

Food Waste Firm Slashes Pump Maintenance Costs

Bryn Power Ltd, South Wales

Overview

Bryn Power is a leading waste management, recycling and renewable energy company in Wales. They process door-step collected and commercial food waste, recovering recyclables and producing PAS100 and PAS110 compost and bio-fertiliser.

Challenge

A heavy-duty lobe pump on sump emptying duties below the hammer mill was frequently requiring maintenance and spare parts, leading to unpredictable downtime and excessive running costs.

While the original pump itself is good with smooth, homogeneous pastes, the original equipment supplier had not factored in the presence of hard - and often abrasive solids that are frequently encountered in food waste streams. Eggshells, fruit stones, bone shards etc can give pumps a hard time. The damage these entrained solids were causing was costing the facility £1k a month in spare parts alone. Downtime and staff hours were another problem, as it was critical to keep the pump on duty every day, including Christmas and bank holidays.

The time and money this pump has saved is phenomenal.

- J Price, Bryn Power





Solution

Bryn Power turned to Atlantic Pumps with the challenge to provide a pump capable of moving sludge of up to 13% dry solids content, that would better withstand the duty, and save money on maintenance and downtime

Furthermore, the pump would need to operate for hours at a time, on average 5 hours a day including bank holidays.

With experience gained in similar applications, Atlantic Pumps recommended the LSM, a heavy-duty peristaltic pump. A 4" LSM-100 was trialled on a hire basis, and soon proved itself as the ideal solution, making the investment in a new one an easy decision.

LSM pumps excel at moving heavily contaminated and viscous sludges. The large rotational diameter produces less scope for rag entanglement, and the robust rubber tube is highly resistant to wear.

Other benefits of the LSM in cases like this are its dry-running ability and high suction lift capability. It's as comfortable with continuous duty as it is in intermittent, stop-start cycles.

The solids-passage capability of LSM pumps is only limited by the hose diameter, and the range of models goes from 1" to 8" (200mm).

Results

Financial:

In the nine months of operation, the LSM pump has required no replacement parts. This has directly saved the Bryn Group £9,000 to date, aside from the cost of labour and downtime. Wear-resilience results in consistent energy-efficiency, unlike fast-wearing gear or lobe pumps.

Environmental:

As any pump wears, it consumes more energy to achieve its flow. LSM pumps show little change in energy consumption over a considerable time, and require less part replacements; showing how durability, asset longevity, and inherent efficiency conserves resources at many levels.

Operational:

The pump hasn't needed a repair or manual intervention to unblock it yet, reducing the pressure on engineering staff, site management, and improving risk management.

The next maintenance task is expected to be a hose replacement and lubricant top-up, both relatively easy jobs that can be completed by in-house staff when required.



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