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Canadian Box Makers Address Corrugator Water Treatment

by Jerry Scott Mills

In late June, the Manufacturing Committee of the Canadian Corrugated and Containerboard Association (CCCA) convened in Toronto, Canada. Under the chairmanship of Bob Hagan, Atlantic Packaging's Senior Vice President of Sales, seventeen participants gathered to address the timely and complex topic, "Corrugator Waste Water Treatment Challenges Facing the Canadian Industry."

Bob Hagan

The meeting's purpose was to assess the scope and impact of widely-divergent regulations which currently apply to industrial waste water disposal in municipalities where CCCA member companies operate. David Andrews, Executive Director of the CCCA, described the Manufacturing Committee as a "robust group within the Association, addressing all manufacturing issues that are commonly shared."

The proceedings were overseen by CCCA legal counsel, Ted Panagiopoulias of the Norton Rose Fulbright law firm, whose presence and expertise would ensure that all exchanges of information conformed in both spirit and intent to strict regulations of the Canadian Competitions Bureau.

The Importance Of Starch Management

To open the meeting, Bob Hagan introduced Associate Members Matthew McPeake and Brian Stamegna of Ingredion Canada, who had volunteered to participate as presenters and as a resource for the session's general discussion.

A long-standing CCCA supporter, Ingredion is a major international supplier of formulated starch-based adhesives, which become a significant component of waste water generated during the corrugated manufacturing process.

Matt McPeake, Ingredion's Senior Manager for Corrugating (U.S. and Canada), began his opening segment with a brief overview of that company's extensive international experience assisting corrugated manufacturers in treating waste water and managing the impact which treated wastewater can have on their plants' starch manufacturing processes.

Matt McPeake

He covered in detail many factors which can influence waste water output from industrial starch application systems and provided examples of "Best Practices" for handling starch adhesives used in a variety of corrugating applications.

A key message for this audience of leading Canadian board manufacturers was the importance of having an efficient starch management system in place. He emphasized that proper control over physical and chemical properties of the waste water effluent was, to a significant degree, employee-influenced.

Addressing specific linkage of adhesion quality with corrugated board performance, McPeake noted that the most robust starch systems he has observed operating in North America are overseen by "trained and informed employees who understand the critical points in the starch mixing process and are capable of accurate measurement and documentation of all applicable data."

In his follow-up segment, Senior Account Manager Brian Stamegna covered the specifics of dealing with

waste water and starches, focussing on the challenges of managing waste water discharged into municipal sewer systems.

Water Treatment Versus Purchase

Stamegna noted that in the current operating environment marked by little or no cohesion among provincial, regional or municipal effluent regulations, accompanied by a trend toward increased financial penalties for exceeding permissible standards—including, in some instances, shutdown of industrial offenders—it is imperative that every corrugating facility understands completely its own locally-applicable set of regulations.

He cautioned that where treated waste water is used in starch preparation, the properties of the water, along with any local conditions, must be throughly understood before an existing starch mixing formula can be modified to ensure desired bonding performance.

During his summary, Stamegna provided a handy "back of the envelope" formula for quickly comparing estimated costs of in-house waste water treatment versus the purchase of municipal water.

He then re-stated the core message of the opening McPeake segment, adding that proper employee training to improve knowledge and skill sets of starch-mixing operators can contribute to both adhesive cost-control and, ultimately, superior corrugated board performance.

Round Table Discussion

Attention had been rapt throughout the Ingredion team's presentations.The ensuing open discussion session was wide-ranging, fact-packed and spirited, as described later by Bob Hagan. "Although anticipation was high during our drive to organize this seminar, no one on the Manufacturing Committee had realized at the outset how significant would be the depth of information that was presented for review by committee members."

Participants recounted their own diverse waste water management experiences ranging from one extreme to another, from maximal municipal legislation to minimal, as demonstrated by just two representative examples:

• In one Ontario municipality, a Cascades Containerboard packaging plant (formerly Norampac) now discharges absolutely zero waste water. In fact, their original municipal sewer pipe connection was permanently welded shut.

• At another Cascades plant in the same province, corrugator effluent is discharged directly to the local sewage system for municipal treatment and recovery.

It became apparent that virtually all CCCA member companies share similar situations, with plants operating under unique and inconsistent sets of regulations. And further, that the general prevalence of such public administrative inconsistencies would likely thwart any Association initiatives aimed at developing broad approaches to proper management of discharged waste water.

In the current situation where industrial effluent bylaws vary widely from municipality to municipality and plant to plant, there can be no commonly shared "one size fits all" industry-wide approach to efficient, ecologically appropriate management of waste water from the corrugating process.

With the long-term outlook trending toward tighter and more co-ordinated discharge regulations, the exchange of information at this event was viewed as a beneficial step toward better understanding of the issues and potential future solutions for this industry.

Jerry Scott Mills is a writer and photojournalist who has covered the corrugated industry for more than 20 years.