Paper and Pulp Operations Case Study: OneCharge Lithium Batteries Increase Runtime, Bring Massive Energy and Labor Savings.

"These batteries just help to move it through the mill. Hour after hour, shift after shift!"
Warehouse Supervisor.

Industry Challenges

A typical paper roll may be loaded, transported, and unloaded 4-16 times on the way from the paper mill to the printing machine. All stages of this transport chain require dedicated, powerful handling equipment working with minimum downtime and operating costs.

Newsprint, coated stock, craft, or linerboard – the high-volume, uninterrupted handling of paper rolls, pulp, and scrap bales require powerful equipment. The power source often needs to be so tough and reliable, you can run it non-stop.

Until recently Class I and II lift trucks and AGVs that employ tilting and rotating attachments were powered mainly by LPG internal combustion engines or lead-acid electric. Both have their own set of problems but the three major problems were common: runtime, high energy costs, and pollution.

Solution

Lithium-ion batteries are better suited to meet the needs of the paper industry three-shift-a-day operations in stevedoring, mill, warehousing, shipboard, transporting operations or harsh recycling applications. Clean and safe Lithium batteries are powerful enough to support the most demanding applications, increase runtime, and reduce energy costs.

OneCharge Lithium Batteries are designed and built for tough applications and offer a high level of expertise in paper handling. We helped our customers to switch from LPG to electric or from lead-acid to Lithium-ion batteries to successfully move paper rolls and bales through the supply chain. OneCharge batteries support the handling of large size rolls in paper mills, printing and converting houses.

Our customers get rid of the acrid smell, acid spills, exhaust gases, and noise pollution created by LPG engines or lead-acid powered electric trucks.

Where sanitary handling is a mandate, like in paper converting and packaging, including food packaging, the safety and zero daily maintenance of OneCharge Li-ion batteries are important.

How OneCharge Lithium Batteries Helped

Application 1.

A US paper mill has switched its end of the line lift trucks to Lithium. The 12.000 lbs. electric powered cushion tire trucks are all 80V, powered by 540Ah OneCharge Li-ion batteries.

Four trucks are traveling with the paper rolls to the loading docks, where the rolls are stacked both in cargo trucks and railcars for distribution. There are also two trucks for making shorter trips with rolls that require rewinding.

All 6 trucks are operating on a single battery each, which will last through the full day with quick opportunity charging events during breaks and lunch.

Application 2.

A large paper mill is using special AGVs to feed the production line. The end of the line is served by 15 smaller lift trucks, that have all been recently switched from the LPG powered IC engine to Electric Lithium. There are 12,000lb capacity trucks equipped with 4,000lb paper roll clamps, and 5,000lb capacity trucks with push / pull attachments. The smaller trucks are engaged in a very heavy application - 3 shifts a day averaging 4,800 hours of operation per year! This is way beyond any industry-standard lease (roughly 1500-2000 hours per year).

Powerful, durable OneCharge Lithium batteries are the best when you need to maximize uptime and safety handling paper and pulp products.

Return on Investment

OneCharge is known for producing some of the most durable, trouble-free Li-ion batteries for applications, where durability, speed, and energy efficiency directly affect the bottom line.

OneCharge Li-ion Batteries help decrease downtime by using breaks for opportunity charging whenever it is most convenient for the operations. Zero daily maintenance and energy efficiency add up the savings quickly.

Typical Savings from switching to Li-ion technology.