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## Reliable grit treatment with the use of HUBER machines

### HUBER's first small grit treatment system in France



*HUBER's first small grit treatment plant in France for treatment of sewer grit and road sweepings*

Castres is a French municipality in the South of France which is located on the river Agout and characterized by industrial enterprises. The best known local enterprise is the pharmaceutical and cosmetics company Pierre Fabre Laboratories which has its headquarters in Castres. In the middle of the industrial zone, not far from the Pierre Fabre Laboratories you will find the sewage treatment plant of Castres. The plant is designed for 95,000 PE and clarifies the wastewater of the population of Castres and of the nearby industrial enterprises. Previously, there was no satisfactory solution on site to treat grit from the sewage plant and sewer grit. The grit generated on site was dumped into a concrete structure and dewatered statically. The quality of the dewatered end product did not meet the requirements of the French legislation for landfilling.

In November 2014, a HUBER Grit Treatment System RoSF5 was installed on WWTP Castres. The challenge of the project was to keep the space requirements of the machines as low as possible and install all components at the same height level so that no further building measures would be required.

The planning result was HUBER's first small grit treatment plant in France and it has been installed on a narrow existing unused portion of the WWTP. The raw material is dumped into the existing concrete structure where it is statically dewatered in the course of time. In the next step the dewatered raw material is transported by a wheel loader into a tank with a capacity of 2 m<sup>3</sup> from where it is delivered at constant flow into the wash drum by a horizontally installed screw conveyor.

Inside the wash drum fine material < 10 mm is separated from coarse material > 10 mm by the 10 mm drum perforations. A special screw conveyor transports the separated coarse material into an adjacent container. The fine material is pumped into the COANDA Grit Washer RoSF4 together with the wash water from the wash drum.



*In operation: ROTAMAT® Wash Drum RoSF 9 in its smallest size 0.5*



*Removed coarse material subsequent to the Wash Drum*

Due to the special design of the Grit Washer it is achieved that the material is classified and washed out, so that 95% of the grit  $\leq 0.25$  mm with a loss on ignition of below 3% is removed. The grit treatment system has been integrated into the existing sewage treatment plant in a way to ensure that the COANDA Grit Washer can additionally process sediments from the grit trap that are introduced also into the 2 m<sup>3</sup> tank. The Grit Washer is designed for a maximum total solids load of 1 t/h. Presently, the plant is used to process sewer grit and road sweepings. The volume of material to be processed daily amounts to up to 10 m<sup>3</sup> road sweepings and up to 8 m<sup>3</sup> sewer grit.

The system described here permits the cost-effective separation of sewer grit and grit from sewage treatment plants into different fractions and optional further utilisation of the treated materials. The treated grit with a low loss on ignition (below 3%) can for example be used as construction material for roads and sewers. Furthermore cost for landfilling can be reduced by decreasing the weight of disposed material. In total, this leads to reduced costs for the disposal of sewer grit, grit from sewage treatment plants and road sweepings. At the same time, the load of mineral solids is significantly reduced with the consequence that maintenance costs and wear on the sewage treatment plant are reduced and the performance of the grit trap improves.

#### **WWTP Castres – facts and figures:**

- Mechanical pre-treatment
- Pre-clarification
- Biological treatment
- Secondary clarification
- Additional sludge treatment and acceptance of external grit

#### **Castres grit treatment system – facts and figures:**

- Acceptance tank RoSF7, 2 m<sup>3</sup> capacity
- ROTAMAT® Wash Drum RoSF9, size 0.5
- COANDA Grit Washer RoSF4, size 1
- Coarse material conveyor RoSF XXL

- Solid feed up to 1 t/h

**Related Solutions:**

- [HUBER Solutions for Grit Treatment](#)

**Related Products:**

- [HUBER Grit Treatment System RoSF 5](#)
- [HUBER Wash Drum RoSF9](#)
- [HUBER Coanda Grit Washing Plant RoSF4](#)
- [HUBER Horizontal grit dosing screw RoSF7 with tank followed by a wash drum](#)

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