

Optimizing Performance: Machine Runnability & Efficiency Audits

The efficiency and reliability of pulp and paper machinery are pivotal to maintaining a competitive edge. A Machine Runnability & Efficiency Audit from Runtech is a detailed examination of the paper production process, designed to ensure that every stage, from the wet end to the reel, operates at peak performance. This audit offers a systematic approach to detecting inefficiencies and enhancing the overall effectiveness of the paper machine.

The Audit Process

The Runnability & Efficiency Audit encompasses several key areas of the paper production process:

Short Circulation: The audit begins with an evaluation of the approach flow system. It is crucial that the pulp is delivered to the headbox consistently and stably, as this impacts the uniformity of the final paper product.

Headbox and Forming Section: Attention is then turned to the headbox and forming section, where the uniform distribution of paper stock is critical for optimal sheet formation. The audit examines these components for any factors that could affect the quality of the paper.

Press Section: The press section is scrutinized for its effectiveness in water removal. Enhanced dewatering at this stage can lead to significant energy savings downstream in the drying process and can also improve the paper's physical properties.

Drying Section: The drying section is assessed for energy efficiency and capacity. By identifying issues such as inadequate pocket ventilation and uneven sheet moisture profiles, the audit can recommend improvements that reduce energy consumption and increase drying capacity.

Calendar, Reel, and Winders: The audit then reviews the calendar, reel, and winders for performance limitations. These areas are critical for achieving the desired finish on the paper and for ensuring the smooth operation of roll building.

Profiles: A thorough analysis of the web profiles for fiber distribution, moisture, and other properties ensures product uniformity and quality across the entire paper width.

Tail Threading: Finally, the efficiency of sheet transfer processes between machine sections is reviewed. Efficient tail threading is essential for reducing sheet breaks and downtime, thus improving overall productivity.

The Benefits of the Audit

Conducting a Runnability & Efficiency Audit can yield several benefits, including:

- Extended lifespan of the paper machine due to preventative maintenance and timely identification of potential issues.
- Opportunities to improve process control and energy usage, leading to cost savings and a more sustainable operation.
- Enhanced product quality through more consistent sheet formation and uniform profiles.
- Increased production efficiency by minimizing downtime related to sheet breaks and transfer issues.

The Outcome

Upon completion of the audit, a comprehensive report is provided, which includes a summary of findings, detailed analysis, and tailored recommendations for improvements. These suggestions are specific to the observed conditions of the machine and are designed to address the unique challenges faced by the operation.

Implementing the Recommendations

The success of the audit is not only in the identification of issues but in the effective implementation of its recommendations. The actionable insights provided by the audit are meant to be integrated into the existing maintenance routines and operational strategies to achieve measurable improvements in machine runnability and efficiency.

A Runtech Machine Runnability & Efficiency Audit is a crucial tool for paper machine operators aiming to optimize their equipment's performance. By conducting this audit, operators can ensure that each section of their paper machine is functioning at its best, thereby improving the overall productivity and quality of their paper products.



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