INDUSTRIAL EDUCATION INSTITUTE, in cooperation with governmental agencies, professional societies and trade associations, announces a series of

ONE-DAY SEMINARS ON

Increasing Profits Through
VALUE ENGINEERING and ANALYSIS

The most effective technique yet developed to increase profits by eliminating non-essentials in product design, purchasing and manufacturing

. . . of importance to every

Director of Engineering
Plant Manager
Design Engineer
Production Manager
Production Engineer
Director of Purchasing
Project Engineer
Industrial Engineer

NEW YORK CITY — December 3rd (Hotel Park-Sheraton)

LOS ANGELES — January 14th (Hotel Sheraton-West)

SAN FRANCISCO — January 15th (Hotel Sheraton-Palace)

Conducted by a panel of the foremost authorities on Value Engineering and Analysis . . . the men who have developed, applied and taught these successful cost prevention and money-saving techniques:

LAWRENCE D. MILES, Manager of Value Analysis Services, General Electric Co.

ALBERT SIKORSKY, Head Electronic Engineer, Value Engineering Office, United States Navy, Bureau of Ships.

BERNARD W. EADES, Director of Value Engineering, General Dynamics Corp., Stromberg-Carlson Division.

- Pioneered and developed in General Electric's Value Analysis Program.
- Currently applied by the United States Navy, Bureau of Ships.
- Endorsed by ELECTROMECHANICAL DESIGN *Magazine* as "an unexcelled opportunity to get a real edge on your competition".

INDUSTRIAL EDUCATION INSTITUTE
25 HUNTINGTON AVENUE, BOSTON 16, MASSACHUSETTS — COmmonwealth 6-5494

ANY COMPANY CAN SAVE UP TO 50% ON PRODUCT COST . . .

VALUE ENGINEERING and ANALYSIS

Eliminates non-essentials . . . Uncovers unnecessary costs . . .
Increases product value . . . Avoids costly mistakes
before purchasing commitments are made

Here's What Management and Engineering Publications Report:

"An important tool of cost information for engineers; a way of looking at design problems for doing a job at less cost . . . Value Engineering uses at least 17 well defined techniques". (ELECTROMECHANICAL DESIGN *Magazine*).

"The General Electric Co. reports a multi-million dollar annual savings . . . industry cannot long ignore the benefits of this program." (SIGNAL *Magazine*, official journal of the Armed Forces Communications and Electronics Assoc.).

"One of the most interesting and significant recent developments in industrial selling is the adoption of Value Analysis techniques as a selling method . . . Worthington Corp. spends $80 million a year — in many widely scattered plants making a broad variety of products . . . savings of at least $8 have been made for every $1 the company has spent on value analysis." (PURCHASING *Magazine*).

"Take any component you make or buy. Apply value analysis to it and you'll probably reduce its cost by 15% to 25%. Any company can use this promising new scientific method to turn costs into profits." (MANAGEMENT METHODS *Magazine*).

"Value Engineering — A Boon . . . cut cost and complexity while achieving the desired performance." (ELECTRONIC DESIGN *Magazine*).

"Value Engineering saves U. S. Navy $8 million." (ELECTRONIC WEEK).

The technique is definable and practical. Men who attend this Seminar will learn the concept and basic principles and how to evaluate them in terms of specific application. They will be taught how to measure the value of each piece of material, each part, each component, before making purchasing commitments. They will see actual demonstrations and examples of techniques that have slashed costs and increased profits in specific cases.

About the speakers . . .

LAWRENCE D. MILES

Manager of Value Analysis Services, General Electric Co.

Mr. Miles is a recognized authority on Value Analysis and Value Engineering in this country. He is a graduate of the University of Nebraska with a degree in Electrical Engineering. Prior to 1947, he worked for 16 years in the Engineering and Purchasing Departments of the General Electric Company. In that year, he organized an activity which would bring better value on a wide scale into the use of materials. With a small group of engineers in General Electric, he developed methods and techniques which enabled engineering and manufacturing personnel to eliminate millions of dollars of "non-working" cost from the company's products. In recognition of this achievement, the company in 1949 presented him its highest award for extra achievement known as the Charles A. Coffin Award. He has just recently been awarded the Navy Distinguished Public Service Award.

ALBERT SIKORSKY

Head Electronic Engineer, Value Engineering Office, United States Navy, Bureau of Ships.

Mr. Sikorsky will illustrate how this technique has been successfully applied by the Navy as well as many of its suppliers. He developed the Value Engineering specifications for Electronic Equipment, and is the author of many published articles on the subject. He has served on many important committees for testing materials and equipment, and was responsible for the installation and maintenance of a wide variety of equipment used in Navy establishments.

BERNARD W. EADES

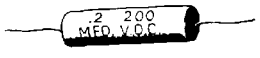
Director of Value Engineering, General Dynamics Corp., Stromberg-Carlson Division.

