



Neutralisation of waste water and stabilisation of food processing sludge

Defining the issue

In order for its residual sludge to conform to the regulations governing agricultural waste, Lesieur, a food oil producer, was looking for a long-term method for stabilising centrifugally dewatered sludge. Lesieur also wanted to modernise its effluent neutralisation process which was using hydrated lime.

Lesieur was looking for an overall approach to provide:

- on-site analyses to validate the performance of the process under consideration
- an intermediate solution for the continued neutralisation of waste water during the installation of the new system
- a new turnkey installation for each process
- use of the existing hydrated lime silo

The solution

From the wide range of Calci-action® answers, Lhoist chose the one which allowed a single reagent to be used for the two applications.

This complete solution integrates:

- Lhoist's mobile Stabi-Matic® pilot unit to simulate the effects of mixing sludge with Neutralac® reagent under actual operating conditions
- the validation of the effective performance of Calci-finishing (post-dewatering treatment), in terms of biological stability and dryness
- the engineering of a double treatment unit using Neutralac® Q as the only reagent
 - to neutralise waste water with lime milk produced by a Duwa-Matic® 650
 - to stabilise sludge using a Stabi-Matic® 3
- a temporary Idra-Stock® 30 unit for storing and dosing Neutralac® SL during the trials
- regular deliveries of Neutralac® and technical assistance



Duwa-Matic® 650 installation integrated below the existing silo

Conclusion

Lhoist met all Lesieur's technical and economic expectations by:

- identifying the customer's needs
- implementing the design, trial, validation, assembly and full start-up of the new process
- maintaining operations during the transition phase
- restoring the old neutralisation unit
- ensuring a long-term solution to give the customer's residual sludge some agricultural value
- simplifying the system by using a single reagent for the two applications

Lesieur has used this complete solution since 2000.