Correcting Your Corrective Actions

BY DAN KAUFMAN AND SHEILA ALEGRIA

Knowing what a corrective action is and when to employ one can help you tighten up your quality management system and use it to its full potential.

IF YOU'RE ONE OF AISC'S CERTIFIED FABRICATORS, there are two kinds of corrective actions that apply to you. As a fabricator, you will write a corrective action when you find a problem that needs to be addressed in your system; this is the first type. The second is an AISC Audit corrective action, which is, as the name implies, potentially written as a result of an AISC/QMC certification audit.

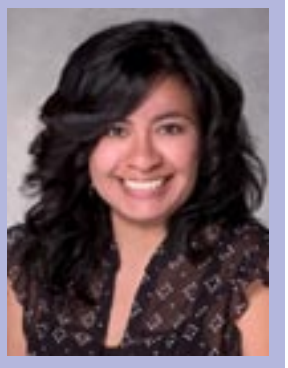
The first one is the most important, as it leads to problem resolution within your own organization and results in documentation that shows that your quality system is working. It also shows that management is actively involved in the quality system. The AISC audit corrective action, on the other hand, might happen only once a year as a result of the "snapshot" view of your company taken by the onsite auditor on an AISC certification audit. While an audit corrective action should not be alarming, it does indicate that an outside entity was required to point out a problem in your system. Bu while AISC is an outside entity, having the issues come up during the AISC audit is better than having an issue arise for one of your customers and possibly lower *their* quality evaluation of your company.

Annually, we compile the statistics of the audit corrective actions written by the QMC auditors and publish the results in *Modern Steel Construction*. These statistics show the summarized reasons for the corrective actions, hopefully giving fabricators a look at where typical soft spots are found. Fabricators looking to become certified probably gain the most from the summary, as it points to where they can concentrate their efforts in creating a good quality management system. (That's a *management* system that is of higher quality, not a system limited to only product quality.)

Every year with this analysis, it seems apparent that there are some fabricators who are not using their internal corrective action systems correctly, and therefore are not receiving the full benefit of the system. Errors in executing corrective actions typically start with a nonconformance—or according to the American Society for Quality (ASQ), a "nonconformity." Nonconformities are typically discovered in the inspection process. Some fabricators believe that any repair of a nonconforming piece is a "corrective action." It is not. A repair of a nonconforming part is, very simply, a repair. When a situation involving nonconforming pieces or processes occurs, a determination must be made to decide if the event is serious enough to warrant a bona fide corrective action. For example, a clip angle placed off the mark can be removed and replaced easily. Yes, time was lost, but a review of inspection records and nonconformance summaries can show how often it is happening. Similarly, if clips have to be removed and replaced several times a day, this is a situation that deserves some investigation. It is the investigation, solution, and implementation of the solution that comprise the corrective action process.

Another example might be a case where the most expensive piece ever handled in the shop had to be scrapped because it was cut too short. It's only one piece but it's a high cost, and nobody wants that to happen again, not even once. The repair of the piece is still not the corrective action. Again, investigation of the error, finding a solution to prevent that error from happening again, and the successful implementation of the solution are what make up the corrective action.

Making the decision when to initiate the corrective action process is not always clear. Remember that a procedure can be changed if it isn't working. If you are spending too much time investigating simple problems, or not doing any investigations, a change in the plan is indicated, although neither of those situations is desirable. Looking at a record of past nonconformances or inspection findings will normally indicate a pattern of problems. A review of that pattern will show problems that can be considered low-, medium-, or high-impact. You will also see a frequency of problems—again low-, medium-, or high-frequency. A simple chart (following page) can be made to easily show how events can be grouped, and limits chosen indicating when to trigger corrective actions. In this example, the green area—low-frequency and low-impact—does not warrant a corrective action. However, the red zones, such as high-impact situations—like losing a customer—with varying frequency should trigger a corrective action. Likewise, if a low-impact problem



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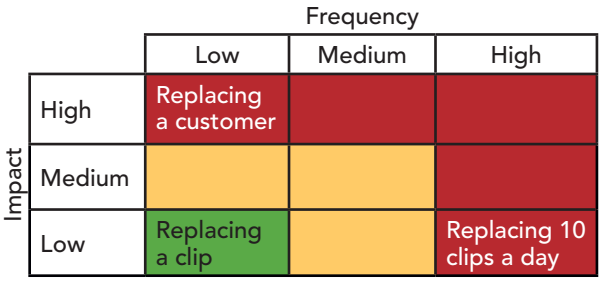

reaches a high frequency, then it will merit additional attention as well.

When to Implement a Corrective Action

Another source for an internal corrective action is a concern written during an AISC certification audit. These concerns are normally described during the closing meeting of the audit and recorded in the audit report; it is expected that certified companies use their own system to address the concerns. These issues can be handled internally, without becoming AISC audit corrective actions the following year.

One more source for internal corrective actions can be a process or procedure failure. If, during your internal audit, you find that a procedure is not being followed—or a procedure is actually causing problems—that issue can be documented and resolved by the use of a corrective action.

When a decision is made to implement a corrective action, the root cause of the problem must be found. A very frequently applied "root cause" is to train or retrain employees. While training is valid on occasion, it should not be over-used. If you find your organization using this excuse too often, you are dealing with a symptom. The disease is the fact that there are so many employees needing so much training! Either the training isn't any good, or employees are being placed where they shouldn't be working. In some locations employee skill levels are not as abundant as the market requires. Your cure will have to include a really good trainer.

Chasing a root cause can be daunting, but it can be eased by employing a root cause analysis model. This may sound complicated but it doesn't have to be. It also can be a one-time effort. One model used widely is the "Five Whys." Start with the first response to "why" a nonconformity happened, and when an answer is given ask "why" again. This will likely annoy the life out of the recipient of the questions, but it's a good way to drill down to a root cause. Categorization of possible causes by personnel, machine, materials, or methods can help narrow down the possible causes. Pick a method and make it your "official" root cause analysis plan. When everybody knows what is expected in root cause analysis, it will happen faster. There are many books and Internet articles on root cause analysis. (There are also lots of consultants ready to tell you that they are the only ones qualified to show them to you.) There is free help at **www.qmconline.com** and also at **www.asq.org**.

Using a corrective action system is a very important part of your management system. Not performing corrective actions is like announcing that key individuals don't believe in using quality tools to make your business better. Knowing how—and when—to perform a corrective action is good, but even more important is the will to put the system into action. MSC