

01 44 8687 52072

**MR. ENGINEER**

**SUMMARY**

**(1ST 6 MONTHS)**

JEFF CASINO  
DAN FOREHAND

**On November 29, 1993 Mr. Engineer was officially started in Vanity Fair Mills at Plant #2 (Monroeville Plant).**

**Mr. Engineer is a data-collection system that can provide 16 different reports and charts. It can give a Sewing-Machine Operator real-time information (% Efficiency all during the day and on each garment).**

**Mr. Engineer consists of a:**

- 1) CYCLE BUTTON**
- 2) STITCH SENSOR**
- 3) KEYPAD UNIT**

**Presently there are 6 Systems ready for use within Vanity Fair. So far Mr. Engineer has been introduced into all of our sewing facilities except for the Demopolis Plant.**

**This summary has been compile to illustrate the impact made by Mr. Engineer so far.**

# **GOALS**

The initial objective with Mr. Engineer was to improve cost in our manufacturing plants by increasing productivity and earnings while reducing make-up cost.

## **IN OTHER WORDS:**

- 1) 25% INCREASE IN EFFICIENCY**
- 2) \$175,000 PER YEAR COST SAVINGS**

Another objective was to discover the other uses of Mr. Engineer besides being a productivity improving device.

## **IN 6 MONTHS MR. ENGINEER HAS BEEN USED TO:**

- 1) COUNT STITCHES ON EMBROIDERY MACHINES (ALMOST IMPOSSIBLE TO GET AN ACCURATE COUNT BY THE NAKED EYE)**
- 2) DISCOVER THE IMPACT OF SOFT TUBING ON SOME OF OUR OPERATORS**

At present Mr. Engineer is being used to check P(Personal) F(Fatigue) D(Delay) Factors. This would include Thread Breaks, Bobbin Changes, Needle Breaks, etc.. Normally one Engineer would have to stay with one Operator all day to collect this data and then work up the data which would take about 1 more day. With Mr. Engineer a keypad would be placed on an Operator's table which would then start collecting information. With 6 of these systems it is

like having 6 extra Industrial Engineers. Also for a full day of obtaining information it would take about 30 minutes to process the results with Mr. Engineer as compared to about 1 day by longhand.

Another objective was to train at least one person in each plant on the basics of Mr. Engineer including:

- 1) WHAT IS MR. ENGINEER?
- 2) WHAT CAN MR. ENGINEER DO FOR EACH PLANT?
- 3) HOW TO SET UP MR. ENGINEER ON AN OPERATOR'S TABLE.

The last objective was to come up with recommendations and proposals for Mr. Engineer in the future. For example should we:

- 1) HAVE 2 OR 3 MR. ENGINEER KEY PADS IN EVERY PLANT AND HAVE THAT PARTICULAR PLANT BE RESPONSIBLE FOR OPERATING MR. ENGINEER?  
OR
- 2) HAVE A TRAVELING TEAM OF MR. ENGINEER EXPERTS?

## SAVINGS

Mr. Engineer has been into 6 sewing facilities so far. Inside these plants Mr. Engineer has been placed on 75 Operator's tables resulting in (ALL NUMBERS ARE WEIGHTED AVERAGES):

- 1) 33% INCREASE IN EFFICIENCY
- 2) INCREASED SAMS BY 5,040 PER 8 HOUR DAY
  - a) 10.5 Operators at 100% Efficiency would no longer be needed on these operations.

\$ \$ \$

### 3) TOTAL DOLLAR SAVINGS FOR THE FIRST SIX MONTHS IS

\$126,000.

(This number comes from a Reduction in Make-up, Reduction of 10.5 Operators including Benefits and Reduction in Overtime.)

### 4) TOTAL SAVINGS = DOLLAR SAVINGS - EXPENSES

Expenses includes salary, travel cost and upkeep of equipment.

TOTAL SAVINGS: 126,000 - 26,500=

**\$99,500 (1ST 6 MONTHS)**

Estimated Total Savings 1st Year:

\$154,000 (Due to Cost of Mr. Engineer)

Estimated Total Yearly Savings After 1st Year:

\$199,000

**PAYBACK FOR 6 KEY PADS: 4 MONTHS**

## COMMUNICATION

Another benefit from Mr. Engineer that is difficult to put a cost savings on is Communication. Most of the Operators who have had Mr. Engineer on their tables feel that the company cares about their problems on the sewing floor. So much so that out of 225 days of having Mr. Engineer on their tables only one Operator has missed a complete day (.4 ABSENTEEISM). In these days of increased union activity Mr. Engineer would be a tool that could be utilized to show an Operator that we do care.

# **FUTURE**

**Mr. Engineer has made a real impact on Vanity Fair in the first 6 months. With a yearly savings of almost \$200,000 and a payback of 4 months for 6 Systems, Mr. Engineer should begin to take it's place with the other Engineering tools in Vanity Fair (along with the Timeboard, Tachometer, Stitch Counter, etc.). This was all accomplished by one person using 6 key pads. One person would not be able to handle more then 6 key pads efficiently.**

**According to the Law of Multiplication if one person can save almost \$200,000 in one year with 6 Systems then 4 people could easily save \$800,000 in one year with 24 Systems. This could be accomplished because Mr. Engineer is easy to use and very flexible in moving from one plant to another. However, the ideal time to stay in plant is at least 1 month.**

**The greatest impact for Mr. Engineer in the future is to have a group (2,3 or more) of Mr. Engineer experts go from plant to plant working on increasing productivity and spreading goodwill. Also each plant should have at least one key pad for their own use. Tremendous savings, directly and indirectly, can be accomplished using Mr. Engineer in the future with paybacks being about a year for 18 key pads.**

**Jeff Castro**