Product Recovery Technology
Safe Discharging of Pipelines

Use your product to the last drop and finalize your production the way it begins - with a free pipeline. Gain high-quality product from your pipeline and reduce the cleaning effort for economic production.

With the product recovery technology of AWH you can process your valuable product almost entirely. The pig shoves the last drop for processing out of the pipeline. You gain an enormous saving potential for the subsequent cleaning process.

You save product and reduce the cleaning effort significantly. Merely a thin residue film is left in the pipeline and the pipe's surface is accessible for short and effective CIP cleaning.

Safety

The closed, automatic system meets the highest safety demands. The investments are amortized at an average of already seven months.

Good Reasons

- effective usage of the product
- less cleansing agent
- less water consumption
- rapid cleaning results
- short-term amortization of investments
- more success

"The pig - as clean as the pipeline itself"
Product Recovery / Pipe Drainage

The pig can be applied there, where:
- pumpable products are conveyed
- frequent or short-term product switch is required
- product blending of two successive phases should be avoided
- a product has very poor flowing characteristics
- the product value does not allow any waste
- regular cleaning is performed
- the water contamination should be reduced to a minimum

Process Control

AWH’s product recovery systems are a well-proven solution for eliminating the product as well as for gentle filling of process pipework systems for sensitive products and products liable to foam.

Application in Product Fields

- raw product reception to storage tank warehouses
- preparation phase vessels to mixers
- mixers to storage tanks
- tank farms to filling machines

Typical Product Examples

- lotion, creams and shampoo
- pharmaceutical liquids
- laundry detergents and cleansing agents
- yoghurt, cheese and curd
- concentrated fruit and sirup
- pastes and doughs
"Flexibly aligned to your requirements thanks to the modular design"

Pig Sending and Cleaning Station

The pig sending and cleaning station is integrated in line with the pipeworks and fully designed for CIP and SIP application. It serves to store the pig during the production and cleaning processes.

The pig is constantly and entirely streamed by media, guided in its position and secured by a pneumatically operated bolt. By means of the constant streaming around the pig with product or CIP medium, the pig is as clean as the pipeline itself.

The pig sending and cleaning station works as transmitting station in a single product recovery system or a transmission and receiving station in a double product recovery system.

Design

The AWH product recovery system consists of:
- the pig sending and cleaning station for storage of the pig during production and cleaning processes,
- feeding of drive media,
- automatic drive media control,
- pig receiving station,
- drive media feeding for returning,
- automatic drive media control for back drive,
- AWH pig with integrated magnet,
- and your process plant.
1. Product Cycle –
The pig is entirely streamed by the product.

2. Pig Cycle –
The product is discharged from the pipeworks.

3. Receiving Cycle –
The pig is safely stopped by the receiving station.

4. Returning Cycle –
The pig is returning.

5. Capture Cycle –
The pig reaches its starting position.

6. Cleaning Cycle –
The pig is entirely streamed by CIP medium.

Process Examples of an AWH Product Recovery System
**Pig Receiving and Returning Station**

A pig receiving station consists of a modular flange tube with a retention bolt. A second pig station can be applied as receiving and cleaning station. Hence, the pig is rinsed before it is returned. For pig recognition this is equipped with a magnetic field sensor.

**Drive Media Control**

A constant and steady pigging speed is ensured by the well-proven AWH drive control. Independent from the tube length, the flow rate and the pigging speed are controlled mechanically.

**Drive Media Feeding**

For safe transportation of sensitive products we offer complete modules for drive media feeding. This compact module provides all connections for driving, release and discharging.

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**Modular Components of the AWH Product Recovery System**
Tangent Pig – One For All Purposes

The pig is a one-piece solid body made of food suitable and low wear elastomer. Thanks to its design, it has the optimum, low-wear sealing lip as well as a dimensionally stable guiding bullet.

The AWH tangent pig has proven particularly well in narrow 1.5D bends thanks to its tapered center. The tangent pig can be applied with T-pieces that are appropriate for pigging and not reduced.

Lip Pig – When The Going Gets Tough

The AWH lip pig is a multi-part flow body made of food suitable plastic with a toughened sealing lip made of low-wear elastomer. Its shape of the lip grants long life and operating times, even in abrasive media.

The lips can be exchanged separately. The AWH lip pig has proven particularly well in 2.5D bends.

Benefits

- developed for fully automatic, validatable operation
- hygienic design, free of dead space, without compromises
- designed for CIP and SIP cleaning
- closed pipe system for safe operation
- the pig remains permanently in the system during cleaning and production, unloading of the pig is not necessary
- pig recognition via the pipe work by magnetic field sensors
- upgradable for existing plants
- design optionally as single or double pigging system, one-way or two-way system
- pig drive media: water, sterile air, carbon dioxide, nitrogen or a following product
- fields of application 0 - 125°C, product pressure max. 16 bar
- aseptic pipe connections acc. to DIN 11866
- material grade 1.4404, elastomer EPDM, FKM, silicone
- pig material silicone
- optionally acc. to ATEX
- sizes: DN25 to DN100 acc. to DIN 11850/11866