Mr. Eades is a graduate of Clarkson College of Technology, where he majored in Business Administration and Industrial Engineering. He has been associated with Value Engineering for the past ten years and his background includes engineering experience with such companies as General Motors, Revere Copper and Brass Co., Permanent Mold Manufacturing Co., and Pressco Casting and Manufacturing Co. He is presently responsible for the development and training of Value Engineering throughout Stromberg-Carlson's electromechanical operations.

● REPRESENTATIVE TESTS FOR VALUE

1 DOES ITS USE CONTRIBUTE VALUE?

COST: 500,000 per year, at 10c each.

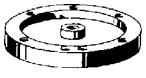


Value Engineering developed new method, eliminating part.

SAVING: $50,000 PER YEAR. 100%.

2 IS ITS COST PROPORTIONATE TO ITS USEFULNESS?

COST: 90c per unit.



Considering its function, cost was not proportionate to usefulness. Value Engineering resulted in a 20 cent part which provided identical performance.

SAVING: 70c PER UNIT.

3 DOES IT NEED ALL OF ITS FEATURES?

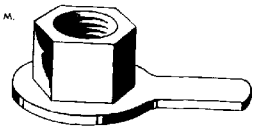
COST: 70,000 per year, at 18c each.

These washers were formerly chamfered, one side. Value Engineering showed the chamfer made no contribution to value. By eliminating it, the cost was reduced to 5c each.

SAVING: 13c PER UNIT; $9,100 PER YEAR. 72%.

4 CAN A USABLE PART BE MADE BY A LOWER COST METHOD?

COST: $30 per M.



Study showed that part could be made by cheaper method.

SAVING: $20 PER M. 67%.

5 CAN A STANDARD PRODUCT BE FOUND WHICH WILL BE USABLE?

COST: $27 per M.

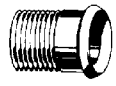
This part was made to special design. Value Engineering revealed that a standard piece was suitable and provided identical performance.

SAVING: $13 PER M. 48%.

These washers were formerly chamfered, one side. VE showed the chamfer made no contribution to value. By eliminating it, the cost was reduced.

6 IS IT MADE ON PROPER TOOLING, CONSIDERING QUANTITIES USED?

COST: 20c each.



Value Engineering indicated that the cost was out of line with reasonable standards. As a result, some wastes of material and labor were eliminated.

SAVING: 15c PER UNIT. 75%.

7 DO MATERIAL, REASONABLE LABOR, OVERHEAD, AND PROFIT, TOTAL ITS COST?

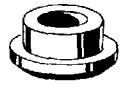
COST: $3 per M. (50,000,000 a year.)

Value Engineering indicated that the cost as out of line with reasonable standards. As a result, some wastes of material and labor were eliminated.

SAVING: $1 PER M; $50,000 PER YEAR. 33%.

8 WILL ANOTHER DEPENDABLE SUPPLIER PROVIDE IT FOR LESS?

COST: $18 per M.



In this case an exploration of the market resulted in finding an equally reliable source of supply that would furnish the identical part at less cost.

SAVING: $4.50 PER M. 25%.

9 IS ANYONE BUYING IT FOR LESS?

COST: $2.50 per M, used in large volume.

This phase of cost measurement draws no line of comparison whether within or outside of the company itself. Extensive purchasing activities provide a ready means of comparison and are a logical starting point in considering this question. In this case, a similar item was being purchased in another high production factory, at less cost.

SAVING: $1.50 PER M. 60%.

THE SEMINAR PROGRAM

1. The Importance of the Technique
   a. Definition of this profit improving function.
   b. Elements to be considered in measuring value.

   And, in the light of the costs and facts — is it worth it?
2. Why Value Engineering and Analysis is Essential Today
   a. Better profit potential through customer-supplier team work.
   b. A dynamic answer to rising costs.
3. Evidences of need for improving value
   a. Costly habits and attitudes in industry today.
   b. High costs introduced in early designs carried over into production stage.
   c. Resistance to change.
   d. Lack of information on available techniques that can lower costs.
4. The basic principles of Value Engineering and Analysis
5. Tests for true Value (Applicable to every material, part or operation)
   a. Does it contribute value?
   b. Does it need all of its features?
   c. Is the cost proportionate to its contribution?
   d. Is there anything better for its use?
   e. Can it be made at lower costs?
   f. Can a standard product be substituted?
   g. Is it being made by the right method?
   h. Can it be bought for less?
6. How and when to Apply the Technique
7. How to Organize for Value Engineering and Analysis
8. How to Sell the Program
   a. To associates.
   b. To management.
   c. To vendors and suppliers.
   d. To customers.

HOW THE SEMINAR WILL BE CONDUCTED

This important one-day meeting will combine formal instruction with informal discussion, question and answer periods, exhibits, demonstrations and case studies — all of which add up to an intensive workshop session.

Those attending the Seminar will see the advantages — and how to apply them — in design, purchasing, manufacturing, sales and other phases of industrial operations.

