



**Product Recovery
(Pigging) Case Study:**

Confectionery Manufacture

How an Automatic Pigging System
Quickly and Efficiently Removes
Product, Speeds Up Changeovers, and
Minimises Downtime

HPS Product Recovery Solutions

www.HPS-Pigging.com



Summary

- HPS designed and commissioned an automatic tank select pigging system for a well-known manufacturer of chocolate-based confectionery products.
- The system enables the confectionery manufacturer to remove residual product quickly and efficiently from a full-scale test area of production.
- The HPS pigging solution removes sufficient product to enable standard production to continue with minimal downtime.
- Cross-contamination is prevented and significantly less time needed for cleaning and changeovers.
- Product recovery rates are high enough to eliminate the need for any oil or butter flushes.
- Overall time required for testing is reduced increasing line efficiency.
- Test product is recovered rather than wasted, enabling reuse.
- The test area can be quickly transferred back to production when required.

About the Client

The HPS client is one of the world's best-known nutrition, health, and wellness companies. It has a rich history going back over 150 years. Today they have a wide range of businesses, many brands, and a diverse range of products.

HPS worked with a research and development team within the company, at a facility producing some of the company's most popular chocolate, biscuit, and snack products. The team develops new technologies and innovative products, while also providing technical help and assistance to other areas of the business.

Project Background

To test new products, the company set up a test bed line in part of its main production area. This allows the research and development team to conduct trials and research in a full-scale factory environment.

It's important that testing is as efficient as possible. It must keep to a schedule to avoid any disruption to manufacturing. When the research and development team has finished using the test facility, any remaining test product in the pipes must be recovered quickly and efficiently. When the pipelines are clean, normal manufacturing operations can continue as normal.

Why the Company Chose HPS as their Pigging Systems Provider

HPS has a strong reputation as the world's leading hygienic and sanitary pigging systems specialist. Having worked with a wide variety of companies that manufacture chocolate and confectionery, the HPS team has an in-depth understanding of the special requirements of this type of product.

In addition, HPS has implemented product recovery and pigging solutions at some of the company's other facilities in the UK, USA, and Brazil.

The Solution

HPS designed, supplied, and commissioned a four-inch single-pig automatic tank-select product recovery (pigging) solution for use with chocolate and chocolate-based products. This was deployed on the new test bed line in the main production area, which allows the research and development team to test products in a full-scale system.

The pigging system operates between two batch storage tanks and five drop-off destinations. The HPS solution include all equipment required to launch, receive, and return the pig, including the pneumatics and air sets to propel the pig using filtered air.

It also includes a bi-directional fully detectable food grade pig along with pig detectors to enable safe, reliable, and accurate PLC control. The solution includes several types of valves. Where required, these are jacketed and have visual sensor position indicators.

HPS also provided full drawings and electrical connection diagrams. Once the equipment was in place, an HPS engineer tested and commissioned it. HPS also delivered full training to relevant staff.

The Results

The HPS pigging solution reduces overall time required for testing, increasing line efficiency. It quickly and effectively recovers sufficient products to enable standard production to continue with minimum downtime, while preventing cross-contamination. Typically, HPS systems recover up to 99.5% of residual product.

Although water flushes are not used with chocolate, sometimes manufacturers use products such as butter oil to flush the lines. Because pigging recovers nearly all the test product, in this case there's no need to use flushes. In addition, there's significantly less time needed for cleaning and changeovers from test to main production. The test product is recovered rather than wasted, so the company can reuse it.

By using pigging the research and development team can quickly transfer the test area back to production when required.

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We have agents throughout the world.

Please contact the HPS head office and we will put you in touch with your local HPS representative.

You can also find us on:

