



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

# **Mondelēz International, Inc.**

**Svoге, Bulgaria**

How HPS Pigging Systems Improve  
the Efficiency of Chocolate  
Processing and Production

**HPS Product Recovery Solutions**

[www.HPS-Pigging.com](http://www.HPS-Pigging.com)



## Summary

- **Mondelēz International, Inc. (Nasdaq: MDLZ) empowers people to snack right in over 150 countries around the world.**
- **In 2019, Mondelēz (Svoge, Bulgaria) approached HPS and implemented phase one of their pigging system project. HPS designed, supplied, and commissioned six fully automatic pigging systems.**
- **Phase two of the project, saw an additional nine pigging systems designed, supplied, and commissioned by HPS.**
- **Phase three of Mondelēz’s pigging project included one fully automatic pigging system.**
- **The key objective of Mondelēz’s pigging project was to remove and recover all traces of the previous product quickly, efficiently, and effectively from pipelines.**
- **By recovering up to 99.5% of product from pipelines, pigging increases product yields and capacity, enables shared instead of dedicated pipelines, and reduces waste.**
- **If the company wasn’t pigging, they would spend large amounts of time, resources, and labour on cleaning the pipelines when changing from one product to another.**
- **The systems are fully automated, increasing operational efficiency, enhancing safety, and minimising the risks of human error by reducing manual intervention.**

## About Mondelēz International

Mondelēz International, Inc. (Nasdaq: MDLZ) empowers people to snack right in over 150 countries around the world. With 2021 net revenues of approximately \$29 billion, MDLZ is leading the future of snacking with iconic global and local brands such as Oreo, belVita and LU biscuits; Cadbury Dairy Milk, Milka and Toblerone chocolate; Sour Patch Kids candy and Trident gum. Mondelēz International is a proud member of the Standard and Poor’s 500, Nasdaq 100 and Dow Jones Sustainability Index.

The Mondelēz Svoge plant is one of the biggest and most modern chocolate manufacturing sites in Bulgaria. Not only is the manufacturing facility the birthplace of Milka Peanut Caramel, it also produces a wide range of global and local brands. This includes Cadbury, Alpen Gold, Lacta, Moreni, Svoge and Sezoni.

## Phase 1: Project Background

Mondelēz Svoge produces a wide range of chocolate products, including plain chocolate bars and chocolate with different flavoured fillings.

Before the installation of HPS's pigging systems, Mondelēz were running the product to drain to ensure there was no contamination between products. This wasted a lot of products. It also took operators a long time to change products.

## Phase 2: Project Background

Following on from the success of Phase 1, Mondelēz asked HPS to design, supply, and commission nine additional pigging systems.

These additional systems were also intended to reduce the quantity of product wastage produced during changeovers.

## Phase 3: Project Background

As a long-standing customer, Mondelēz approached HPS to discuss implementing an additional pigging system to clean the pipelines when switching from one product to another.

Mondelēz wanted to use a shared pipeline for different formulations of product, so it was important to quickly, efficiently, and effectively remove all traces of the previous product.

By recovering as much useable product as possible, not only does pigging effectively clean chocolate pipelines, but it increases yields and reduces waste.

Krasimir Dimitrov at Mondelēz, Svoge, commented,

*"The idea for a pigging solution came from a project where we wanted to implement different flavours for our product"*

*"In that matter we had one pipe which we wanted to use for two different types of products. And when we were switching between the two products, we needed to make sure that everything is clean such as vessels, pipes and equipment"*



## Why Mondelēz Chose HPS as their Pigging Systems Provider

HPS has a solid reputation as the world's leading hygienic and sanitary pigging systems specialists. That's because HPS has a proven track record of successful projects which deliver high return on investment (ROI), rapid payback, and that exceed client's expectations.

In addition, HPS has specialised in process pigging since 1995 and has worked with a wide variety of companies that manufacture chocolate, candy, confectionery, and similar type products. This includes several Mondelēz plants around the world.

There are certain considerations that need taking in to account when processing and pigging chocolate products. HPS has extensive experience in pigging systems for chocolate processing and production. This experience meant that, as well as being fully aware of the chocolate production process, HPS experts were able to recommend a highly effective, and efficient pigging solution to meet Mondelēz's needs and requirements.

Asked why Mondelēz chose HPS, Krasimir commented,

*"We have worked with HPS for many years. HPS is an approved supplier for Mondelēz, and we've had a positive experience with the products which HPS provide for us."*

*"HPS can offer us everything that is needed for a pigging system."*

### The Solution

For phase one of the project, HPS designed, supplied, and commissioned six pigging systems on the storage to filler lines. Each one of these lines was a single-pig pigging system with 4 drop-off points and each point had two separate fillers associated with it, enabling 1 tank to pig product to 8 different fillers.

For phase two of the project, HPS designed, supplied, and commissioned nine single-pig pigging systems.

For phase three, HPS designed and supplied one single-pig pigging system for use with chocolate and chocolate-based products.



The pigging system recovers up to 99.5% of product from the pipeline. If it wasn't for pigging, this residual product would be wasted. It would also be much more difficult to use the line for more than one type of product.

HPS engineers and pigging system designers recommended all the equipment required to launch, receive, and return the pig to and from source and destination. This includes the pig launcher and receiver station, and the pneumatics and air sets to propel the pig using filtered air.

It also includes a bi-directional fully detectable food-grade pipeline pig as well as AccuTect pig detectors to enable safe, reliable, and accurate pig detection and PLC control.

The solution includes several types of valves. Where required these are jacketed and have visual sensor position indicators.

## The Results

*\*Please note, Due to client confidentiality, we are unable to publish detailed figures.*

Phase one and two of the project enabled Mondelēz to save product, rather than wasting it. The changeover times and production downtime have also decreased significantly.

The primary aims of phase three of the project were to use the pigging system to clean the chocolate pipelines when switching from one product to another, enabling Mondelēz to use the line for multi-products.

The HPS pigging system recovers up to 99.5% of product from the pipeline. If it wasn't for pigging, this product would be wasted during the cleaning and changeover process.

Because the pigging system reclaims nearly all residual product from the pipe, Mondelēz can use the same pipeline for different flavours and configurations of product.

So, not only does pigging increase yields and reduces waste, but it increases the capacity and flexibility of their operations and speeds up changeover times.

It also saves considerable amounts of time, resources, and labour on cleaning vessels, pipes, and equipment.

That's because there is less product to remove which reduces the effort and resources needed to clean process piping.

In addition to the above benefits, by saving energy and resources, pigging has also helped Mondelēz improve its environmental sustainability.

When asked if he would recommend HPS to other companies, Krasimir replied:

“Yes, because the project went very well, and the equipment is very sustainable”.

## The Future

Mondelēz is a long-standing customer of HPS Product Recovery Solutions, and they now have multiple HPS pigging systems in operation in the Svoge plant.

As the demand for their products continues to increase, and their production expands, we expect to see even more pigging solutions in their manufacturing plant.

When asked about Mondelēz’s plans for expansions or additions for pigging systems in the future after phase three was completed, Krasimir commented:

*“It will be better to have more solutions in our plant like this one we implemented.”*



# 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:

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

*You can also find us on:*

