

# Belt Scales for Soil Washing Summary after one season

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**HASTAG**   
A CRH COMPANY

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FMS Force Measuring Systems AG  
& Hastag (Zürich) AG

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# Reliability and accuracy come first

## Use of FMS conveyor belt scales in a soil washing plant.

### Resource protection and local production

Excavated or demolition material has long since ceased to be simply landfilled. Processing and recycling into material cycles are an increasingly important pillar of the value chain for gravel plants.

HASTAG (Zurich) AG has expanded the existing soil washing plant. An important point during the expansion was the recording of yield data. Therefore, two conveyor belt scales from FMS were used. One scale continuously measures the material flow to the washing plant, the other was placed in the discharge conveyor. Both belt scales are integrated into the control system via PROFINET. Via the difference, the quality of the input material can be determined at any time, and the efficiency of the washing plant can be monitored. The drive roller in the feed hopper is connected to a dosing controller, so that the washing plant always operates at the optimum operating point.

The executing contractor recommended the FMS conveyor belt scales, as he had already had good experience. Thus, the installation on the new feed conveyor and the existing discharge conveyor was only a formality.

### Daniel Müller

#### Team leader gravel production, HASTAG (Zürich) AG

"With the belt scales, we determine the yield from material input and output. In addition, the scales are integrated in the control system, the belt weight is determined, the frequency-converted feeder is controlled and thus an optimum material feed is metered. The conveyor belt scales have now been in operation for a good year and since commissioning we have not experienced any failures. They are not susceptible to faults, require little maintenance and can be operated by any employee after a brief introduction. The display on the evaluation unit provides optimum visual control when taring or calibrating the belt scale. We are very satisfied with the FMS conveyor belt scales."

### About HASTAG (Zürich) AG

Today, HASTAG (Zurich) AG is one of the leading construction services and building materials companies in the greater Zurich region. Its business includes the extraction of raw materials such as sand and gravel, concrete production, and the recycling and disposal of a wide range of materials. Individual advice and tailor-made solutions round off the company's range of building materials services. Thanks to resource-saving, local production, short transport routes and the closing of material cycles, the company helps to make the region sustainable. HASTAG (Zurich) AG has been part of the JURA Materials Group based in Aarau since 2004.

### Learn more

<https://www.fms-technology.com/en/our-solutions/belt-scales/electronics>

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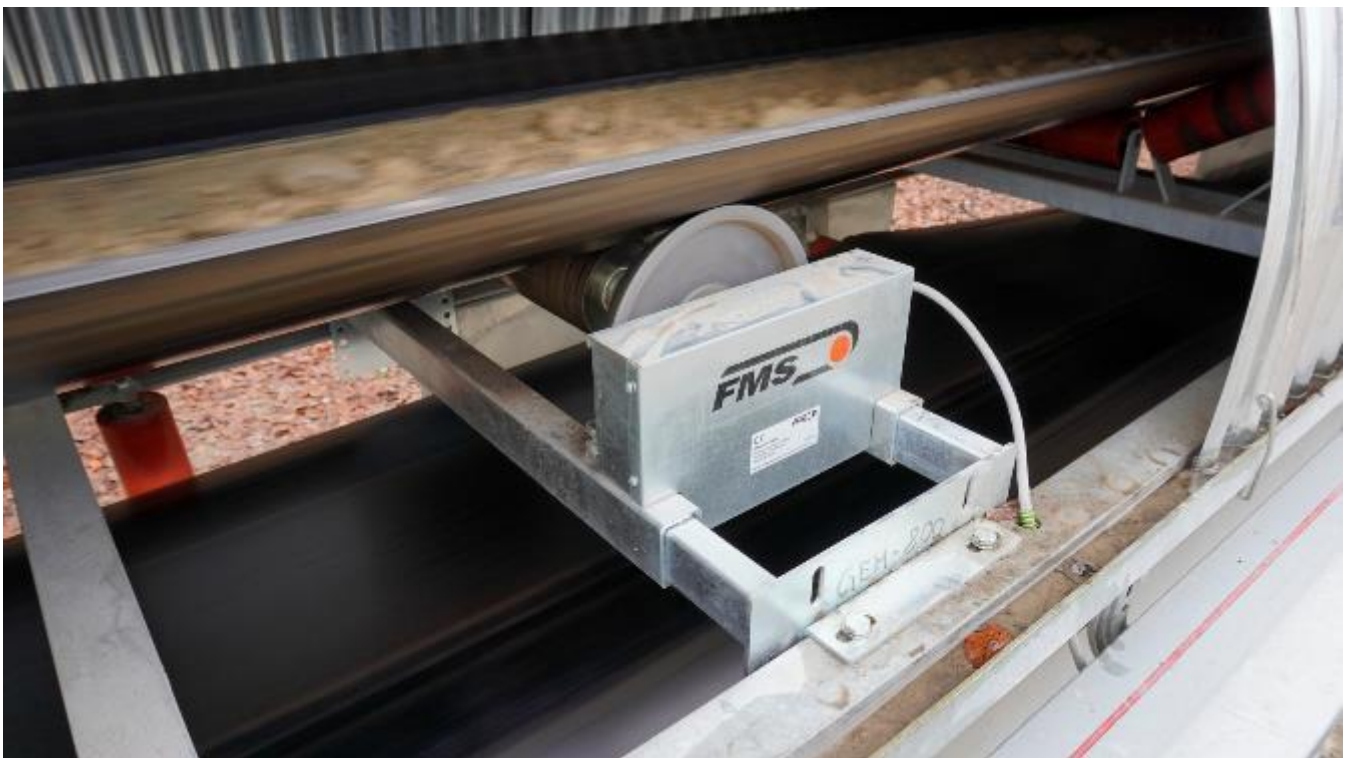
### **How does the FMS belt scale work?**

