

## VALUE ENGINEERING:-

Value Engineering (VE) is an intensive, inter disciplinary problem solving activity that focuses on improving the value of the functions that are required to accomplish the goal, or objective of any product, process, service, or organization.

## VALUE METHODOLOGY:-

“The systematic application of recognized techniques which identify the functions of the product or service, establish the worth of those functions, and provide the necessary functions to meet the required performance at the lowest overall cost.”

## OBJECTIVE OF VALUE ENGINEERING:-

- ..Value Engineering is used to determine the best design alternatives for Projects.
- ..Value Engineering is used to reduce cost on existing Projects.
- ..Value Engineering is used to improve quality, increase reliability and availability, and customer satisfaction.
- ..Value Engineering is also used to improve organizational performance
- ..Value Engineering is used to improve schedule of work.
- ..Value Engineering is used to reduce risk.
- ..Value Engineering is a powerful tool used to identify problems and develop recommended solutions.

## SIX STEPS OF VE PLAN

Phase 1- information phase-Clearly identify the problem(s) to be solved, and gather information on the background, functions and requirements of the project.

phase 2- functional analysis-What must the project do? What are the functions? How they are related?

Phase 3- Creativity phase-Brainstorm ideas on how to improve the high cost broken, or inadequately performed key functions.

Phase 4- evaluation phase-Screen ideas for acceptance, score remaining ideas on a scale and group ideas into categories. Develop design scenarios, and selection criteria. Rate and rank ideas.

Phase 5- Development phase-Plan how to sell ideas to management, identify key recommendations, plan management presentation.

Phase 6- Reporting phase-Give oral presentation to management, or develop written report.

## ADVANTAGES OF VALUE ENGINEERING

There are many advantages of value engineering besides the normal advantage of cost reduction - lower cost, lower prices and higher profits. Further, the following advantages may be possible where value Analysis is employed in the business:

1. The most suitable products are manufactured because a careful study is made to determine the desirable feature of each product in terms of customer requirements.
2. Each product should be manufactured at the lowest possible cost because special attention is paid for simplification, standardisation and improved methods of production.
3. Quality is maintained at desired level because there is no question to reduce cost at the expense of quality.
4. Value engineering is based on the principle that management effectiveness can be measured in terms of cost saving. Any saving in cost is treated as increased efficiency.
5. The constant search for improvement will lead to greater all round efficiency.
6. Suggestion box method may be employed and any ideas can be called into by the value Engineers.

**1. Is value engineering equivalent to continual improvement in ISO 9001:2000?**

Ans - Value engineering is dealing with satisfaction of customer through continual improvement of product which is quite equivalent to ISO9001:2000 norms. The difference is that ISO 9001:2000 norms are generic and is applicable for all organisations which may not be the case with value engineering.

**2. If the specification of a material is changed by value engineering, then how can the customer be satisfied?**

Ans - Specification of a material is changed keeping in mind the requirements of the customer only. It can be considered that a value engineer looks after the requirements of the customer through the function of the product rather than its material specification.