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PRODUCTION VALUE LEFT ON THE SURFACE OF THE ROLLER

By

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Our own Safe Harbor Statement

The claims, observations, data and viewpoints of this paper are based on over 77+ years of involvement in the Web Processing industries. Data is derived based on doing business (on an annual basis) with over 1,300 different web processing manufacturers. This includes processing over 16,000 unique purchase orders and more than 260,000 rollers annually in 23 different market segments. This market activity includes providing (on a limited basis) solutions to “competing” companies due to the large product portfolio of the American Roller Company. There are exceptions within the industry to the items highlighted in this paper; however they are just that – exceptions – and not general practice as observed and documented by company data. *There are exceptions but be careful not to fall in the “but my company is different” mindset trap.*

THE INDUSTRY CHALLENGE AND WHY

In web processing rollers, the areas of roller utilization, best practices, maintenance and fleet management have significant opportunity for process improvement. In too many of these areas we (the industry) are sloppy with details and lack metrics to document performance and continuous improvement. **We are leaving process improvement and economical value on the surface of the roller.**

Why do we allow this to happen? In many cases roller spend is a lower amount in the overall maintenance, repair and operations (MRO) spend within a plant. As a result, plant operations or executive management tend to focus on other aspects of the business or what they perceive as higher impact areas. Ironically, web processing rollers are typically the piece of equipment affecting machine speeds and quality. Therefore, just because they may be lower spends; they can be the highest impact component in production and quality metrics. This is often overlooked.

What are the contributing factors and what can we do about it? There are three groups of “offenders” all leaving value on the surface of the roller: **The Industry, The End User, and The Supplier Base**. In the following we will highlight these areas of inefficiency and identify root cause and corrective action.

THE INDUSTRY

Within the industry there are two themes that many view as acceptable, or feel the time and effort required to correct is not important. They are: (1) lack of roller specifications and (2) what we call the Con Game. These industry problems result in inefficiency and lost economic opportunity.

Lack of Specification – In a majority of the industries, end users do not have a master specification file of what they have/want per roll position. As a result, they don't know what they receive from suppliers and do not have anything to validate it against. Often times the business process is sloppy: rollers ship to suppliers without documentation, PO's often read "make it like last time", and journal repairs are subjective. At any given time, 30% of in-house rolls from end users do not have purchase orders or tracking information. The lack of clear specifications and sloppy paperwork cultivates a mindset of being loose with the details which directly correlates to performance issues. This culture breeds the second theme seen.....

The Con Game – Most roller suppliers are smaller operations (less than 40 people), and as a result struggle with critical mass challenges in running a business. These struggles often show up in two areas: (1) materials being supplied; (2) tolerances being achieved. Small suppliers often must substitute material specified since they do not have the material in stock. They may also ignore the roller tolerance because of capability limitations. In some cases suppliers will even "re-cap" instead of recovering customers' rolls to save costs.

How are we sure this is happening? In working with end users to solve problems and enhance performance, we find that in 30% of the cases we uncover the material, durometers and tolerances they thought they were getting were not correct.

How does this happen? This happens because the end user often has no measuring standard (or the resources) to inspect incoming rollers, they do not require certified supplier quality sheets, and they do not go back and audit or verify supplier compliance.

What can an end user do to correct this?

1. Document a master specification file for every roller position.
2. Develop formal master service agreements with suppliers.
3. Require suppliers to provide usage metrics; certified quality documentation (i.e. laser profiles, proof & accountability documentation.)
4. Audit the supplier.

THE END USER

The data set that drives observations and conclusions regarding end user based inefficiencies ranges from single plant entities to global multi-national plants. There are three identified groupings and the degree at which end users struggle in these areas is wide ranging. Further, the same plant can have different levels of success or challenges within these three groups:

De-centralized vs. centralized decision making – Almost all end-users address roller spends in a de-centralized plant mindset. Some end-users have tried corporate initiatives with virtually no success as local plants resist, citing several real factors such as differences in equipment and local servicing needs. Most examples of these initiatives center on a unit price, purchasing consolidation perspective. The market as it exists today is highly unit price competitive, and efforts in this regard have yielded poor results. However, very few organizations have approached it from an application or roll position perspective, based on standardization of materials and tolerance requirements. Our company has experienced end-user success with a very narrow set of companies that recognize this opportunity and put programs in place to drive results led by a corporate engineering department.