Unlike most conventional conveyor belt scales, FMS does not use standard idler stations. Instead, a compact measuring roller is used in which the entire measuring technology is housed, well protected. Hermetically sealed force measuring bearings at both ends of the roller take care of the actual force measurement. Solid steel housings protect them from environmental influences. One of the two housings also includes the non-contact speed sensing system.

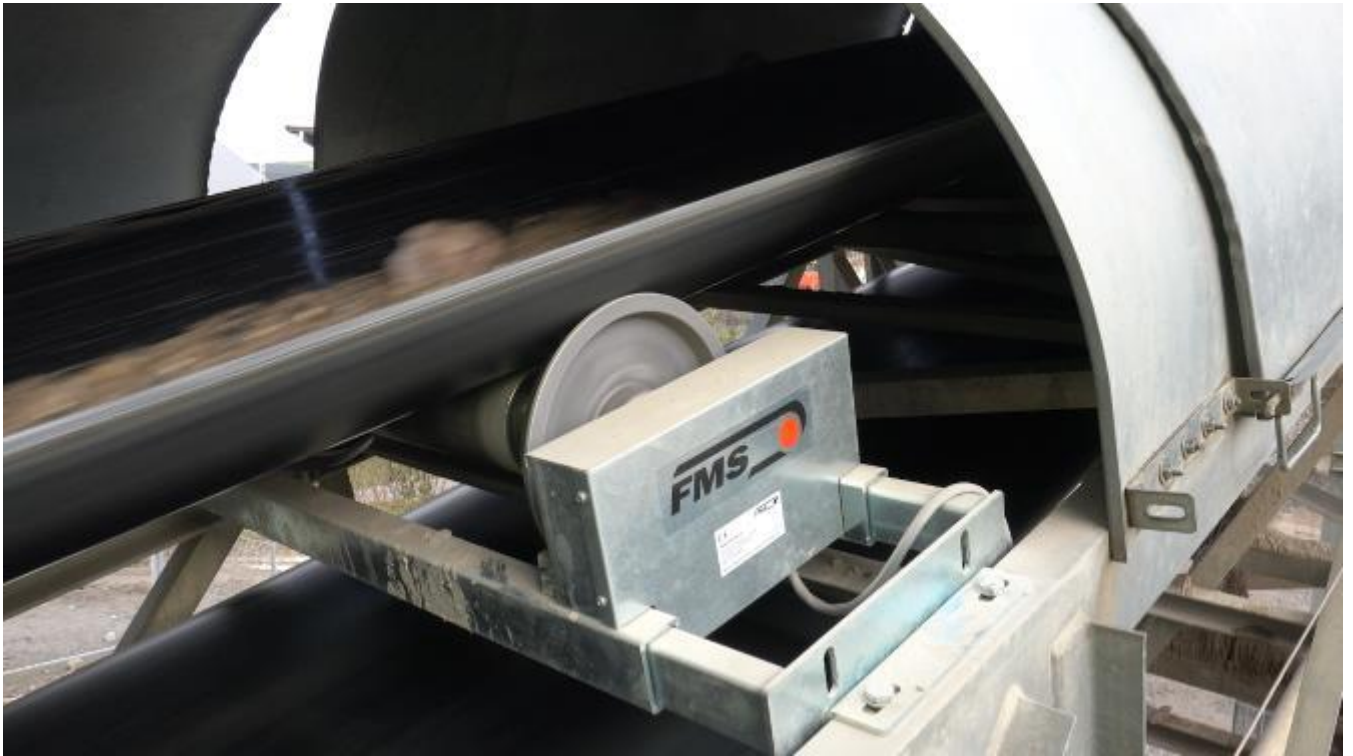
The dimensions of the galvanized base frame are determined by the belt profile (belt width, troughing angle), as well as the geometry of the existing conveyor belt frame.

