

Better Metal Management

Establishing controls for precious metals

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As soon as I answered the telephone and heard the caller's greeting, I knew something was wrong—dead wrong. “Mike, ummm...ah...I think I have a problem.” I immediately recognized the hesitant, wobbly voice: It belonged to a successful ring importer who had blindly jumped into manufacturing several months ago. As his bank auditor, I had come to know him well—and his problems. I cringed at what he might say next.

“Um... I'm a little confused, Mike, and I need your help,” he continued. “It's my inventory: I've got an 8 percent gold loss, and I think it might be a problem. What do you think?”

“What do *I* think?” I responded. “Let's see, 8 percent of your gold unaccounted for... That comes to about \$215,000. What do *you* think about that?”

His silence at the other end of the line confirmed my worst fears: His company was out of control. Ever since he had started on this venture, he had had constant troubles with his precious metal inventory. Now he was telling me he had an 8 percent gold loss. He might as well shut his doors for good.

“Let's try to figure out the problem,” I said. “Did you follow the guidelines I suggested? Did you get a good physical count on your precious metals?”

“I think so,” he said weakly.

“For \$215,000, wouldn't you rather *know* you had a good count? Let's see, did you inspect your dust collectors and the ductwork of your ventilation system for gold dust buildup? Did you sweep and vacuum up every last bit of scrap possible? Did you pump out the sink traps and sludge tanks, and change the resins

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and filters? Did you double-check the base metal scrap drums to ensure there's no gold in them?"

"Ah..."

"Did you review your books for data input error? Did you get confirmation from vendors, subcontractors, and refiners about gold that's being held on their premises? Did you count your salesmen's lines to make sure they match their reports?"

"Ah..."

"What about security? Do you scan employees on a regular basis? Do you limit access to the vault?"

"Ah...we're working on those things, but we haven't quite nailed them down yet."

"It's your inventory," I replied.

Sadly but not surprisingly, the company closed a year later due to severe metal losses. Looking back at that experience, I can only shake my head. After performing more than 25 jewelry manufacturing audits in my career, I've found too many similar examples of companies that don't track their precious metals the way they should. They lack inventory procedures, security controls, basic reclamation policies, and even properly trained personnel.

Such sloppiness can have many consequences, not the least of which is a poor return from refiners. A refiner can give back only as much as it has received: Precious metal lost at a manufacturing plant is lost forever. To maximize their returns, companies must learn how to capture as much precious metal as possible—and that starts with sound precious metal policies.

Graham Ward, executive vice president of operations for Hallmark-Sweet in Attleboro, Massachusetts,

believes that precious metal inventory and accounts receivable exposure compose the heart of the jewelry industry. “As such, our first line of defense lies within strong internal controls,” he says. “With regard to metal, our systems heavily monitor the physical movement through our [production] processes, thus affording us up-to-the-minute accounting.”

When it comes to defining and assessing controls, one of the leading authorities is Paul A. Bourget, president of Paul Bourget Associates in Woonsocket, Rhode Island. Bourget, a CPA, has 25 years of experience in precious metals, evaluating the strengths and weaknesses of jewelry manufacturers for major banks and business owners.

“Companies that become successful often do not implement controls to remain successful,” he notes. “The jewelry industry makes the most money in the fourth quarter, but it also loses the most money in the fourth quarter. Everyone is so busy shipping product that vital controls are neglected. Well-managed companies control their success and ensure that strong controls are maintained in every quarter.”

Making Inventory Count

So how can manufacturers ensure they won't be surprised by returns from the refinery? Any system of controls must begin with the establishment of good inventory procedures. “We made a commitment to protect our investments, our assets, our company; that equates to a system of valid inventory controls,” says Vernon J. Ferrini, controller for General Findings Inc. in North Attleboro, Massachusetts. “Sure, we have excellent security here, but precious metal inventory control is our number one priority.”

Todd Morvillo, president of Morvillo and Sons Inc., a fabricator of precious metals in North Providence, Rhode Island, adds similar thoughts. “We constantly monitor our inventory and have a series of checks and balances for each process. Gold control is critical, and if we are out of sync, our staff works together to find the reason. It's a team effort.”

To nurture such policies, owners and senior management must set forth objectives in their business plan. The first objective should be the establishment of

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what is perhaps the most important management tool available: the PMCA (Precious Metal Control Account).