Special emphasis will be placed on the "how to" of gaining company-wide acceptance and application of the technique, and extending its use to subcontractors, suppliers and customers. Registrants will have ample opportunity to present their own specific problems, and receive practical solutions. They will exchange ideas and discuss all phases of Value Engineering and Analysis with men who have similar problems and responsibilities in many of the nation's leading companies.

For continuing reference, Registrants will receive a complete set of Seminar notes and other valuable material to help them expand Value Engineering and Analysis in their companies.

TO MEASURE THE TRUE VALUES IN ANY PRODUCT — ASK THESE QUESTIONS:

1. What is it?
2. What does it do?
3. What does it cost?
4. What else will do the job?
5. What will that cost?
6. What is the Most Valuable way?

REGISTRATION INFORMATION

Seminars will be limited in size for maximum instruction effectiveness, and reservations accepted in the order received. All reservations considered firm one week in advance of Seminar date.

For maximum effectiveness many companies send people in teams. Determine who else in your company should attend, and make your reservations today.

Registration fee: $45 for one man, $40 per man for two men and $35 per man for three or more men from same company. Fee includes attendance at both morning and afternoon sessions, luncheon, coffee breaks, all necessary supplies and reference material.

Seminars start at 9:30 A.M. and end promptly at 4:30 P.M.

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A few of the more than 3500 Companies that have sent their men to IEI Seminars.

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Allied Chemical & Dye
Allis-Chalmers Manufacturing
Aluminum Co. of America
American Agricultural Chem.
American Bosch Arma
American Brake Shoe
American Can
American Chain & Cable
American Cyanamid
American Gas & Electric
American Machine & Foundry
American Marietta
American Metal
American Metal Products
American Optical
Am. Radiator & Std. Sanitary
American Smelting & Refining
Am. Telephone & Telegraph
American Viscose
American Zinc, Lead & Smelting
Anaconda Wire & Cable
Anheuser-Busch
Armco Steel
Armour
Armstrong Cork
Arvin Industries
Atlantic Refining
Avco Manufacturing
Babcock & Wilcox
Baldwin-Lima-Hamilton
Bendix Aviation
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Chase Manhattan Bank
Chesapeake & Ohio Ry.
Chrysler
Cincinnati Gas & Electric
Cincinnati Milling Machine
Cities Service
Clark Equipment
Cleveland Electric Illuminating
Clevite
Colgate-Palmolive
Colorado Fuel & Iron
Combustion Engineering
Consolidated Edison
Con. Water Power & Paper
Consumers Power
Continental Can
Cooper-Bessemer
Corn Products Refining
Corning Glass Works
Cummins Engine
Culler-Hammer
Daystrom
Diamond Alkali
Dow Chemical
Dresser Industries
Dupont (E. I.) deNemours
Eagle Picher
Eastern Gas & Fuel Associates
Eastman Kodak
Eaton Manufacturing
Electric Auto-Lite
Electric Storage Battery
Fairbanks, Morse
Fairchild Engine & Airplane
Federal-Mogul-Bower Bearings
Firestone Tire and Rubber
Ford Motor
Fruehauf Trailer
General Am. Transportation
General Aniline & Film
General Cable
General Dynamics
General Electric
General Foods
General Mills
General Motors
General Precision Eqpt.
General Telephone
General Tire & Rubber
Gerber Products
Glidden
Goodrich (B. F.)
Goodyear Tire & Rubber
Grace (W. R.)
Grumman Aircraft Engineering
Gulf Oil
Handy & Harman
Hercules Powder
Ingersoll-Rand
Inland Steel
Internat. Business Machines
Internat. Minerals & Chemicals
Island Creek Coal
Johns-Manville
Johnson & Johnson
Jones & Laughlin Steel
Kaiser Industries
Kellogg
Kimberly Clark
Koppers
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Long Island Lighting
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Magnavox
Mallory (P. R.)
Marathon
Martin (Glenn L.)
Mead
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Midland Steel Products
Minneapolis-Honeywell Reg.
Minnesota Mining & Mfg.
Monsanto Chemical
Montgomery Ward
Motorola
Mueller Brass
National Biscuit
National Cash Register
New England Electric System
Newport News Shipbuilding
New York Life
North American Aviation
Norton
Olin Mathieson Chemical
Oliver
Otis Elevator
Outboard Marine
Owens-Corning Fiberglas
Owens-Illinois Glass
Pennsylvania Power & Light
Peoples Gas Light & Coke
Pepsi-Cola
Pfizer (Chas.)
Philco
Pittsburgh Consolidation Coal
Porter (H. K.)
Procter & Gamble
Public Service Electric & Gas
Pullman
Pure Oil
Radio Corp. of America
Raytheon Manufacturing
Reliance Electric and Engineering
Remington Arms
Republic Aviation
Republic Steel
Revere Copper & Brass
Reynolds Metals
Robertshaw-Fulton Controls
Rockwell Manufacturing
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