Generalist and Poor Metrics - Many end user plants have downsized and personnel have become more generalized, therefore they are not roller experts. As a result, personnel often make poor roller business decisions due to a lack of knowledge, training or time. While many plants have computerized maintenance management systems (CMMS), these systems are often not used for roller metrics to drive continuous improvement and uncover untapped opportunities. Very few end users generate quarterly metrics around roller usage, performance and the correlation to spends and overall machine performance. In addition, very few end users have measurable process

improvement objectives around rollers as they do not have the baseline data from which to work from.

Unit Price vs. Value Delivered – Within the industries there is a mix of business; about 50% commodity oriented and 50% high value-add applications. A unit price perspective in the commodity arena is a reasonable expectation. However, in value-add applications, roller performance directly relates to improved run-time, less quality defects, or lower total cost of ownership on a machine. Value is measured by these parameters as opposed to unit price. However, almost all end users view web processing rollers as commodity and are unit price focused. All rollers are lumped into one commodity category. This means end users miss vital opportunities to improve their operations.

What can an end user do to correct this?

1. Evaluate and decide your level of centralized or decentralized strategy.
 - a. Are you purchasing or application engineering driven in your approach?
2. Does your company or plant use a CMMS system? Do you have access to roller metrics?
 - a. Do you have quarterly usage and performance metrics as it relates to machine performance? Do you have a continuous improvement program in this area?
3. Are you using your supplier base as a technical consultant? To help with best practices?
4. Have you segmented your roller needs? Unit Price vs. Value Add. Can you quantify?

SUPPLIER BASE

It probably is no surprise that to the supplier base, we have room to improve and be better! We have our own three areas where we could assist the industry and the end user in unlocking economic value in web processing rollers.

Niche Product Offerings – In order to effectively drive value, all types of roller constructions and coverings need to be considered when developing value based solutions. Rubber coverings

are not the answer for every application, and the same can be said for urethane or hard facing coverings. This presents a challenge for end-users who already struggle at times with their depth of knowledge and limited time to research multiple suppliers.

Suppliers are de-centralized - Most suppliers are a single facility, which makes them de-centralized by nature. Almost all the of the other multi-plant roller companies approach the market and manage internally in a decentralized way. This presents a challenge to end users who have developed or would like to implement some level of corporate standards and need a supplier base that can help in that execution.

End users need consolidated suppliers - The roller industry today has more supply than demand. As a result, there is extreme price pressure and suppliers cut costs. This by itself isn't necessarily all bad, but as a result only a very small handful of companies are investing in R&D efforts or future technology. Even the "larger" suppliers, who do pursue R&D, are increasingly devoting more resources to project execution to make up for the knowledge gap at the end user level. Smaller suppliers continue to cut corners—focusing on the "unit price" chase.

What can an end user do to correct this?

1. Evaluate your supplier base to understand what niches you are getting advice from.
 - a. Be sure you have evaluated all options to roller technology for your applications.
 - b. Dig deep and fully understand if in-house full service is truly comprehensive.
2. Evaluate how you're centralized vs. decentralized strategy correlates to what you expect of your supplier base.

About the Author

Dan Cahalane is the President of American Roller and Plasma Coatings, a company that specializes in surface enhancement coatings and organized into two divisions: Web Processing and Industrial. Dan has been with the company since 2005 and in manufacturing for over 25 years. The Company has over 10 locations across the United States and China. Dan holds a Bachelor of Science in Electrical Engineering degree from Marquette University. Previous to American Roller he held global management positions at ABB, a large international automation group. He is a member of the Board of Directors for the Metropolitan Milwaukee Association of Commerce (MMAC), and is Managing Director of Cahalane Investments, LLC which invests in private middle market manufacturing companies.