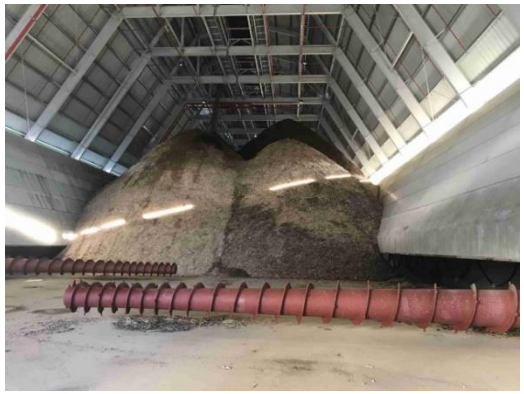
Plants for
Difficult to handle bulk materials

León, Spain
YEAR OF CONSTRUCTION 2019



DESCRIPTION

SHW-SHS has delivered the second pair of travelling screws for a large A-frame silo to Spain in spring 2019. The SHW-SHS customer was quickly convinced of the technical advantages and know-how of the SHW travelling screw.

The travelling screw is the ideal conveying technology for high capacity storage rooms/heaps. Biomass, in the form of wood chips and cereal straw, is discharged in metered quantities. A maximum conveying volume of up to 300 m³/h was required and projected by the customer. The combustible bulk material is used to generate energy in the form of steam (heat) which is converted into electrical energy by means of turbines.

The plant will produce **more than 320 million kWh**, which corresponds to the supply of 50,000 households. Similarly, part of the heat generated in the processes can be used to supply industry or a decentralised heating system for domestic use (district heating). With this plant, Castilla y León will be one of the first municipalities in Spain to produce electrical energy from biomass.

The wood chips and later possibly also the straw will be fed into the A-Frame silo from above by trucks via an external conveying system and distributed evenly over two heaps. The discharge from the silo (bunker) is carried out with two installed SHW travelling screws, each 9.5 m long and mounted on one side, on two parallel troughed belt conveyors. The bulk material is transported with further conveying technology into the boiler for combustion and thus energy generation.

The scope of delivery of SHW-SHS consisted of:

- Creation of the silo overview drawing, including the silo bottom/tunnel drawings
- Specifications of the forces to be expected by the travelling screw on the concrete structure
- Specification drawings for the design of the top and bottom guideways and the concrete inserts for the travelling screw carriage
- Two travelling screws mounted on one side for a silo built on site with the clear dimensions LxWxH = 72 m x 19.3 m x 18 m (max. filling height)
- Silo storage capacity 20 000 m³
- Discharge volume between 40 - 300 m³/h per travelling screw
- 200 kW installed motor power per travelling screw

After a successful start of the system, it runs without any problems.
All components have been tailored to the customer's requirements in terms of design (material selection, wear, design, drive power).

SHW-SHS stands out from the market due to its holistic concept from planning, delivery to commissioning and after-sales service and is a competent partner for the customer throughout the entire product life cycle.