel plants recognize the contribution of Value Engineering in bringing improvements in the area of cost improvements. However, steel plants also realized that sincere and serious endeavors were required to bring this process into reality.

Initially steel plants invited local chapter of productivity council to train company's officers in Value Engineering related methodology, concepts and their application. After the training, certified value specialist were prepared to perform Value Engineering in industries. Therefore, this management technique became vital in the company. The top management got convinced about the versatility and power of this technique. However, acceptance at all level came much later.

Several companies formally adopted VE and formed a VE Group. It was formed under the Industrial Engineering division. The VE group was headed by a VE head under him five persons were given the task of coordinating activities related to Value Engineering on all company activities.

The group systematically followed the VE job plan and trained thousands of officers in the company. The VE training became one of the key result areas of this group for the first three years. Even after ten years of its inception, training still remains an important activity of the value engineering group, as steel company puts a premium on training and considers it a long-term investment.

VE culture which is an integral part of all company activities nowadays, was basically initiated in the areas of steel making and mills in which four Value Engineering Projects were started. After this, several other projects were started from areas of operations, maintenance

and collieries. Nowadays, VE has entered every function of the company i.e.- Iron making, steel making , mines, mills, sales, health care , civic amenities, social welfare activities, sports, education and has reduced cost incurred.

In-house VE workshops

Initially, during 1980-90, well known Certified Value Specialists like Harold Tuffy, Rudy Kempter, Bob Rossman, SS Iyer, SS Venkataraman and L Kannappan were invited to conduct the workshops of VE. However, since formation of VE Group, most of VE projects are facilitated through in-house workshops. These workshops follow the Module I pattern suggested by SAVE International, USA. The emphasis is laid on data gathering and analysis, understanding the functions and use of creativity for gathering ideas. These are subsequently evaluated and recommendations made in standard formats as Value Engineering Change Proposals (VECP). An eight-phase VE job plan as given below, is followed systematically.

VE job plan

1. Orientation Phase
2. Information Phase
3. Function Phase
4. Creative Phase
5. Evaluation Phase
6. Recommendation Phase
7. Implementation Phase
8. Audit Phase

Senior executives of the company and other experts are invited for mid-course correction meetings during the workshop, to help the teams benefit from their expertise.

Team leaders make a presentation on their projects to the management at the concluding session of the workshop. During presentation, requires sanctions are obtained for implementation and a stipulated time period is fixed for completion of the project.

Professional Approach

The management of the steel plant nurtures practitioners of Value Engineering by improving professional skills and enhancing competence in accordance with standards set forth. In this regard, the organization encourages executives who utilize the Value Engineering discipline in their 'principal' career to go for CVS certification. Certified Value Specialists (CVS) are recognized professionals across the world, who have requisite expertise in running VE programs.

The Value Engineering Group developed an in-house Value Engineering Information System – a computerized data base. This keeps information on all VE projects from initiation to

completion. Each project is assigned a particular code. At any point of time complete information about a VE project can be obtained by logging in its project code. At present, details of around 2500 projects are available in the data base.

The steel plant intranet has more than 200 selected VE projects on the Website. These can be accessed from any location of the company and browsed for taking information for wider applications.

Publications

The management quickly sanctioned to start in house quarterly publication exclusively for Value Engineering after observing the importance of VE and its impact on cost improvement and in product performances. This publication highlights all the VE activities and also carries in every issue a successful case study highlighting the team's effort and savings achieved by them. Apart from providing recognition to the team, it also provided ideas to other team members and motivated them to adopt VE projects in their respective areas of work.

Rewards and recognition

Human Resource Development Policy considers encouragement of people to participate in the company's improvement process and also to recognize good work. Value Engineering also follows the same practice.

The company held a special VE Awards Banquet Nite to recognize the successful VE teams. The recognition system has been assimilated into the company's culture and is today a way of life. After submitting cost audit report, the successful teams are given recognition in a formal way in a special function. In this function, team members are invited along with their spouses and a special dinner is hosted by top management personals.

Top management, senior executives and other special invitees like managing Directors of subsidiary companies participate in these functions. Team members are given silver salvers and attractive gifts as tokens of recognition. Corporate communication department organizes wide publicity for the function and wide coverage given through in-house journals and magazines to keep employees informed about VE activities and motivate employees to undertake VE projects.

Spreading the VE message in India

When VE began in the company, the vision and commitment of the pioneers led to rapid spread of the concept among subsidiary companies of the steel company and then among other industries in and around the steel plant.

The steel company has been instrumental in revitalizing the Indian Value Engineering Society (INVEST), the apex body of VE practitioners in India and giving it a new direction. The top management of the company encouraged executives to participate in INVEST

activities. It was from this forum that VE spread to other industries in India. Over the years steel company has not only created wealth for itself from the VE process but has also created assets in the form of trained Value Engineers who have spread their skills throughout the country and abroad.

Conclusion

Value Engineering has been taken in various companies in India and abroad to reduce cost and improve bottom line. This is a very simple and easy to understand tool, which helps even average level of employees to understand and apply.

Reference

1. Value Engineering a practical approach for owners, designers and contractors – Larry W Zimmerman, Glen D Hart
2. Techniques of Value Analysis and Engineering - Lawrence D Miles