

This has been an intense year for PRODESA Medioambiente concerning the pellets market. Having a long experience in biomass thermal drying and agripellets production, it seems a short period since we started our activity in the wood pellets market, and however at the end of 2009 the sum of plants manufactured by PRODESA will be putting on the market more than 388.500 tons of pellets, with a total installed capacity of 515.500 tons.

Throughout the last months, this company specialized in thermal drying of biomass that works under license of the brand SWISS COMBI has directed its efforts both to the national and the international market, in which has reached several successes. Accordingly, PRODESA started 2008 with the commitment of setting into operation two new pellets plants, one near the Spanish city of Salamanca and the other one in the north, near Oviedo. However, one of the more representative projects managed within the last year is ENERMONTIJO, located in the city of Pegões, Portugal, that reached PRODESA's offices at the beginning of 2008. This plant will start its operation in December of the present year, and after the start up, will put on the market 85.000 tons of pellets per year, both DIN PLUS and industrial pellet. Its specific characteristics, as it will manufacture in a continuous process pellets from complete tree logs, together with the record time in which it has been manufactured and erected (6 months) makes it a reference plant in the Iberian market.

The project consists of the construction of a plant to produce in a continuous process pellets from complete tree logs of pine and eucalyptus as raw material. Following the philosophy of the maximum flexibility, the plant which is the first one with these characteristics in the Iberian Peninsula, allows to incorporate raw material in each one of the main transformations that wood suffers throughout the process. In this case, the Swedish company BRUCKS was the responsible for the debarking, chipping and rechipping line and PRODESA for the thermal drying, milling and pelleting line.

First of all logs are debarked in a rotary machine. By using a chipping line with two engines of 200 kW each, the logs are reduced to woodchips. In order to be able to guarantee that the 100% of the product that goes to the dryer fulfills with the desirable particle size (10mm), those chips go through a rechipper in a close loop, so just particles with the right particle size are allowed to go to the dryer.

Meanwhile, the barks that have been removed from the logs in the first stage of the process, are directed to the boiler to produce hot water at 105°C, which will be used as energy source for the indirect dryer. A low temperature belt dryer reduces the moisture content of the wood pinchips from 45% to 10% without modifying the original properties of wood and with a very high reliability even at high ratios of utilization, nearly zero risk of firing and a very low emissions level (<15 mg/Nm³). As the band speed is adjusted depending on the conditions of the raw material, we are able to have a very accurate control of the moisture content at the outlet of the dryer.

The milling and pelleting line has been likewise delivered by PRODESA, and consists of three pellet mills that will produce altogether 12 tons/h.

Another of the keys of the project is the short time in which it has been developed. In six months the complete plant has been manufactured and erected. A well coordinated execution fulfilled by a wide experienced staff, together with the best collaboration of every person in ENERMONTIJO



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have enabled that the whole project has been developed without significant setbacks in a really short period of time.

At present days, and nearly at the end of the year, PRODESA has been awarded with a new project that will also become a reference in the Iberian Peninsula: to coordinate and execute a drying + pelleting of biomass + electric generation with ORC plant. In this new installation, as in ENERMONTIJO, the raw material will be complete logs, and the thermal energy that will be used for the drying will be the waste energy coming from the ORC, obtained in a thermal oil biomass boiler.