



## Materials

# Efficient Screening Technology: Technical Precision as an Economic Gamechanger

GERWIN, a METZEN brand, has created significant economic value with a tailor-made, low-emission screening plant: unscreened sand, previously transported solely to stockpiles, can now be marketed for the first time. Despite extremely tight deadlines and the technical challenge of integrating directly with existing silos, a highly efficient plant was realised that meets the unique requirements of its residential-adjacent location. The solution enables both low-dust silo loading of dry material and flexible discharge of moistened sand into containers. The result is a future-proof system that unlocks new value, ensures environmental and community protection, and sustainably improves the overall operational efficiency of the site.

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### Challenge

#### Time-critical construction – maximum emission control

A new screening plant had to be built within an extremely tight timeframe and seamlessly connected to an existing silo system. The close proximity to a residential area and the complex connection requirements posed significant challenges for design, planning, and execution.

In addition, the exposed location required a strict low-emission approach to reliably protect residents from dust and noise. At the same time, flexible material handling had to be ensured, including low-dust loading of dry material into silos and discharge of moistened sand into containers.

The economic starting point was critical:

Unscreened sand had previously only been transported to stockpiles, with no opportunity for marketing.

### Solution

#### Intelligent integration – clean processes

In close coordination with the operator, an efficient screening plant was developed and constructed directly on two existing silos. These now serve both for storage of filler sand and screened sand.

The plant enables:

- **Low-dust silo loading** of dry material
- **Discharge of moistened sand** for different applications
- **Low-emission operation** through targeted dust and noise reduction
- **Structured integration** despite particularly challenging connection conditions

Through this combination of advanced technology and precise planning, the plant was realised in a remarkably short time and prepared for commissioning.

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### Result

#### New value creation – high environmental compatibility

The project demonstrates how technical modernisation directly creates economic value:

- Screened sand can now be sold for the first time
- A major customer has already been acquired for filler sand
- The low-emission design protects residents and meets modern environmental standards
- Efficient screening technology sustainably improves operational profitability

### Highlights

- **New value creation enabled:** Unscreened sand can now be marketed
- **Market access secured:** A major customer has already been acquired for filler sand
- **Complex integration mastered:** New screening plant constructed directly on existing silos
- **Low-emission design:** Specifically designed to protect local residents and minimise dust
- **Flexible material handling:** Low-dust silo loading and discharge of moistened material into containers

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