Factory Floor Solutions

OEE

VersaCall has successful implemented OEE Solutions for a number of manufacturers

Recommended VersaCall Approach

- **Phased**
- **Employee Involvement**
- **Stay Simple**

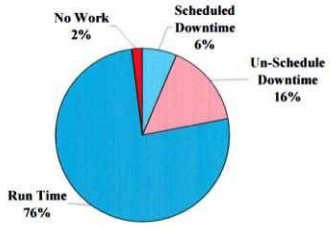
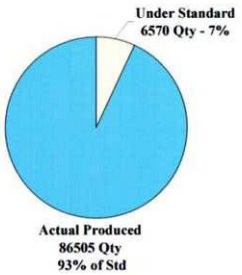
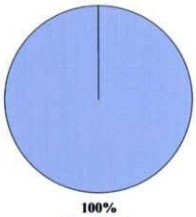
Proposed OEE Report

Custom Report – Customer Defines Format & Content

Overall Equipment Effectiveness

KENNAMETAL

September 27 - 70.6%
Average OEE Trend – 76.2%

Availability	Performance	Quality
		
76%	93%	100%
	Standard Qty: 93,075 Actual: 86,505	

Overview

The personnel of VersaCall Technologies Inc. have successfully developed and implemented OEE reporting systems. A number of articles have been published by VersaCall personnel on the parameters of OEE – availability, performance and quality. While we are a very solid supporter of OEE as a measurement benchmark for operational performance, we have found that it is a very difficult path to start with limited or no OEE data collection and reporting and implement a full blown OEE data collection and reporting system. Although our Data Input Module System is very capable of providing complete data collection and reporting, we recommend a phased approach.

Our goal is to have a ***"Successful"*** implement of OEE Data Collection and Reporting. It is VersaCall's position that an integral part of a successful implementation of OEE reporting system is the site personnel. We believe that it is important that the site personnel understand what comprises the percentages parameters of availability, performance and quality. Just as important for site personnel to understand what they can do to impact the parameters.

Our recommend approach is to bring up one (1) OEE percentage performance parameter at a time starting with availability and then adding quality and finally adding performance. Important to this approach is the involvement of the site personnel down to the operator level [This assumes that an operator will be involved in the capture of performance information, there are alternatives].

Phased Approach – Availability

We are recommending a phased approach with the first phase is intended to capture and report the basic performance components of OEE. The goal of the 1st phase is to have line supervision understanding, evaluating and managing their line equipment performance by the OEE components of equipment availability.

For the 1st phase, the approach is to keep both data capture and reporting very simple. As mentioned above, limited detailed information will be capture and the proposed reports will be simple graphs with detail drill down capabilities.

For future phases, they could be the capturing and profiling the detail of the basic information capture in the phase 1 effort. Other areas could include trend and comparison reports and evaluations. Some portions of the baseline OEE information provided from phase 1 is not currently captured or available. This information could provide a different view of the equipment performance activity. It would be the recommendation of VersaCall that until the basic OEE information from phase 1 is accepted & utilized by line supervision and site management , that subsequent phases not be pursued.

For availability the following elements can be measured and reported with the VersaCall System:

- Total Time
- Total Run Time
- Idle Time
- Downtime by Reason Code

Phased Approach – Quality & Performance

For Quality the following elements can be measured and reported with the VersaCall System:

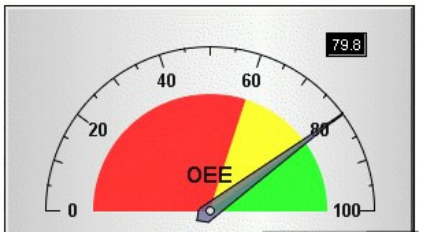
- Total Quantity Produced
- Total Quantity Scrapped by Reason Code

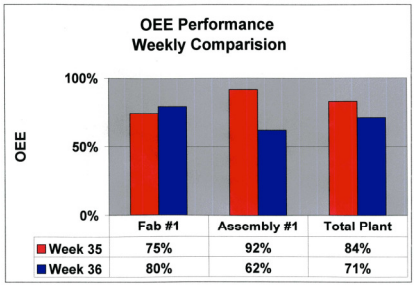
For Performance the following elements can be measured and reported with the VersaCall System:

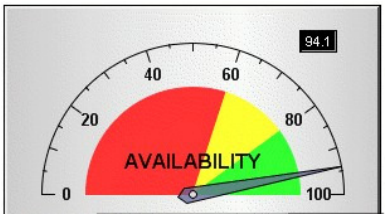
- Takt Quantity Output
- Total Quantity Produced

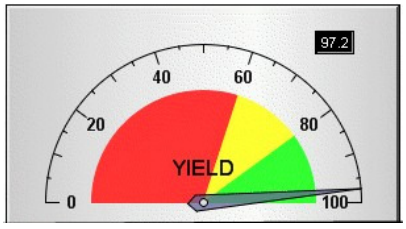
VersaCall Performance Intelligence OEE Charts & Graphs

VersaCall offers a broad spectrum of Standard & Custom OEE & OAE Charts and Graphs









Standard Definitions

a. Availability – The standard for total availability is defined as 24 hours /7 days a week. Total run time will be when the equipment has power [from designated switch contact input]. From total run time scheduled downtime [i.e.set-up, project runs, preventative maintenance] and unscheduled downtime alarms that occurred during the reporting time period will be deducted. ***Percentage is calculated – total time less scheduled and unscheduled downtime / total time [7/24 depending upon reporting period]***

b. Performance – For each piece of equipment, a takt time representing the standard output will need entered and maintained in the look-up table that is part of the VersaCall Reporting Software [It is possible to import this information, it would be a custom report that would price separately]. *Percentage calculation is total part number quantity produced by the equipment for the* ***availability*** *time period / standard for the part number for the same time period*

c. Quality – Total quantity produced is the calculated from the material introduced into the production area for a given time period. Scrap will be determined by total quantity produced less quantity shipped from the production period. ***Percentage calculation is for a specified time period - the total quantity that exits a production area / total quantity that enters the production area.***

d. Operator Involvement – With this approach for capturing data, there will be operator involvement for capturing performance information –machine status; downtime reason code information etc. both in the initial roll-out and in the future.