

## Innovative disposal site with automated weighing processes

Smart weighing: efficient • robust • fully interconnected



**Rheinische Baustoffwerke (RBS)** is a large producer of sand, gravel and building materials with disposal capacities. In Hürth Ville, Germany, RBS operates a modern landfill for mineral waste. To unlock efficiency gains in truck scales at the disposal site, RBS has chosen an automated weighing solution designed by **PFREUNDT** and equipped with smart **SysTec weighing indicators**. PFREUNDT considered especially RBS' operating requirements during development of the project.

### The key facts

- Completely automated weighing process
- 2 truck scales at the entrance with driver self-service terminals and 2 vehicle scales at the exit
- Recording of weighing data on RFID cards
- Logging of the unloading position (storage of GPS data)
- Legally compliant material sampling processes

### Products

- IT3: digital SysTec weighing indicators for weight recording of the truck scales.
- SysTec's IT1 weighing indicators are used as secondary display for the driver self-service terminals

### Customer benefits

- Automated PFREUNDT system solution saves time and resources - high productivity, lower operating costs
- More throughput: No more queues at the entrance, as trucks can be quickly dispatched by means of digital truck scales with self-service terminal
- Precise accounting of weighed and delivered materials
- Robust SysTec weighing indicators for outdoor use
- Complete digital documentation of the disposal process on RFID cards
- Fast processing of the data by ERP connection
- High operational reliability due to self-sufficient system: the solution is designed in such a way that power supply is sufficient in case of temporary failures of the online connection

## Weighing 4.0 - PFREUNDT's system solution

Automation is a key lever at RBS to become faster and more efficient. For this reason, RBS relies on digital weighing processes. When it comes to designing and implementing the weighing technology solution for the landfill in Hürth Ville, RBS opts for a PFREUNDT system solution and the smart SysTec weighing indicators.

"We developed the system solution specifically for RBS's operational requirements. It covers all processes from the completely automated weighing process, including initial and secondary weighing of the trucks, to material sample documentation during the dumping processes and commercial procedures at the exit," says Mark Terbrack, application consultant and specialist for system solutions at PFREUNDT.



Self-service terminal for drivers © Photo: PFREUNDT



© Photos: PFREUNDT

## Check-in scales

Both truck scales operate with an automatic check-in. The truck drivers, who already possess RFID cards from RBS with recorded master data for the loaded material, can simply hold the card up to the reader at the self-service terminal. There is no need to get out of the vehicle, the processes run very smoothly.

The self-service terminal displays the unloading point, all order-relevant data, and also the material to be dumped. The truck driver actively confirms the data at the terminal. At check-in, an RBS employee can use a camera to carry out a visual inspection of the loaded material and, if there is any suspicion, arrange for unscheduled sampling of the load. For new customers not yet registered, an RBS employee issues a new card.

The truck scales are equipped with a traffic light system. If the system is not ready for use, this is signaled by the flashing red light. When the scale is zeroed, the traffic light is green and the truck can drive onto the scale. After weighing, the truck starts to the designated unloading point.

## IT3 SysTec weighing indicators for truck scales

In addition to the outdoor secondary displays for the weight values, four SysTec weighing indicators of the series IT3 are located in a container house of the landfill. The weighing indicators are used for weight value recording and control of the truck scales.

### At a glance: SysTec IT3 indicator:

- 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



## Dumping and material samples

Legal regulations define classification of materials requiring monitoring. In accordance with the high safety requirements, material samples are repeatedly taken during the unloading process and checked by an RBS supervisor.

Each supervisor has a mobile device that reads the data from the RFID cards of the truck drivers via app and logs the unloading point via GPS coordinates. The supervisor checks whether the truck is at the correct dumping point. In addition, the date and time of the dumping and the type of material are saved on the card.

There is a random check of the materials. As soon as a sample is required, this is indicated to the supervisor on the mobile device - and the sampling starts with digital logging.

## Check-out and weighing data approval

Finally, the weight of the unloaded truck is recorded at the outbound scales. The driver signs the weighing data approval and receives the delivery note.



© Photos: PFREUNDT



*“PFREUNDT has always had a high commitment to innovation and quality - this is also appreciated by our customer RBS. The weighing electronics must meet this demand. That’s why we rely on SysTec weighing indicators and terminals: robust, digital, W&M approved and the systems have a convincing operating concept.”*

Mark Terbrack, application consultant and specialist for system solutions, PFREUNDT GmbH

## 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.systemecnet.com](http://www.systemecnet.com)



### PFREUNDT GmbH

The owner-managed PFREUNDT GmbH is located in Südlohn in the Münsterland region, Germany. PFREUNDT plans, develops and sells legal-for-trade mobile and stationary weighing systems - including software and data transmission systems.

The company has been operating successfully in the weighing technology market for over 40 years and employs more than 100 people.

Whether for wheel loaders, skip loaders, excavators, conveyor belts, dumpers etc. - the mobile weighing systems from PFREUNDT reliably and digitally capture all important weighing data such as weight, material, date or location directly in the work process. For customers, this means savings in terms of costs and time in day-to-day business and the improvement of operational processes.

With the nationwide service network and 40 sales and service locations worldwide, PFREUNDT ensures the smooth operation of weighing systems on site.

Discover more: [www.pfreundt.de](http://www.pfreundt.de)