



STRUVITE

London Wastewater Struvite Control Case Study London, Ohio, USA

A 35-day trial reduced struvite accumulation, softened existing deposits and removed a significant amount of scale without chemical assistance.

35 days

Significant Struvite Removal

1 week

Large Pieces Began Detaching

>50%

First-Roller Holes Open

0

Chemical Dosing Required

BEFORE & AFTER

BEFORE

- 1/4-inch struvite coated the belt press
- Years of deposits blocked first-roller holes
- Cleaning risked significant plant downtime

AFTER

- ✓ Existing struvite softened during treatment
- ✓ Large pieces detached within one week
- ✓ Over half the first-roller holes were open



BEFORE

Struvite blocking the drum holes



AFTER

Over half the drum holes open



OVERVIEW

The City of London Wastewater Department in Ohio operated an anaerobic wastewater treatment plant using a belt press for sludge dewatering. Years of struvite accumulation had blocked openings and coated the drum, rollers and bottom beam, reducing efficiency and leaving the belt press due for cleaning. From 11 May to 16 June, the plant ran a 35-day evaluation to determine whether Hydropath treatment could slow accumulation and assist removal without chemical, manual or mechanical cleaning.



CHALLENGE

- Years of hard struvite build-up coated the belt press, blocked roller holes and left the equipment due for disruptive cleaning.
- Struvite deposits reached approximately 1/4 inch inside the belt press.
 - Years of build-up coated the drum, rollers and bottom beam.
 - Struvite covered and blocked holes on the first roller.
 - Conventional chemical or mechanical cleaning required significant downtime.



SOLUTION

One *HydroFLOW*® i Range unit was fitted to the four-inch iron sludge feed pipe, approximately 30 ft before the belt press, and operated throughout the 35-day evaluation.

UNIT INSTALLED

1x *HydroFLOW*® i120

PIPEWORK

4-inch iron sludge feed pipe

INSTALLATION POINT

Approximately 30 ft before the belt press

EVALUATION PERIOD

11 May to 16 June (35 days)



INSTALLATION

HydroFLOW® unit on the sludge feed pipe



RESULTS

Struvite Accumulation Slowed

The unit reduced the rate of new struvite accumulation in the belt press.

Existing Deposits Softened

Years of hard build-up began to soften while the unit was operating.

Large Pieces Detached

Large pieces came off the first roller and wash box within the first week.

Over Half the Roller Holes Open

By the end of the evaluation, over half the holes on the first roller were open.

Significant Struvite Removed

A significant amount of struvite was removed from the belt press within 35 days.

Purchase Funding Initiated

The plant began allocating funds to purchase a unit for continued struvite control.



TESTIMONIAL

"The HydroFLOW® device not only reduced the rate of struvite accumulation, it actually started to soften-up existing deposits! Within a week, we started seeing large pieces coming off the first roller and the wash box. In addition, over half of the holes on the first roller were open."

— Dan Leavitt, Plant Superintendent

KEY TAKEAWAY

Struvite Control at London

At the City of London Wastewater Department, one *HydroFLOW®* I Range unit operated on the four-inch sludge feed pipe for 35 days. Hydropath treatment reduced the rate of struvite accumulation and softened years of existing deposits. Large pieces began detaching within one week, over half the holes on the first roller were open, and a significant amount of struvite was removed by the end of the evaluation. The plant then began allocating funds to purchase a unit for continued cleaning and long-term struvite control.

35 days

SIGNIFICANT STRUVITE REMOVAL

1 week

LARGE PIECES BEGAN DETACHING

>50%

FIRST-ROLLER HOLES OPEN



ADDITIONAL PHOTO EVIDENCE



BEFORE

Bottom roller before the 35-day evaluation



AFTER

Bottom roller after the 35-day evaluation



BEFORE

Side of roller before the 35-day evaluation



AFTER

Side of roller after the 35-day evaluation



BEFORE

Bottom beam before the 35-day evaluation



AFTER

Bottom beam after the 35-day evaluation



BEFORE

1/4-inch struvite build-up inside the belt press

RELATED CASE STUDY

East Hyde Struvite Scale Control Case Study

Luton, UK

Severe struvite scaling repeatedly disrupted centrate lines at East Hyde Sewage Works. After one HydroFLOW® unit was installed, no additional scale formed throughout the six-month trial, helping reduce maintenance and improve centrifuge efficiency.

No New Scale for 6 Months

The centrate line showed no additional struvite scale throughout the t

Reduced Maintenance

Stable scale conditions reduced the need for maintenance intervention.

Improved Centrifuge Efficiency

The centrifuge operated more efficiently following installation.

HYDROPATH 

Ready to control struvite scale?

Get a free consultation for your wastewater treatment facility.

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