Paper Mill Avoids $5M in Lost Production

Benefits of online remote monitoring system nurses cracked fan to outage

Site: Kimberly Clark – Paper Mill in Owensboro, KY
Asset: Through Air Fan
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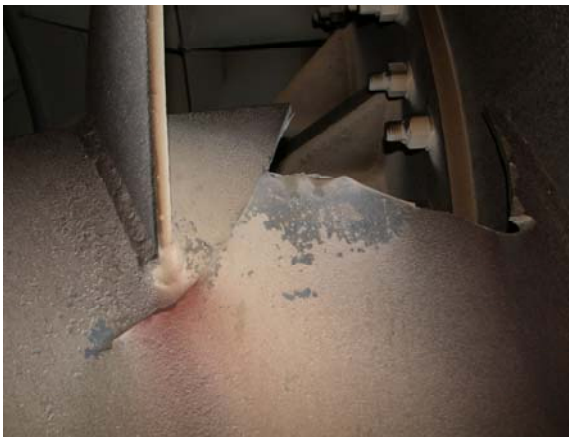

When one of its two Through Air Fans developed a large crack in a blade, Kimberly Clark's Owensboro, Kentucky paper mill was six weeks away from its scheduled outage. Taking the damaged fan down early would cripple mill production by 50% for weeks, but trying to run the fan until the shutdown could result in catastrophic consequential damage if it failed. Azima DLI was hired to take frequent vibration readings and determine whether the fan could stay in operation until the outage. If the fan had to be taken out of service, the mill faced nearly $5 million in production losses.

Azima DLI quickly deployed its mobile remote monitoring system and began taking data every ten minutes. Within one day, the Azima DLI analyst determined that running the fan at 90% speed would reduce the stress on the blade, but not impact production. The mill made the speed change and Azima DLI continued to collect data at 10-minute intervals. If the situation worsened, the Azima DLI diagnostic system would alert the analyst and mill staff immediately.

To everyone's dismay, vibration readings soon triggered alerts. The Azima DLI analyst studied the data and discovered that whenever the fan's associated paper machine changed cycles (stock-on/stock-off), the fan was getting pushed from 90% to 100% and causing more damage. Based on this information, mill operators made adjustments so the fan did not get pushed to 100% when the paper machine changed cycles. This enabled the fan's speed to remain constant at 90% capacity.

From this point forward, there were no more alerts and the fan made it to the outage without incident. Without Azima DLI, the mill would have either had a $5M production loss due to an unplanned outage or a catastrophic failure had they kept the fan in operation at 100% capacity.

Jacob Schlottman has been an Azima DLI analyst since 2005. He has extensive vibration analysis expertise in several industries, including paper, steel, power, and industrial gases. He is a certified Level III Vibration Analyst.

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