Call it what you like—the gold book, the hedge book, or the daily position analysis—the PMCA is as important to a company as a compass is to an airplane: Without one, you don't know where you're going. Simply defined, the PMCA is a transactional summary, in fine troy ounces, of gold, platinum, and other precious metals held by the company. It will indicate the total amount of precious metal in use, the metal's physical location (both in-house and off-site), and the amounts owed to leasing banks or vendors. It will monitor purchases, sales, returned product, goods on consignment, metal contained in sales lines, and lots held at refiners, among other categories. In many ways the PMCA functions like your typical checking account, with the “opening balance” based on a solid physical inventory of raw material, work-in-progress, and finished goods.

How does a PMCA work? Let's say your opening balance on Jan. 1 is 5,000 fine troy ounces of gold. That first week, you purchase 400 ounces of fine grain and ship 600 ounces of 14k chain. Your PMCA would look like this: 5,000 ounces of gold plus purchases of 400 ounces minus sales of 350.40 (600 ounces of 14k times 0.5840 assay) equals 5,049.60 ounces as the ending balance for the week. Naturally, the PMCA becomes more complex when you purchase and ship items of different karatage, or have metal moving between some of the major categories mentioned above.

The PMCA also provides the basis for what may be one of the most crucial areas of inventory control: monitoring and calculating shrink.

Rising Above Shrinkage

Shrinkage (i.e., metal loss) is the difference between the fine ounces tabulated from the physical inventory and the fine ounces tabulated from the PMCA book inventory. In a perfect world, the two numbers would match. Fact is, they rarely do. Even with the best controls, there will always be some level of shrinkage. The key is to keep that level in check and understand why and when it happens.

When reviewing shrinkage, jewelry manufacturers typically conduct both a book-to-physical comparison and a throughput analysis. The first method delivers a snapshot in time: It compares the total metal quantities on hand with what has been recorded in the PMCA. Manufacturers should do this with each physical inventory, looking for patterns or blips that warrant further investigation. Those results should then be compared with figures for both the previous year and the most recent five-year period. Most companies conduct an inventory annually, but auditors usually recommend doing it twice a year or even quarterly.

When comparing inventory to the PMCA, be suspect of gains: They're usually the result of conservative accounting practices that often mask true shrinkage. As an example, a controller might intentionally pad the PMCA to show a gain at the end of the fiscal year and ensure everyone is happy. This is typically done by distorting sales reports to overstate the reduction of metal in the book, resulting in a higher physical inventory. This, to say the least, is bad policy.

Most often, the result of the book-to-physical comparison will be a metal loss. The throughput analysis then compares that loss to what has been manufactured for the given time period, putting the book-to-physical comparison in perspective.

To conduct a throughput analysis, take your ounce loss and divide it by the number of ounces used in manufacturing during that same time period. Analyze the shrink ounces and percentages lost to (1) determine if the losses fall within the parameters set forth in your company's business plan, and (2) see if the losses fall in line with those of similar manufacturers. For example, say your book-to-physical shrink shows 140 ounces of fine gold lost on an inventory totaling 10,000 ounces. That equates to a 1.4 percent loss. Is that acceptable to your business plan and historical shrink numbers? If you pushed 25,000 fine ounces of gold through

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the plant, the shrink or throughput level is now a 0.56 percent loss. Is that acceptable?

While actual shrink numbers are a closely guarded secret, it's safe to assume the following as a guide: Manufacturers of findings, stampings, chain, and fabrication should have a shrinkage of less than 1 percent. Manufacturers of rings, charms, pendants, and other jewelry requiring heavy grinding and polishing have a wider shrink range of 1 to 3 percent. If your book-to-physical shrinkage and percentage loss exceed your business plan's allowances, review your inventory compilation line by line for such mistakes as misidentified items, wrong conversions, and data input errors.

This review is a very important step, since numerous hard-to-pinpoint errors can occur. Given the numerous SKUs in a manufacturing plant, for example, it is quite easy to count 14 karat as 10 karat and vice versa, as well as have tare weight errors. I have also seen several computer systems calculate 14 karat material using an errant factor of 0.4166, the factor for 10 karat conversion. This quite damaging miscalculation lay buried in an inventory compilation some two hundred pages long. When it was fixed, 400 fine gold ounces were added back to the inventory.

After checking your inventory, review the PMCA in the same manner and rerun the analysis. If your shrink is still too high, perform another physical inventory (as dreaded as that may seem). *Don't* throw the analysis in the drawer for next year, since all the signs signal a major problem may be lurking.

You'll find some shrink losses are easily explainable—for example, some ounces may be kept by a re-

finer as a service fee. It's the unexplained losses that create the headaches. For those, you'll need to go beyond the PMCA and look at your overall operation.

