



Product Recovery (Pigging) Case Study: **Soft Drinks Production**

Central America

How an HPS Fully Automatic Pigging System Significantly Increases Yields, Cuts Waste, and Improves Efficiency

HPS Product Recovery Solutions

www.HPS-Pigging.com



Summary

- HPS designed, supplied, and implemented a fully automatic pigging system for a leading soft drinks manufacturer located in Central America.
- The 3-inch pigging system replaced a blower system, which was inefficient and wasting significant amounts of valuable product.
- Return on investment (ROI) from the HPS pigging system is outstanding. It is saving the company approximately \$31,500 US dollars' worth of product per pigging run. There is usually one pigging run a day.
- Product recovery rates rose from approximately 10% using the blower system, to over 99% using the HPS pigging system.
- As well as increasing yields and reducing flush waste, the pigging system also helps the manufacturer speed up changeovers and minimise water consumption.
- By reducing waste, water use, cleaning chemical use and subsequent disposal costs, using pigging also helps towards the company's environmental sustainability goals.

About the Customer

The HPS client manufactures a number of well-known carbonated soft drinks. The established brand boasts a diverse portfolio of beverages, including soft drinks, water, orange juice, iced tea and sports drinks. HPS worked with the company at one of its production facilities located in Central America. This particular facility produces and exports concentrates, which are the ingredients of a range of drinks manufactured and created by the company.

Project Background

The soft drinks company contacted HPS to discuss a product recovery (pigging) system for a new 3-inch concentrate line. The company's key objective from pigging was to

increase product yield. In addition, it also expected pigging to reduce production downtime and minimise waste and water consumption for rinsing.

Before contacting HPS about a pigging solution, the company had been using a blower system. The performance of the blower system was unsatisfactory. Significant quantities of valuable concentrate were being wasted. The concentrate is an expensive raw ingredient, and the blower system was only recovering around 10% of it during changeovers.

The Central American plant had never used pigging. However, some of the company's other plants had used HPS pigging systems in other facilities and explained the benefits of pigging to Central American staff.

Because there were many different products running through the line, it was important for the soft drinks company to quickly, efficiently, and effectively clear them to avoid cross-contamination.

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 specialists and has a proven track record of successful projects which deliver a high return on investment (ROI), rapid payback, and that exceed their client's expectations.

In addition, HPS has worked with a wide variety of companies that manufacture soft drinks, juices, and other beverages. These include some of the other company's processing and bottling plants throughout the world. So, they knew they could rely on HPS to deliver high-quality, effective, and reliable product recovery (pigging) solutions.

The Solution

After discussing the company's objectives and requirements, HPS system designers recommended and supplied a Single-Pig, Fully Automatic 3-inch Pigging System which includes two launch areas and one receive area.

Because the system is fully automatic, the operator starts the pigging sequence by selecting the appropriate option on an HMI panel. This launches and returns the pig through a series of valves. Special HPS pig-detection technology ensures accurate and reliable pig location and subsequent control by the HMI/PLC.

The equipment also includes a 3-inch HPS process pig for use in hygienic or sanitary applications (which are guaranteed for 18 miles or 30 km of use), plus full engineering drawings, electrical connection diagrams and functional design specification.

HPS provided a full service – from design and supply of a system to implementation, commissioning, and ongoing support.

When commissioning was complete, HPS engineers ensured employees understood how the system worked and were fully aware on how to operate and maintain the equipment properly and safely.

The Results

The primary aims of the project were to increase yields and reduce product waste on their new 3 inch-line. The pigging system recovers up to 99.5% of product, which is significantly more than the 10% that the blower system was recovering. They have at least one run per day and each pigging run saves the company an estimated \$31,500 worth of product. Therefore, the return on investment is significant and the system paid for itself extremely quickly.

The system also reduces effluent and associated disposal costs because nearly all product is recovered and no longer sent to drain. Changeovers are much quicker which improves efficiency of operations. Because the system removes a high percentage of product from the line while cleaning at the same time, there's no requirement for a lengthy flush out. This reduces water consumption considerably.

Because the company chose an automatic pigging system, safety has been enhanced while automation also minimises the risks of human error through reduced manual intervention. By saving water, resources, and energy, pigging also helps towards their environmental sustainability.



Contact HPS

To improve the efficiency and effectiveness of your liquid processing, contact your nearest HPS Office:

United Kingdom (Head Office):

HPS Product Recovery Solutions

46 Evelyn Street
Beeston
Nottingham, NG9 2EU
United Kingdom

T: +44 (0) 115 925 4700 **E:** info@hps-pigging.com

USA and Canada:

HPS LLC

T: +1 908 858 5225 **E:** usa@hps-pigging.com

Australasia:

HPS Australasia

T: +61 (0) 8 8278 1009 **E:** australia@hps-pigging.com

All other countries:

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:

