The Economic Impact of Your Environmental System

Part 1 - Upstream

Mill management today has what is called a “working” understanding of the economic impact (Return on Investment or ROI) of process system. This series of articles goes through each area giving a view of the potential savings and impact each area has and the impact on the overall mill operation with respect to waste treatment and the environment.

Sewer Systems

The mill’s sewer systems impacts are broken down into three different areas. First is tracking and monitoring fiber loss. Next is soda loss. And last, the process upsets that change the conditions downstream in the waste treatment area.

Fiber Loss- Facilities have known for years the potential of measuring fiber loss within the sewer systems. Just knowing fiber loss is not a savings point! Knowing where the culprit lies and what caused it is more important. Published articles show that a 5% improvement in reducing the fiber loss results in $1m plus annual savings. What is not discussed is the impact that fiber has on the downstream waste treatment system.

Soda Loss-This is an item that mills want to track and understand better, but at the same time, it is a condition that can change from day to day, hour to hour. Tracking and monitoring soda loss is estimated to have an impact of between $250,000 to $500,000 per year. Knowing the soda loss, for any immediate period, is just like fiber loss and is not a savings point. Knowing what is causing it brings immediate return. But understanding its impact downstream in real-time is where the greater return is.

Process Upsets-This is the least discussed issue in any facility. Areas routinely do chemical flushes and perform other process operations that drastically change the profile of the sewer water. An item

such as a chemical flush, though not harmful to the sewer, can have a severe impact downstream at the clarifiers, sludge processing operations and retention ponds resulting in COD/BOD excursions.

Having the ability to know what is coming, is worth a minimum of $1m in savings to a facility. When an unknown condition hits with no warning, reactionary responses are usually too little too late with a costly result. Forewarning allows for preemptive responses that mitigate the impact on the waste treatment processes and have a smaller financial impact. These preemptive actions can prevent permit excursions and fines along with potential savings in the $1m to $2m range annually.

In Part 2, a look at the impacted waste treatment areas downstream from the sewers will be covered.

Most environmental systems have not been approached as a complete, holistic architecture, resulting in patches and quick fixes to most systems. It is not uncommon that sensor data is not connected (especially for remote areas of a facility). IoT-MFG has the expertise to connect your legacy equipment but also with our global partnerships, we can provide the correct sensors to give you a complete picture (on a real-time basis) of your Environmental System (from the sewers to the outfall).

Contact Us Today To Get Started On Your Environmental Strategy.

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