Standards Alert

Dewatering Equipment – Design Specification has been updated.

The Specification sets sizing and design requirements for dewatering equipment in our Water Resource Recovery Facilities. It applies to centrifuges, rotary drum thickeners (RDTs) and rotary screw thickeners (RSTs) that are being renewed of newly installed. This update enhances safety, sustainability, and cost efficiency.

Why has the standard been revised?

This update incorporates Rotary Screw Thickeners (RSTs), which is a new and innovative technology that offers greater flexibility, and to improve the performance of Rotary Drum Thickeners (RDTs).

Key focus areas include:

- Safety in Design.
- Equipment reliability.
- New technology.

What has changed from the previous version?

Key changes from the previous version include:

- Inclusion of RST technology.
- Modulating flow control valve for centrifuge flushing pipework.
- Improved flushing to control struvite formation.
- Guidance on when hot flushing for sludge pumping is required.
- Natural frequency and harmonic verification.
- Pneumatic struts to support cleaning hatch covers.
- Clarification of polymer injection points for centrifuges.

What are the key benefits and impact to users?

- RSTs can provide cost and layout savings during design and construction with less civil/structural works.
- RSTs require less frequent mesh replacement and no bearing lubrication or replacement which deliver operating cost savings.
- Struvite flushing will reduce operating costs, improve reliability and reduce safety risk associated with pipe blockages.
- Modulating flow control valves maintain flushing flow, reducing blockages, corrective works, vibrations, centrifuge warranty issues.
- Natural frequencies and harmonics verification will reduce risk of vibrational damage that results in modification and repairs.
- Hot flushing significantly reduces blockages that drive planned and reactive maintenance.
- Clarification of polymer injection points improves process outcomes and lowers lifecycle costs.
- Inclusion of pneumatic struts for cleaning hatch covers reduces the risk of crush injury (safety).

When can I start using the new standard?

When new or updated engineering standards are published, they apply to projects commenced after the publication date. There is no requirement to apply them retrospectively.

Project managers, however, have the discretion to apply new requirements to in-flight projects where they see benefit.

Where can I find the new standard?

The guideline is available on iConnect (for SW staff), SWDelivery Portal (for SW contractors), and the Sydney Water website.

How can I provide feedback?

If you have any feedback on this guideline, please contact the author by email at: standards@sydneywater.com.au.