COUNTING THE HOLES Pt. 2: Important Lessons

There are some important lessons to be learned from "counting holes" (see the previous post, *Counting the Holes, Part One).*

First, Japanese (and many other high-tech oriented countries') customers pay very strict attention to quality. These local quality standards and expectations may be higher or broader – or both – from what is customary in the U.S. This can be "news" to many engineering and hi-tech firms that might be used to dealing with just meeting minimum ISO (International Standards Organization) requirements. After all, these specifications are just the minimum specifications. *Expectations* can often be higher in many countries.

Taking Japan as an example again, there is a deeply engrained expectation of high quality in the manufacturing realm, which can be seen as a manifestation of Japanese cultural values, where mastery of perfection in an art (or anything else) is always held in the highest regard. Almost all Japanese manufacturers have at their core the "zero defect" philosophy built on the statistical analysis methods pioneered by American statistician W. Edwards Deming after WWII. Deming is regarded as having had more impact upon Japanese industry than any other non-Japanese person. He was honored in Japan in 1951 with the establishment of the Deming Prize, today considered the most prestigious and famous industrial award in Japan. No analysis of the rise and success of Japanese industry and products will fail to give W.E Deming his due credit. (Today his work is carried on by the Deming Institute.) Yet despite that, his concepts and philosophy began to gain some modicum of recognition and adoption in the U.S. only shortly before his death, with the creation of the U.S. Malcolm Baldrige Award in 1987. Even today, few Americans

have heard of this award.

Deming's industrial and design practices have evolved into the "zero defect" approach virtually all Japanese companies build into their manufacturing processes, and in turn, Japanese customers build into their buying expectations. By contrast, much of the U.S. manufacturing sector still bases its design processes on the concept of "minimum percent of defects." "Zero defects" is very hard to achieve, and no matter how good and advanced the manufacturer, some defect will occur. Rigorous application of a "minimal defects" approach will yield minimal defects, a goal much easier to achieve. The gap in results between the two approaches, at least for high quality manufacturers around the globe, can be small, maybe even the same. But the gap in *philosophy* is huge. The achievement of say, a 4% defect rate against a target of a 5%, would be cause for celebration (and maybe corporate bonuses) according the minimal defect approach, but for criticism and increased pressure for process improvement under a "zero defects" approach.

This difference with Japan (and other advanced-technology countries) can set up smaller U.S. companies for an unwelcome surprise when confronting customers who are demanding different and very high technical and quality standards that they are not used to domestically. Engineers, marketers and customer service, among other groups in a company, often balk at the level of technical detail, commitment to quality, and customer satisfaction demanded by many of their overseas customers, their Japanese customers being the prime target of complaint.

Another area of difference in quality perspective with many international customers is that they are also concerned with the *appearance* of the product, not just its performance. When products do not meet stated specifications – even cosmetic or minor ones – many international customers take it just as seriously. For Japanese consumers, for example, "Scratch and

Dent Discounts” are not a consideration. Customers demand perfection.

The implications for US manufacturers are that product shipments that consistently contain out-of-spec products or visual imperfections will erode confidence in the manufacturer. This lack of confidence inevitably filters down to the field sales force level, and will eventually negatively affect the sales of the product.

This brings up another point about specifications. US companies tend to be very legalistic and narrow in their interpretation of contracts and product specifications based on U.S norms. Recognize that a consistent pattern of customer complaints about “poor quality” or “frequent trouble” is an important information stream about potential problems in product quality in a certain environment. Use your customers’ or distributor’s incoming inspection process as an extension of your own quality control. (We’ll return to this subject in a future column.)

Your international customers’ input is an important source of feedback to improve the quality of your product and your process to meet consumer preferences and expectations, in addition to environmental demands that may not be present in the U.S. domestic market. When they hold your feet to the fire, don’t ask, “What difference does it make?” and try to avoid raising your quality standards. See what can be done to satisfy the world’s most demanding customers. You’ll end up building a reputation for quality around the world. Why not reap the benefits of having somebody else count the holes for you?

COUNTING THE HOLES Pt. 1: Why Your Standards May Not Be As Good As You Think

Small companies founded on engineering or technology can face problems when communicating their ideas and concepts to an international audience who may approach problem-solving from a different perspective.

The following is a condensed true story. Taking a cue from Hollywood, names have been omitted, details changed and disguised, and the actual conversations have been shortened and enhanced for "dramatic effect…"

Several years ago there was an American parts manufacturer who had a Japanese company as one of its most important customers. The American company worked in close cooperation with its Japanese customer. As is the case in many instances in specialized industries where the manufacturer sets its own standards and publishes its own QC specs, the manufacturer had issued its own standard variations for a certain kind of part that it had been supplying to its Japanese customer. In this case, the part was a kind of large flat structural brace for insulation, resembling a giant peg board, that fit between the outer skin and the inside wall of a fairly large final assembly piece. The insulation was riveted onto this brace. The process of riveting the insulation caused a number of holes to be closed, and thus a standard was set by the manufacturer that "no more than 14% of the holes would be closed when the final assembly is delivered…"

One day, a delegation of Japanese arrived at the manufacturing plant with a grave concern: The supplies being delivered were out of spec! Between 18-21% of the holes were covered!

In the meetings that followed, communication broke down. The

American engineers couldn't take their customers seriously. "These guys actually *counted the holes!* Don't they have anything better to do?! So what's the difference if it's 14% or 18% or 21%?!!!"

Perhaps that represents a view that would be shared by many of us. *You mean these guys actually counted the holes?!*

Yes, some one did indeed count the holes! Somebody went home to his wife that night and answered that universal *"How was your day, dear?"* with, "Well, I counted some holes today and, amazingly enough, there weren't enough of them! The boss is going to be pretty surprised when he reads my memo…." (You could even imagine the music in the background.*)

Yet the Japanese voiced a concern that is representative of Japanese industrial thinking. It could certainly be said to be one of the fundamental reasons for the well-deserved reputation for high quality enjoyed by Japanese products across industries around the world: attention to quality details.

To their credit, the manufacturer took up the challenge. After many months of internal investigation, much to their chagrin and just as their customer had claimed, they could not find one example of in-house assemblies that had no more than 14%.

Trying to recoup some face, they now replied what they had been thinking all along: "Well, what difference does it make, anyway?"

What difference does it make? "Who set the specifications in the first place? *You* did, not us, and your products are not meeting *your own self-set specs.* If the true specifications should be 'between 18-21%', then publish that as the standard. But don't publish one thing and then manufacture them at some other, sub-standard specs. If you can't even meet your own specs, how can we be confident you are meeting

industry and government specs?!”

With that, the argument was won. The manufacturer embarked on extensive retesting and reanalyzing, and revised its specifications to meet realistic and mutually acceptable levels.

Next: Important Lessons

**Fixing A Hole,* The Beatles, of course!