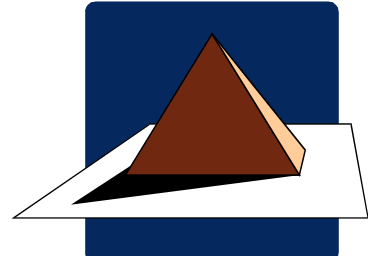


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“Service Measured To The Standard”

## ~ IS 90% GOOD ENOUGH? ~

Interesting question! The objective of 100%, perfect operation, is the goal any business strives to achieve. Yet, in our present work environment, would you be satisfied to operate your business at a 90% level? That is, 90% of the time, operators or maintenance are performing tasks correctly, and 90% of the time the equipment is operational. Let's assume that the sales price of a product is based on 100% reliable operation and the cost of manufacturing is 70% of the sales price. If, 10% of the time, someone or something is not performing at a 100% level, but rather 90%, the potential profit of the product is reduced by that 10% missed opportunity. Furthermore, what may appear to be a 10% loss could be even greater. How so?

Initial training of plant operators and maintenance personnel is critical for safe and cost effective operation. Yet, during training, individuals may not learn or fully understand 100% of their tasks. To add to the situation, new equipment may be added with minimal training or infrequent tasks may be performed without refresher training—leading to delays or mistakes. Therefore, 10% of the time, operators and maintenance personnel could be performing improper actions; and this can lead to longer down time or to products “off spec”. Since these periods of loss occur at differing times, then collectively the plant could be operating at 90% of the accepted 90% level, i.e.

operating at 81% quality production level. The efficiency plant efficiency level could be reduced further by plant designs meeting only 90% of the expected equipment or process level. Now the quality production level could be operating at 73%. Thus from these three factors we see that a once accepted 90% quality output could result in potential profit of 3%. Is there anything that can be done? Yes!!

Properly trained personnel are one of the most important assets of any plant. A short 30-minute refresher training class or discussion each week would result in an equivalent training of about 25 hours each year. Standardized operating/maintenance instructions and procedures help to establish common and consistent work practices, reducing errors and delays. Audits and failure analyses help to identify work practices and equipment reliability less than 100%.

If you are conducting audits and failure analyses, that's a great start, but if your reviews are initiated as the result of failures while “fighting fires”, then the pressure to find a quick answer for the cause and to apply a solution may limit one's opportunity to find the **true root cause** for a complete solution. These situations may be better handled by using plant personnel to address immediate problems and calling upon others to investigate the root cause of the problem and, ultimately, to develop longer lasting plant or company wide solutions.

### Disclaimer

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