
Technical Bulletin

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Was Mark Twain Talking About a Blastcleaning Problem When He Said:

**“EVERYONE TALKS ABOUT IT —
BUT NO ONE DOES ANYTHING ABOUT IT.”**

No, he wasn't. Blastcleaning wasn't around yet. He was talking about the weather. But he sure would have hit the nail on the head if he had been talking about blastcleaning.

In earlier Technical Bulletins, we have referred to the findings of Ervin's Task Force survey of more than 100 major blastcleaning operations — 9 out of 10 were found to be out of control with respect to quality of finish, productivity, and operating cost.

Shocking as that was, even more shocking was the fact it wasn't news to anyone. The Operators and Millwrights knew it. Supervision knew it — Upper Management knew it, too. Just like Mark Twain said: "Everyone talked about it, but no one did anything about it."

OPINIONS GALORE, BUT NO SOLUTIONS

Sure, everybody had opinions. Operators and Millwrights had opinions. So did Management. Unfortunately, there was always more difference of opinion than agreement. Yet, invariably, buried among the many diverse opinions was the right opinion — it just never surfaced.

The reason? A communication gap — they weren't talking the same language. Operators and Millwrights expressed their opinions in terms of "nuts and bolts." Management opinions came out as "operating concepts." Needed: A bridge to cover the gap in communication.

PROCESS CONTROL IS THAT BRIDGE

SPC (Statistical Process Control) provides the means of gathering FACTS to support an opinion. Opinions can be argued against. What is needed is indisputable fact. All of the factors that contribute to a good or bad blastcleaning operation can be pictured on SPC Charts as FACTS. Indisputable facts!

Facts, though, don't take sides — they tell it like it is. They may support an opinion, or they may prove it wrong. Either way, it's part of the learning process that leads to problem-solving. And, a funny thing happens during the SPC Charting process — you usually find the problem is already well on the way to being solved, because of the effort that goes into finding the best way to gather and chart the data.

Those SPC Charts become Management's picture-book of FACTS. When those facts verify an opinion and Management is presented with the SPC fact-charts, Management support for the proper action invariably follows.

A CASE HISTORY:

HOW SPC FACT-FINDING SOLD MANAGEMENT

Top Management's goals, posted all through the plant, assigned top priority to achieving World-Class Quality, Optimum Productivity, and Cost Reduction

throughout the entire Company. Sound goals! Necessary goals! But, those goals were far from being met in the blastcleaning operation. Not even close!

It seems that somewhere between Top Management and the blastcleaning operation, the twin goals of "Optimum Productivity" and "Cost Reduction" had been translated into the operating concept that says: "If it ain't broke, don't fix it." This concept was aimed specifically at the blastcleaning equipment to reduce maintenance down-time and the cost of replacing blast-wheel components (impellers, control cages, blades). This was to be accomplished by the edict: "Get more life out of them, make them last longer — if it ain't broke, don't fix it."

Following Ervin's Task Force study, an in-depth blastcleaning seminar was given to the Operating Team (Operators and Millwrights). Included in the 2-hour training session were the following comments about blast-wheel component wear:

- When the leading edge of the impeller wears more than 1/8-inch (not broke) —
- When the leading edge of the control cage wears more than 1/4-inch (not broke) —
- When the blades are deeply grooved and pitted (not broke) —

When these things happen, the whole operation becomes a disaster-case, because that excess wear distorts and shifts the abrasive blast-stream so that only part of it hits the work — and the rest slams against the work fixtures or the cabinet.

- Then, cleaning is poor (where you don't hit the work, you can't clean it).
- Equipment maintenance and repair increase because of direct impact on wear parts.
- Abrasive cost goes up (breakdown is faster where shot and grit hits the extremely hard wear parts).

AND

- Because work has to be re-blasted, or blast-cycle time increased, productivity falls apart (less work cleaned per shift).
- Total cost goes out of sight, when measured in cost per unit of work cleaned.

A CLASSIC OPINION CONFRONTATION

Now, the Operators and Millwrights had an opinion (based on what they learned in the Seminar) that argued against the operating concept of "If it ain't broke, etc." And, since record-keeping had been non-existent, there was no way to dig up facts to support either opinion. Stalemate.

It took SPC to bridge the gap. Top Management decided to back up its goals-priority by insisting that SPC be put in place on all major processes, including Blastcleaning. In a very short time, SPC fact-charts began showing PROCESS RESULTS in a picture-form everybody could understand — and couldn't argue against.

Whenever blast-wheel component wear exceeded the limits of tolerance, red flags came up all over, saying: "OUT OF CONTROL."

- Out of control on quality of finish (more rejects)
- Out of control on productivity (less work cleaned per shift)
- Out of control on Total Costs per unit of work cleaned.

The OUT OF CONTROL red flags got Management's attention — at all Management levels. Now, instead of the "If it ain't broke" philosophy, wheel-component wear is monitored by SPC Charts — impellers, cages, blades are changed when they should be. The Company is happy. The Operating Team is twice as happy. SPC was everybody's friend!

SPC — THE BLAST-CLEANER'S FRIEND!

SPC — The fact-finder process that resolves differences of opinion by developing FACTS everyone has to accept.

SPC — The fact-finder process that changes TALK (about differences of opinion) into ACTION (on doing what the FACTS prove needs to be done).

SPC — The blast-cleaning problem-solver!

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