

Industrial Engineering Conference Detroit

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WASHINGTON, D. C. 20020

Oct 11-1968

Most of you are familiar with IE techniques and methods.
You came here hoping to learn something to help.

Some want to know Friend, or Foe. "When Friend, When Foe"

Some want to use some VE where it does the job better,
and quit fooling with it where it does not.

Some have seen VE get funds and budgets, the IE wanted,
as I have seen IE get funds and budgets that VE wanted.

All would like to know a little more about what it really is,
so they can relate it to their work, and use its benefits ---
if any --- in their kind of work.

I have the greatest appreciation for the work of Indust. Engrg.
---ac lib---

My purpose is to help you to achieve even more success.
All of my discussion will be pointed in that direction.

From Maynard's handbook I learn that the objective ^{and purpose} of IE is
"The achievement of Lower costs"

That is well stated for the objective and purpose of VE.

Interestingly enough however, this does not necessarily
mean that they are competitors,
nor that they have similar approaches
nor that they are not complementary or supplementary to each other.

For the objective and purpose of winning "Fair Lady"
a one carat diamond may be effective,
or a week-end in Toronto,
or the use of ones credit card for an hour.
or maybe some of each!!

Systems, processes, or products are not identified by
their objectives and purposes.

Sameness of purpose, in no way infers sameness of technique,
or, in any individual case,
sameness of effectiveness.

Again, for the objective and purpose of achieveing good health,
a balanced diet might be prescribed,
or a jog around the park each day,
or an operation.

The balanced diet, may or may not be the competitor of the operation.
It may be a needed complement, in an individual case.

So, we'll start our thinking together on the sound premise,
"That although IE and VE may have precisely the same objective and purpose
they may not in the slightest be competitors,
nor use, basically, the same techniques".

In general, we may find, that since VE came after IE,
Industrial Engineers will find some of its techniques to be
very useful supplements to their own.

The approaches and techniques of VE were developed to:
Cause all techniques which were directed towaro securing better costs
Whether they be in Management planning

Design Engrg

Mfg. Engrg

Ind. Engrg, or wha ever

to achieve results, more quickly --- in the ordinary cases
more surely --- in the difficult cases.

WORKSHOP CASE STUDY PROJECT

1. Refrigerator - one million per year.

2. Military gasoline tank for a landing craft.

Contents:

200 gal. gasoline. Life: 8 yrs.; Production quantities: a one time buy of only 1,000 pts.

3. Protective device switch operates in oil vapor environment.

Life: 25 yrs. Quantity: 20,000 per yr.

4. Spot focuser for a military radar-like equipment, purchased once only.

Quantity: 1,000 units.

5. Insulator stud which carries a tension load and is made from HD galvanized steel.

6. Motor shield: 4,500 per year.

7. Motor shield fastener: 4,500 per year.

8. Garbage disposal: 1,000,000 per year.

9. Brush holder: 6,000 per year.

10. Magnet keeper: 1,000,000 per year.

11. Double nut: 4,000 per year. Material: steel.

12. Flourescent transformer made from steel at the rate of three million per year.

THE TEN STEP DISCIPLINE THINKING SYSTEM
OF VALUE ENGINEERING

1. What are we trying to do?
(Write down the main objective).
2. Now, state by functions what actions must take place to accomplish the main objective.
3. Set up one or more of these functions, or a combination of them as a "solvable problem".
4. State this problem, by function, ten different ways.
5. Now, check back:
 - (a) Is this "solvable problem" in total harmony with the most important factors of our main objective defined in Step No. 1?
 - (b) Would this problem be more solvable and more in harmony with "what we are really trying to do", if we included other functions in the problem?
 - (c) Ditto - if we sub-divide the problem further, making it functionally divided, smaller "solvable problems"?
6. Information step.
7. Analysis step.
8. Creative step.
9. Judgement step.
10. Development step.

