

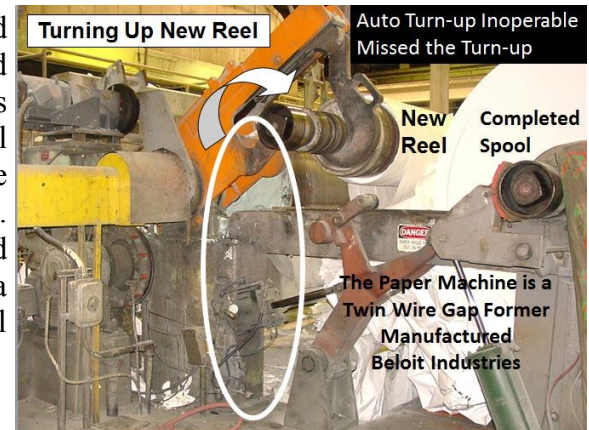


Fatal Incident Involving a Paper Machine's Primary Arm and Reel Rail

A Rereeler Assistant with three years of service was fatally injured when he was caught in-between the unguarded area of the Primary Arm and the Reel Rail of a Paper Machine (PM). A “turn-up” was required on the PM: the process to stop winding the continuous sheet of paper onto a completed spool and start winding paper onto a new empty spool. The PM is equipped with an **automatic** turn-up assist device with a blade, but it was not operational due to a broken blade. Replacement blades were not available. The Backtender and Assistant Rereeler Operator were successful with a **manual** turn-up on the second attempt. The Backtender last saw the worker moving from his position toward the backside of the PM. It appears the worker went to the backside of the reel to assist with the manual turn-up. This occasionally occurs on a missed automatic turn-up. The two-person process is done by the Backtender and Assistant Rereeler Operator. It is not part of their normal operating procedures and it is not done frequently.

The worker attempted to blow the sheet of paper onto the spool with an air hose. Because the air hose was missing a wand, the worker leaned over the Reel Rail. The Backtender and the Rereeler Assistant were working the turn-up from the front side of the reel. The Backtender was unaware the worker was attempting to assist with the manual turn-up from the backside of the PM. The area was very noisy. There was poor visibility due to the location of the Backtender's operating station, the large reel of paper, broken paper piled on the floor and hung up at the floor opening.

Once the turn-up was completed and paper started to roll up on the new spool, the Backtender performed the routine task of engaging the Secondary Arms and lowering the Primary Arms onto the Reel Rail surface. The worker was caught in-between the unguarded area of the Primary Arm and the Reel Rail. The Primary Arms had been in disrepair and operators could not manually raise the arms when a spool had paper on it, so the crew had to use the Reel Crane to lift the Primary Arms to release the worker.



Recommendations to Prevent Recurrence:

- Conduct a hazard analysis with worker participation that focuses on the relationship between the workers and the task, the tools (or lack of) and the environment. Consider the entire machine operation production process, the machine modes of operation, individual activities associated with the operation, servicing and maintenance activities. The results from the analysis may then be used as a basis to design machine safeguarding, energy control program and procedures.
- Install safeguarding that is properly designed, constructed, fitted, securely held in place, not easily defeated, located at an adequate distance from the hazards and does not obstruct the view of the process and hazards.
- Install operator stations and/or cameras to allow operators to view all areas of the machine.
- Develop and document procedures for a manual turn-up with input from the shift crews; update training accordingly.
- Implement a maintenance and inspection system with parts readily available.
- Provide all workers with a Right-To-Act process including, but not limited to: procedures to report hazards; refuse unsafe or unhealthy tasks; and shut down any process without the fear of retaliation. All workers should be trained or retrained annually on the Right-To-Act process.



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This hazard alert is based on an actual incident, and reflects our best understanding of the incident at the time it was written. However, many incidents have multiple causes; this alert may not cover all of them. The purpose of the alert is to illustrate workplace hazards; it is not intended to be a comprehensive report on the incident.