FOOD INDUSTRY

PepsiCo/Walkers Spray-Nozzle Scale Treatment Leicester, UK

Hydropath treatment kept PepsiCo Walkers' 200-micron spray nozzles clear for 24 weeks, replacing weekly acid cleaning and production stoppages.

24 wks	95%	147 hrs	196 L
Nozzle Operation Without Cleaning	Estimated Cleaning Cost Saving	Production Downtime Avoided	Annual Acid Solution Saving

⇄ BEFORE & AFTER

BEFORE

- Nozzles blocked every week
- Cleaning stopped production for three hours
- Acid baths were required for cleaning

AFTER

- ✓ Nozzles remained clear for 24 weeks
- ✓ Weekly production stoppages ended
- ✓ Routine acid cleaning was discontinued

OVERVIEW

Walkers, part of PepsiCo, operates the UK's largest crisp factory in Leicester. One production line used cold-water spray bars with 200-micron nozzle outlets. Pressure reduction at the outlets encouraged scale formation, causing weekly blockages. Each cleaning stopped production while the nozzles were removed and soaked in acid for three hours.

⚠ CHALLENGE

Blocked nozzles required removal from the production line every week.

- 200-micron outlets were highly vulnerable to scale blockage
- Nozzles became blocked on a weekly basis
- Each acid-bath cleaning took three hours
- Cleaning created production downtime, labour and chemical costs

SOLUTION

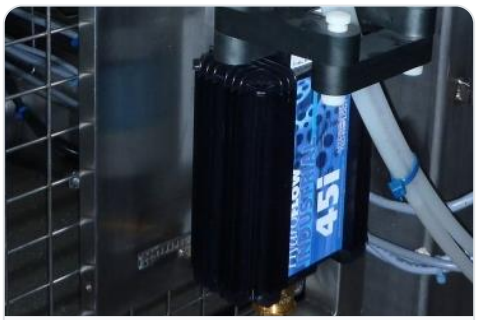
One *Hydro*FLOW® i45 was fitted after the pumps, treating both flexible feed pipes and all four nozzle sets.

UNIT INSTALLED
1x *Hydro*FLOW® i45

EQUIPMENT TREATED
Four sets of 200-micron spray nozzles

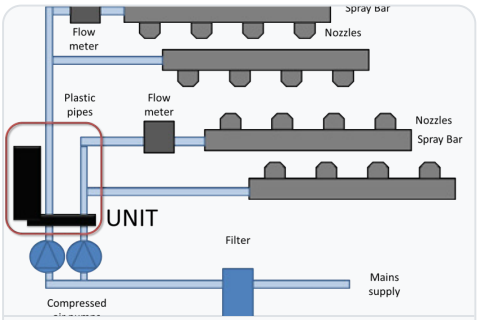
INSTALLATION POINT
After pumps on two flexible plastic feed pipes

NOZZLE SIZE
200-micron outlets



INSTALLATION

i45 Treating Both Feed Pipes



SYSTEM

Spray-nozzle layout

RESULTS

24 Weeks Without Cleaning
Nozzles previously cleaned weekly remained clear for 24 weeks.

95% Cleaning Cost Saving
The report estimated a 95% annual reduction in nozzle-cleaning costs.

147 Hours Downtime Avoided
Replacing weekly three-hour cleans avoided around 147 hours of annual downtime.

Routine Acid Cleaning Ended
Weekly acid-bath cleaning ended, avoiding about 196 litres of acid solution annually.

49 Cleans Avoided Annually
Weekly cleaning fell from around 49 annual cleans to none during the trial.

Weekly Stoppages Avoided
Weekly shutdowns for nozzle removal and acid cleaning were avoided.

KEY TAKEAWAY

Spray-Nozzle Treatment Summary

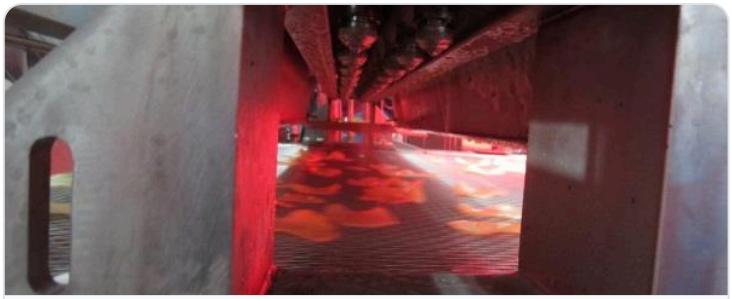
One *Hydro*FLOW® i45 treated four spray-nozzle sets at PepsiCo Walkers in Leicester. Nozzles that previously blocked weekly remained clear for 24 weeks, eliminating routine acid cleaning and substantially reducing cleaning costs and production stoppages.

95%
ESTIMATED CLEANING COST SAVING

49
ANNUAL CLEANS AVOIDED

✓
ANNUAL ACID SAVING

ADDITIONAL PHOTO EVIDENCE



OPERATION

Spray bars operating on the crisp-production line

BEFORE

Spray bars being removed for weekly acid cleaning

RELATED CASE STUDY

McCain Potato Fries Factory Case Study

Lewedorp, Netherlands

HydroFLOW® units were installed at the McCain potato processing factory in the Netherlands, dramatically extending maintenance intervals from 500 to 1,500 hours and eliminating the need for acid cleaning since installation, resulting in a 6x reduction in cleaning frequency.

3x Longer Intervals
Maintenance intervals extended from 500 to 1,500 operating hours

No Acid Cleans
Complete elimination of acid cleaning procedures since installation

6x Less Cleaning
Dramatic reduction in overall cleaning frequency and downtime