



# Making pelleting as *dust-free* as possible

Back in 2009, Rudnick & Enners had supplied the wood waste disposal system for the chipper circular sawing line in use at Scierie Chauvin in Mignovillard/FR. Not too long ago, the plant specialist from the Westerwald region completed another project at Scierie Chauvin: the installation of a pellet mill. Its official inauguration took place on October 6.

“For the new production facility, we expanded the disposal system in the sawmill, from where the raw material reaches the pellet mill,” Christian Gebele, Managing Director at BSR Engineering, tells us. The expert from Alpenrod/DE was responsible for the entire project, including the electrical installation,

the switching and control system and the plant visualization. In addition, Rudnick & Enners supplied its own Industry 4.0 tool as well as QuickData to display operational and performance data. The new tubular belt conveyor transports the spruce and fir sawdust and wood chips, which accumulate in the

sawmill, to the two wet chip silos. Rudnick & Enners's managing director Sven Rudnick puts the performance of the tubular belt conveyor at around 200 st/h. External material can also be transported into the wet chip silos via an additional infeed station. This station is designed for rapid unloading from



View of the pellet silos (in the front) and the truck loading station: Rudnick & Enners installed the entire pelleting plant including the wood waste disposal system

Bildquelle: Rudnick & Enners



At the inauguration ceremony: Stéphane Chauvin (managing director of Scierie Chauvin/Jura Pellets), Lionel André, Denis Walter, Henry André (R & E partner in France, André Technologies), Christian Gebele (managing director of BSR Engineering for R & E project management), Fabrice Chauvin (managing director Scierie Chauvin/Jura Pellets) (from left)



Following the good collaboration, Rudnick & Enners is currently delivering a drum chipper line for logs and cross-cut wood. In the future, the system will supply biomass for the heating plant and additional raw material for the pellet plant

trucks at up to 300 st/h. Before the material enters the bucket elevator, which is connected to the wet chip silo, oversized pieces are removed using the Rudnick & Enners rotating screener. "The entire additional infeed station has a compact structure, a high conveying capacity and has been adapted to the topography of the premises," Rudnick explains.

### Separate wet chip grinding

The material is transported from the two wet chip silos to the wet chip processing unit on a tubular belt conveyor. The goal was to build an energy-optimized wet chip processing unit. "Only material that cannot be dried is ground. Another requirement is to reduce no-load operation of the wet chip hammermill to a minimum," Rudnick explains. "In this respect, Rudnick & Enners's plant design convinced us. Having a few months of operating experience now, we can say that it was without doubt the right decision," the two managing directors, Stéphane and Fabrice Chauvin, agree. For this reason, the sawdust and wood chips are separated before wet grinding.

Rudnick & Enners's RE-HM 500x1,300 wet chip hammermill works without an extraction system and has a throughput of around 12 t/h (atro). The wet chip hammermill has also been designed to handle hardwood material in the future. In the Stela Laxhuber belt dryer behind it, the ground sawdust and chips are dried until they reach the required wood moisture content. From the belt dryer, the material is transported to the dry chip silo on a bucket elevator. The silo itself has a diameter of 12 meters and is 24 meters high.

### Horizontal pelleting

When it came to the actual pelleting plant, Scierie Chauvin opted for a horizontal design. The capacity is 6 t/h twice. Rudnick & Enners supplied the entire pelleting plant, including the dry chip hammermill, the mixing container as well as the conditioner and the special cooling technology.



Truck loading station with mobile conveyor belt

Rudnick & Enners equipped the horizontal cooler with a removal system for the pellets which are produced right after the start-up of the plant and with intelligent control technology to make the pelleting process more efficient. A spark detection and extinguishing system was installed directly between the press and the cooler. Via the cooler, the pellets, which are produced right after the plant has been started up, can be separated directly into a spacious container, thereby eliminating the need for manual disposal. The cooler is also equipped with several innovative features which help optimize pellet moisture and reduce energy consumption during the cooling process. The aspiration of external air is also possible. "Thanks to intelligent cooling, we achieve optimal values when it comes to dust and the moisture content of the pellets," Gebele explains and adds: "The goal was to make pelleting as dust-free as possible and to minimize the cleaning effort for the operating staff."

The pelleting plant, pressure boosting system and dry chip grinding unit occupy a floor space of only 14 by 11 meters – "and all of that with a low building height," as Rudnick emphasizes. Before the pellets are sto-

red in the four silos, they are screened once again. The entire pellet transport is done gently by using tubular belt conveyors. When they leave the silo, the pellets are transported to the truck loading station with its performance of around 100 t/h. The trucks can be loaded quickly thanks to the mobile loading conveyor. Chauvin can also use the tubular belt conveyors to transport the pellets to the bagging machine which was also supplied by Rudnick & Enners. Depending on the bag format, the machine has a capacity of 1,400 to 1,500 bags per hour. "The goal is to reduce the percentage of broken pellets and dust in the bags to a minimum," Rudnick explains.

### Further collaboration

"We are very satisfied with the entire plant and the collaboration with Rudnick & Enners. The plant is very stable in its operation," Scierie Chauvin comments. This positive experience is the reason why Rudnick & Enners is currently building a high-performance drum chipper line for logs and cross-cut wood, including a vibrating dosing system for the processing of industrial wood, at the company's Mignovillard site. //