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Earplugs and efficiencies: Visual cues of performance

VISITING 20–30 PAPER MILLS PER YEAR allows one to make a lot of observations, especially when the first mill visit was in 1975. Regardless of grade produced, geographic location, mill age or ownership, there are a few visual cues that can tell you immediately about mill management. These cues often indicate excellent or poor paper machine performance.

First, there must be an apology offered to all as no offense is intended here, just an editorial to bring about some thought.

Ear Plug Theory

Paper machine efficiencies are inversely proportional to the number of discarded earplugs found between the parking lot and paper mill operating floor. The basis of this theory reflects how mill personnel really care about their working environment. Ear plugs scattered like popcorn can be seen in gutters, in the grass, along sidewalks, on the floor next to trash cans and by warning signs about keeping plastics out of the process systems. If you agree with the concept of taking care of small problems so that large problems never appear, then housekeeping is one of the first basics to conquer. This includes providing enough trashcans (and emptying them occasionally) along with practices by top management, and down, toward keeping the place clean.

At the end of a two-day visit to a recycled paperboard mill in the South (envision trucks of OCC, OMG and various scraps of waste paper blowing around from the highway to the storage warehouse), I was discussing the lack of all of the trash, as previously described, with the mill manager. I asked how they keep the mill property so clean. He answered, "Well, we all deserve to work in a nice environment." That was all. Later on, I noticed the engineering manager picking up a pair of earplugs and connecting cord while walking across the road back to his office.

Welding Rod Corollary

The amount of unused or partially used welding rods scattered on every concrete floor are proportional to unscheduled downtime. I have to confess that during a vacuum system survey, pipe plugs or fittings are often removed to allow installation of a new vacuum gauge. After a brief search, in some mills, a welding rod can be found and poked into the hole to remove dried stock, scale or rust. Then again, in other mills the long search is exhausted only when some wire or rods are found in a scrap metal bin or trashcan.

In what type of mill would you find someone pressure cleaning the operating floor, repainting of equipment and structural steel, and brushing dust and stock off from mesh guards over motor and gear reducer fans? Which mill would you prefer to work in?

Control Room Quality of Life Hypothesis

Remember when there were only bench boards and maybe a small shack for wet end operators? Today, control rooms may have: smoked glass windows; air conditioning; dim, indirect lighting; DCS panels wrapping around comfortable office chairs; refrigerators; microwave ovens; and exercise bikes or treadmills.

Is there a measurable relationship between having all the comforts of home (and then some) and having talented papermakers produce high quality grades at 90+% efficiency, over 8–12 hour shifts? Fortunately, there is not. While there is absolutely nothing wrong with having a nice place to work, talk and think (recall the mill manager's previous comment), some papermakers have grown accustomed to only running the process from computer monitors, seldom venturing away from "Home Base."

Although the complex paper machine processes may be equipped with bells, whistles, automatic controls and computers, there is no replacement for wandering around, climbing the catwalks and even hosing down obscure areas of the basement floor. This allows you to closely observe, feel, hear and even smell the symphony composed of thousands of meshing gear teeth and spinning bearing rollers, maybe a hundred motors whining and all of the machine rolls conveying a fragile sheet from the headbox to the reel.

For the best operating mills with or without luxurious control rooms, a big difference in efficiencies lies in the amount of time spent on rounds and genuinely trying to find a small problem before it becomes a serious cause of downtime.

Our paper industry in North America is competing globally whether we want it to or not. In Latin America or Asia, someone can be paid a few dollars per day to wipe the goo off a gear housing or grease fitting. That person can feel a hot bearing immediately and report it. Taking care of details can prevent the big problems from arising. P&P

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