Two solid telescopic and height-adjustable mounting brackets ensure fast installation.

The evaluation of the measurement data is done by the own electronics, which can be mounted up to 100 m away from the measuring roller. Predefined procedures and a graphic display ensure easy operation. A PROFINET interface is available for system integration (others on request).



*Illustration 1: Measuring roller in the feed conveyor. Only a single connecting cable, no failure-prone friction roller for speed detection.*



*Illustration 2: Measuring roller in the discharge conveyor. The telescoping and height-adjustable mounting brackets are clearly visible. The side discs on troughed belts have separate bearings the roller, as they rotate more slowly than the center roller.*





Illustration 3: Grafical display for easy operation with highest accuracy.

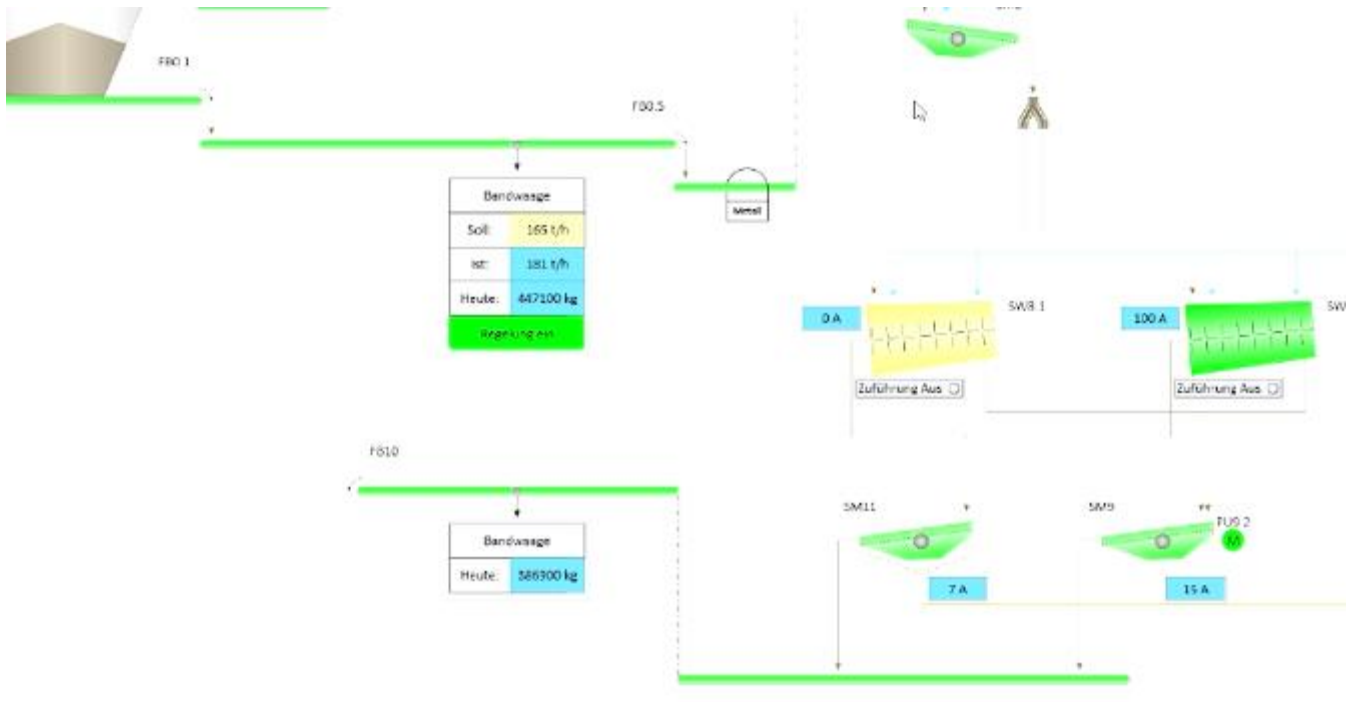


Illustration 4: both belt scales are an integrated part of the master control system

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