Liquid Product Recovery (Pigging) Case Study:

Morris Lubricants

Shrewsbury, UK

How a Custom 4-Inch Automated HPS Pigging System is Eliminating Waste, Preventing Contamination, and Boosting Yields at Morris Lubricants' Shrewsbury Facility.

HPS Product Recovery Solutions

www.hps-pigging.com

HPS

Summary

- Morris Lubricants is a leading UK-based manufacturer of high-quality oils and lubricants
- The company installed a new 37,000-litre blending tank to enable direct tanker filling, but faced operational challenges due to the tanker loading point being 100 metres away from the blending vessel.
- The distance created a risk of cross-contamination between blends and resulted in **200–300 litres of product loss per batch** when manually flushing lines.
- Seeking a solution, Morris Lubricants required a system that could work with their existing stainless steel pipeline dimensions, integrate into their site-wide PLC control, and deliver high product recovery rates.
- HPS designed, supplied, and commissioned a custom 4-inch automated pigging system that **fully cleared the transfer line and prevented contamination.**
- The solution integrated seamlessly with Morris Lubricants' existing PLC system, enabling reliable, automated sequencing.
- Since implementation, the system has eliminated cross-contamination and recovered valuable product that would have otherwise been lost.
- The project has reduced cleaning time and labour, improved safety by minimising manual intervention, and supported sustainability goals by reducing waste and environmental impact.
- The success of this installation has led the senior management team at Morris Lubricants to consider further adoption of pigging technology, including integration into new bulk storage tanks.

About Morris Lubricants

With a heritage spanning over 150 years, Morris Lubricants has grown into a trusted global name in oils, lubricants, and greases. To ensure it meets exacting performance standards, every product undergoes an extensive development process - often taking five to seven years from concept to launch.

Still family-owned after five generations, Morris Lubricants combines tradition with innovation. Their products are exported to more than 100 countries, supported by a business philosophy centred on adaptability, reliability, and close customer collaboration. By understanding client needs and delivering both exceptional products and ongoing support, Morris Lubricants ensures smooth, dependable performance in even the most demanding environments.

Project Background

Operating from their long-established site in the centre of Shrewsbury, UK, Morris Lubricants had recently installed a new blending tank with a capacity of up to 37,000 litres to allow direct tanker filling. However, the tanker filling point was located approximately 100 metres away from the blending vessel.

The distance between the new blending tank and tanker filling point created significant operational challenges.

The main issues were preventing cross-contamination between blends and removing valuable oil left in the long stainless steel pipeline after transfers. Without an effective liquid product recovery system, 200–300 litres of product per batch would be lost **-** oil that could not be re-sold.

Paul Perry**,** Group Facilities & Site Services Manager at Morris Lubricants explained,

"We needed a solution to enable us to prevent cross-contamination of differing oil formulation blends and also purge the fill lines to the tanker to avoid costly waste."

Finding a Solution

Morris Lubricants had a clear set of requirements for their product recovery system. The solution needed to:

- **Remove as much residual product as possible from the stainless steel line.**
- **Integrate with their existing site-wide PLC control system.**
- **Fit the very specific OD/ID dimensions of the existing pipeline.**

While the team could blow air through the lines, this method wasn't sufficient to fully clear them. Previous experience with an alternative pigging system provider had shown that it wasn't suitable for this particular application due to the pipeline specifications.

Paul continued,

"We can blow air through the lines but it's not enough to clear residue product,"

"The product line from the blender to the tanker fill point was also a stainless steel pipe with a very specific OD/ID. We had previously fitted a system supplied by another pigging company, but they couldn't offer a solution for our specific application."

After exploring options, the team contacted HPS.

"We contacted HPS and Shaun Pitcher initially quoted the solution, and then Andrew Miles picked up the project once we placed the order."

Why Morris Lubricants Chose HPS as their Pigging Systems Provider

Following their assessment, Morris Lubricants selected HPS for several reasons:

- **Engineered for their unique specifications** – HPS provided pigging equipment specifically designed for the unique dimensions of the existing stainless steel line.
- **Seamless PLC integration** – The solution could be fully integrated into their existing control system.
- **Industry reputation** – HPS has a strong track record in product recovery, with proven success in the lubricants sector. Additionally, HPS has established successful partnerships with prominent lubricant manufacturers, further underscoring their capability and credibility in the field.
- **Commissioning support** – HPS offered on-site commissioning, which other suppliers did not provide.

Paul said:

"the HPS solution looked to meet our needs in that the piggin system solution offered was a good fit for the pipeline we had installed, and we could incorporate our existing PLC control into the various valves and sequencing required,"

"HPS seemed to have a good reputation in the industry and a good range of products, also HPS provided commissioning support while other pigging companies didn't."

The Solution

HPS worked closely with Morris Lubricants to design and supply a custom 4-inch automated pigging system capable of efficiently clearing the 100-metre stainless steel line between the blending vessel and the tanker loading point.

The system was fully integrated with Morris Lubricants existing PLC-based control infrastructure, ensuring smooth sequencing and minimal manual intervention. Automation of the pigging process not only improved operational efficiency but also reduced the potential for human error.

On-site commissioning by an HPS engineer ensured optimal setup and allowed any minor control issues to be resolved quickly.
Paul commented:

"The commissioning engineer was very useful and allowed us to sort out a few issues with control, which was far easier than trying to do this ourselves,"

"Also, the quality of the documentation and drawings beforehand and interaction with your project manager made my life much easier.

The Results

Since the implementation of the HPS 4-inch automated pigging system, Morris Lubricants has seen substantial improvements across quality, efficiency, and cost savings. The system has completely eliminated cross-contamination between blends, ensuring that every batch maintains its integrity.

One of the most notable gains has been in product recovery. Previously, manual flushing of the 100-metre line into an IBC at the end of a tanker fill resulted in the loss of 200–300 litres of oil per batch - product that could not be resold.

With the HPS system in place, this waste has been virtually eliminated, delivering immediate and ongoing financial returns.

Paul commented,

"We have used the pig several times and not had any contamination issues with any of the blends filled directly to the tankers."

"Without the pig we would have to flush the lines manually into an IBC at the end of the tanker fill, which would be time-consuming and result in 200-300 litres of oil which could not be re-sold."

Operational efficiency has also improved. The automated pigging has significantly reduced the time and labour required for line cleaning and product changeovers, enabling faster turnaround between production batches.

Integration with the site-wide PLC means the pigging system is easy to operate, with reliable sequencing built into the existing controls.

Paul continued,

"We have designed our own control system using existing sitewide PLC control which is integrated with your pig system."

Because the pigging system recovers more product, there's significantly less waste - and less waste means a smaller environmental footprint, supporting Morris Lubricants' commitment to sustainable operations.

The Future

Building on the success of this project, Morris Lubricants will definitely consider the use of pigging technology in other areas of their operations and future projects.

The strong results from the first installation have also given Morris Lubricants the confidence to recommend HPS to other businesses in the lubricants and wider process industries.

Asked if he would recommend HPS to other companies considering pigging technology, Paul responded,

"I would and had we known we would not have previously installed the other pigging company's system – as the HPS solution is better designed."

Reflecting on the overall experience, the team highlighted the quality of HPS's project delivery - from the initial design phase through to commissioning and ongoing support.

"Very positive – quality of communication, drawings, and understanding of our needs."

Contact HPS

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