ESSENTIAL ACTION PROMPTED BY THE TEN-STEP
V. E. PROBLEM SOLVING SYSTEM

1. A deeper search for facts and new information. Determination of suitability of the "hardware" for the intended function.
2. Identify and locate non-obvious factors which have influenced decisions on:
 - a. "marketing suitability".
 - b. "engineering design"
 - c. "manufacturing methods"
 - d. "purchasing supplier arrangements"
3. Vigorous searchout "buy" or "partial buy" possibility as a more profitable alternative to "make".
4. Evaluate each increment of function provided by each increment of cost.
Evaluate each restriction which limits alternatives.
5. Start with the simplest, lowest cost approach which will work at all. Add to this only enough to accomplish the main objective.
6. Evaluate and check the reasonableness of purported "engineering data" which has caused the decision to use a costly process or design.
7. Get help!
8. Evaluate the reasonableness of "turndown" of new material or process during its first five years.

PROCLAMATION

City of Detroit, Executive Office

Jerome P. Cavanagh
Mayor

INDUSTRIAL ENGINEERS DAY

October 11, 1968

WHEREAS The leading society of industrial engineers in our nation -- The American Institute of Industrial Engineers -- will hold their tenth annual conference in Detroit on October 11, and

WHEREAS The American Institute of Industrial Engineers has more than 80,000 members from 126 chapters throughout the United States, and

WHEREAS There are nearly 300 members of the Detroit Chapter of the American Institute of Industrial Engineers who represent a City long known for its engineering genius, and

WHEREAS No city in our nation has benefitted more dramatically than Detroit from the ideas and labor of industrial engineers

NOW, THEREFORE, I, Jerome P. Cavanagh, Mayor of the City of Detroit, do hereby proclaim the day of October 11, 1968 as

INDUSTRIAL ENGINEERS DAY

in Detroit, and urge all Detroiters to join in recognizing and applauding the continuing significant achievements of industrial engineers.

Given under my hand and seal
this 17th day of September, 1968

Jerome P. Cavanagh
Mayor

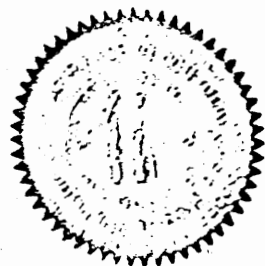
PROGRAM

8:00 - 8:30	Friday, Oct. Sep 11, 1968 REGISTRATION	
8:30 - 8:40	KEYNOTE ADDRESS: "A LOOK INTO THE FUTURE" F.A. ANDERSON II	
8:45 - 10:00	1 Crystal Ball Room VALUE ENGINEERING Irs Philosophy & Potential Case Studies L.D. MILES	2 Founders Room NLRB RULINGS PHILOSOPHICAL OVERVIEW OF NLRB RULINGS-DECISIONS GEORGE CHERPELIS
BREAK 10:10 - 10:20		
10:20 - 11:40	VE/ECASE STUDIES WORKSHOP L.D. MILES & J.W. MOON	HOW NLRB RULINGS/ DECISIONS ARE CHANGING TRADITIONAL MANAGEMENT APPROACHES RICHARD T. FRANKENSTEIN
11:50 - 1:30	3 LUNCHEON ADDRESS: "FUTURE IMPLICATIONS OF HARD CORE PRE-EMPLOYMENT TRAINING" WAYNE GBIMM	
1:40 - 3:10	1 Crystal Ball Room VALUE ENGINEERING DISCUSSION: HOW TO DOUBLE CO. PROFITS WORKSHOP	2 Founders Room NLRB RULINGS/COURT DECISIONS
BREAK 3:10 - 3:25		
3:25 - 4:45	VE & I.E. cooperative Effort WORKSHOP: VE techniques applied to I.E. Problems, J.W. MOON	"A PANEL DISCUSSION" Moderator - Paul Thomas Panel: G. Cherpelis R. Frankenstein B. Morse J. O'Reilly S. SPERKA

EXHIBITORS

LOCATED IN THE NORMANDY & PARLOR 'C' ROOMS
4TH FLOOR - FROM 8:00 TO 5:00

CONTROL DATA	DENNISON COPIER	DURA BUSINESS MACHINES
HEWLETT- PACKARD COMPANY	MEASUREMENT INSTRUMENT INC.	VICTOR COMPTON CORP.



Shellac
Varnish

Q asked

Higher level Functions -

what Books available -

only one basic F.

VE VS VA -

Kelleny

Paint story -