The Scrap Trap

You can begin by looking into scrap accountability. From its purchase in raw form to its shipment as a finished product, gold changes shape, weight, and karatage through a multitude of processes. All of these changes result in scrap metal, which is then either remelted or sent to a refiner. Too often, manufacturers don't track these changes; if they receive lower-than-expected returns on their scrap, they place the onus on the refiner to account for the loss. But controlling scrap—as well as improving returns—actually begins on the production floor.

The first step is to determine how much you are losing on job orders. To do this, you can begin with the high-scrap-generation areas: cutting, grinding, and polishing. These three areas generate the most metal loss in any manufacturing operation: The reduction in material between a cast and a finished piece can be as much as 25 percent. Since cast pieces are generally sold on a pre-finished weight basis, manufacturers too often become complacent because they have in effect charged the customer for the loss. Instead, these working losses should be accounted for in the PMCA.

Once you've tracked your losses, you should ask yourself three questions:

Have I accounted for all the precious metal in my plant? Take a good look around the plant to ensure you are looking in every nook and cranny where precious metal may hide. And don't forget such obvious places as the sink trap, rugs, and dust collectors.

I can recall having a quite lengthy discussion with a plant manager who didn't want to clean his dust collector because he was worried about the cost of replacement bags. "Besides," he said, "it's a new dust collector; it can't have much gold in it." After much insistence on my part, the company cleaned the collector and recovered 456 ounces of gold. This was a large adjustment that otherwise would not have been part of the company's physical inventory and would have been a major factor in "unexplained shrink."

Are all personnel properly trained? Problems can also stem from poorly

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trained personnel. It's a good idea to do periodic reviews as well as cross-training to ensure jobs are being performed properly: You may be surprised to learn that certain procedures are being sidestepped in a race to get product out the door.

During one audit, I was standing in the security room with the owner, observing scanning procedures, when in comes the janitor with a mop and bucket. I had seen the janitor about an hour earlier mopping up in the grinding area; now here he is mopping like a hurricane in and out of security—unchecked. The owner and I watched him move to his utility closet, where he proceeded to dump the wastewater, gold glittering all the way into the drain. Upon questioning the janitor, we learned that he'd been doing this every day for the past two years because that was the way he'd learned it from the previous janitor. As you can well imagine, the owner was quite embarrassed—and extremely upset when he learned that the drain had no gold recovery trap.

Is a security program in place? Any company involved in the handling of precious metals should have a working security program. Employee theft is an ongoing problem in the industry: A disgruntled employee running a machine all day may spend a considerable part of the day thinking of creative ways to beat the company.

The sophistication of a company's controls should be primarily predicated on three criteria: the amount of inventory on hand, the capital available to invest in security systems, and the number of employees. Walk-through detectors, independent security guards, and

hand scanners all work well as a line of defense. A company should also limit access to the vault, as well as make sure that security stations are positioned between the production floor and employee lockers. At a minimum, shops with more than five people should install a random peg system, in which employees draw color-coded pegs from a board when exiting the plant. Those with the color of the day get scanned.

But you should never bet your inventory solely on your security. Rather, make sure all of your internal controls are in place and operating properly. According to Rory Pichi, a former vice president of operations for Jurgan & Cheviot in Los Angeles, good internal controls are based on “a combination of accounting, production, and security controls that work together.” If any of those areas is below par, a plant is not secure.

Getting Back to Basics

Even if you’ve done everything right—establishing proper inventory procedures and shrink policies, collecting all the scrap possible, installing security equipment, and training your employees well—the value of a second opinion is immeasurable. Thus, it makes good business sense to have an independent consultant, intimately familiar with the jewelry industry, come in to review your controls. The audit typically focuses on your policies, procedures, and personnel, comparing them with industry standards and outlining your strengths and weaknesses. You may discover things about your company you never knew.

During my audit days, I had the opportunity to observe facilities in numerous areas—fabrication, stamping, casting, rings, chain, and refining. I’ve seen common mistakes (some of which I’ve noted above) made again and again because managers lacked exposure to industry standards and concepts. Some of those managers fell victim to the “if it ain’t broke, don’t fix it” mentality. (Just imagine where manufacturing would be today if no one had the ambition to make things run smoother, faster, lighter, and cheaper.) Others were open-minded and willing to absorb outside help—and they saw their profits rise.

Don’t think you need a sales base of \$100 million to establish strong controls. Take a lesson from the gold prospectors of the 1880s: While working hard all day

on a sluice box, they counted their gold pieces, weighed them, wrote that weight down in a book, kept that book close to the vest, packed a six-shooter for show, then rode into town to sell their gold at the scales. It didn't matter if they were working alone or running a mining crew, they all followed the same procedures for control—or their failure was guaranteed. Those same guidelines (minus, of course, the six-shooter) still apply today. It's that simple. And that important.

