THE ANDRITZ ADVANCED PELLET SOLUTION

Steam-Ex PROCESS EQUIPMENT

DECARBONIZING ENERGY PRODUCTION WITH ANDRITZ

Most of the world's heat and power generation is based on coal. To decarbonize this energy production, ANDRITZ has developed equipment technology to produce advanced pellets - steam explosion pellets. The ANDRITZ Steam-Ex process equipment is based on steam explosion and converts biomass (e.g., wood, forest residues, sawmill residues, ...) into a sustainable substitute fuel for coal-fired heat and power plants. These steam explosion pellets have various advantages over white pellets, such as higher energy density, durability and water resistance, which allows them to be stored outdoors and reduces both CAPEX and OPEX in fuel logistics. And the most important advantage is the direct replacement of coal without significant investment in existing power plants. ANDRITZ offers a full range of services, from engineering and equipment supply to erection and start-up of complete lines including ongoing service support.

ANDRITZ

ANDRITZ's sustainable solution to replace coal with renewable pellets

RAW MATERIAL PREPARATION

ANDRITZ woodyard operations such as storage, debarking, chipping, and grinding deliver raw material at the required particle size.

DRYING

The ground feedstock is dried in an ANDRITZ belt dryer, which allows the use of low-temperature thermal energy, including waste heat.

STEAM-EX PROCESS EQUIPMENT

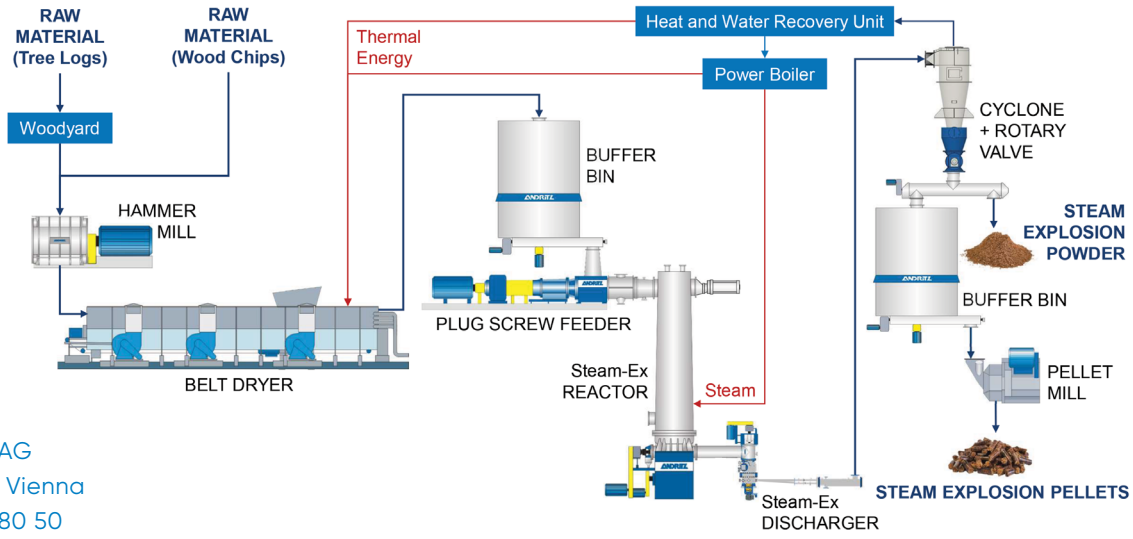
The ANDRITZ plug screw feeder transports the dried ground feedstock to the pressurized vertical digester by creating a pressure seal. ANDRITZ offers several innovative solutions to adapt the plug screw feeder to different conditions and to minimize maintenance costs. The biomass is pressurized inside the ANDRITZ Steam-Ex reactor with steam and continuously treated in this high-temperature steam atmosphere. The following steam explosion in the ANDRITZ Steam-Ex discharger ruptures the lignocellulosic biomass structure which yields a homogenous powder. To minimize steam consumption and wear, the special design of the ANDRITZ Steam-Ex discharger has been continuously optimized since the early 2000s. The steam-exploded biomass is separated from the steam using a cyclone.

PELLETING

ANDRITZ pellet mills are then used to efficiently densify the resulting steam explosion powder into steam explosion pellets.

YOUR BENEFITS

- ANDRITZ can supply complete steam explosion pellet lines – from logs to pellets
- Conventional pellet lines can be easily upgraded to a Steam-Ex line by retrofitting the Steam-Ex process equipment
- Everything from a single source: engineering, equipment, automation, erection, start-up, and service
- Equipment technology based on many proven solutions worldwide



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