

Belt scale with SysTec weighing terminals for soil recycling

W&M approved weighing electronics: robust and efficient



Boskalis Environmental specializes in the large-scale cleaning of contaminated soil and mineral waste. The result of this process is re-usable material for infrastructure projects, such as road construction. In Alkmaar, the Netherlands, Boskalis has installed a soil washing plant with a **belt scale** designed by **DOSCO**. The scale is operated with the robust W&M approved **IT3 weighing terminals from SysTec**.

The key facts

- W&M approved belt scale for soil weighing
- Via PROFINET, the SysTec weighing terminal is connected to a PLC system that controls the scale
- After soil cleaning, up to 90% of the previously contaminated soil can be used again
- In total, Boskalis cleans between 500,000 and 600,000 tons of contaminated material annually

Products

- **SysTec IT3: digital weighing terminals** for legal-for-trade weight recording and weight display
- Belt scale construction by DOSCO

Customer benefits

- Precise accounting of the weighed soil quantities by means of the W&M approved belt scale
- The plant in Alkmaar has a mobile design - it can be dismantled, transported and reassembled at another location with little effort. This is environmentally friendly, economical and offers flexibility.
- Easy integration of the weighing terminal in the system via interfaces for fieldbus systems
- Robust and durable SysTec weighing terminals for outdoor use (IP 69K) - excellent price/performance ratio
- Bright 5" weight display of the IT3 weighing terminal

Professional soil cleaning

Since the late 1980s, Boskalis Environmental has been cleaning contaminated soil and other mineral wastes. The recycling process consists of extractive cleaning, which separates the coarse from the fine constituents by fractional splitting. The „clean“ fraction of the treated soil, which consists of larger particles such as sand and gravel, can then be re-used for sustainability purposes, such as construction projects.

After soil washing, the contamination is concentrated in a smaller portion of the total volume of contaminated soil or sediment (in the fine fraction). This portion can then be more easily disposed of or further treated (e.g., by consolidation or stabilization).



Efficient soil cleaning © Photo: Boskalis Environmental

W&M approved weighing and accounting

Precision and economic efficiency are crucial for Boskalis Environmental. Therefore, the incoming soil material is weighed on a legal-for-trade conveyor belt scale designed by the renowned scale manufacturer DOSCO. The W&M approval is a prerequisite for invoicing the customer soil quantity.

The belt scale has a speedometer unit: the signals from the speed sensor and the belt scale are sent to a transmitter. This calculates belt speed, delivery rate and flow rate.

Another special feature: the IT3 weighing terminal is connected via PROFINET to a PLC system that controls the plant.



Belt scale in soil cleaning plant in Alkmaar (photo above) and IT3 weighing terminal (photo below)

© Photos: DOSCO



“For our belt scales, we use **weighing electronics from SysTec**. Especially for outdoor use, robust stainless steel weighing terminals are important. The intuitive operation and interface capability are features that we value in SysTec,” says **Johan Dermout, Sales & Project Manager at DOSCO**. “For every belt scale application, SysTec has the right weighing terminal. For example, when a high degree of customization is required, we use a freely programmable IT8000E. The device can be adapted exactly to customer requirements. The SysTec weighing electronics offer us as scale builders a lot of freedom in the choice of load cells, force application and speed transducer,” adds Johan Dermout.

At a glance - SysTec's IT3 weighing terminal:

- Compact device with very good price/performance ratio
- High operating comfort: intuitive user guidance, bright 5" color screen for weight display, operator dialogs and calibration
- W&M approved for use as non-automatic weighing instrument NAWI / AGFI
- Robust stainless steel housing (ingress protection IT3: IP69K; IT3 Ex2/22: IP65),
- Design options: for wall-mount/desk-top and panel-mount installation
- Simple integration into PC networks or fieldbus system
- Hazardous area: for installation in hazardous area the IT3 Ex2/22 version is available



Further information regarding the project service providers



SysTec Systemtechnik und Industrieautomation GmbH

Since 1994 SysTec has been developing and producing W&M approved industrial weighing indicators and filling controllers for static and dynamic scales.

More than 150,000 installations are successfully in use worldwide. The innovative SysTec weighing systems work reliably in numerous applications: These include filling systems for liquids and bulk materials, shipping / receiving scales, beltweighers, vehicle scales, checkweighers, piece counting scales, mobile weighing systems and all kinds of customer-specific applications. In addition to standard products, SysTec also offers customer-specific system solutions and custom-made hardware and software. Comprehensive technical advice completes the range of services.

The production and development site for SysTec weighing terminals and software solutions is Germany. The company is located in Bergheim-Glessen, near Cologne. The production of the weighing terminals and software is subject to international OIML standards.

Discover more: www.systecnet.com



DOSCO Sales & Engineering B.V.

The Dutch scale manufacturer DOSCO has specialized in industrial weighing/measuring and process automation for over 45 years.

The company supplies a wide range of industries with high-quality scales, such as the food and animal feed industry, chemicals and pharmaceuticals, or the building materials sector. DOSCO has already installed numerous weighing systems both inside and outside Europe.

All weighing systems can be completed with process control and/or automation.

DOSCO's service department takes care of all engineering, all necessary installation work, maintenance and expansion orders.

The company is located in Soest, the Netherlands.

Discover more: www.dosco.nl