



One-step drying of saw dust Knäredssågen pellet line, Sweden

This project

Knäredssågen decided in 2006 to expand its pellet production also to include the wet raw material produced in-house by utilising off-gases from the energy plant for drying purposes. The off-gases from the combustion of dry flakes are efficiently used as drying medium in a rotary drum dryer.

YEAR OF DELIVERY:
2007

TECHNOLOGY:

One-step direct drying – Bojner Systems.

Heating medium: exhaust gases

TREATED MATERIAL:

Various grinded biomass and saw dust

EVAPORATION CAPACITY:

approx. 0,5 t/h

DRYNESS IN/OUT (w%):

approx. 45 / 90

HEAT SOURCE:

Exhaust gases from furnace of approx 200°C

HEAT RECOVERY:

Partial chimney condensation

GAS / DUST CLEANING:

Cyclone

SCOPE OF DELIVERY:

Material input and discharge, dryer, exhaust gas ducts incl cyclone, instrumentation, etc.

Alternative solutions

We offer custom made systems for drying of all types of solid biofuels – indirect systems in one or two steps being our specialty. Besides exhaust gases, steam, thermal oil, etc can be applied as heat source. We also offer direct drum drying which is a simple robust technology, however with less opportunities for heat recovery and elimination of fire hazards. Please get in touch with us and explain your situation!



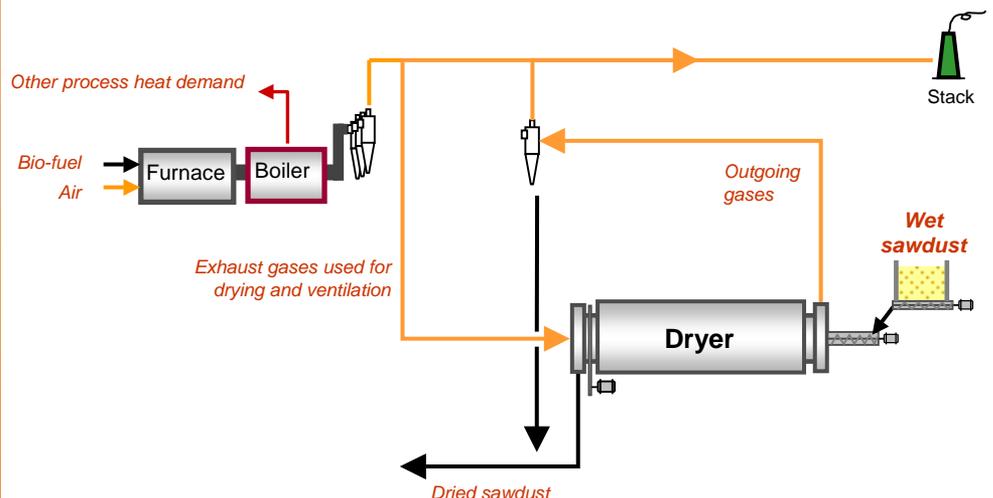
A rotary drum dryer uses an existing off-gas from the sawmill's energy plant consisting of a furnace and a boiler. The sawmill uses only dry chips as fuel, which implies that the off-gas has a very high drying potential.

In the dryer the material is exposed for the gases in counter-current flow with direct heat transmission. After the dryer the gases leave the plant through the chimney via one single cyclone.

Within the dryer a set of lifters and sector plates effectively expose the material to the gas stream during the rotation of the drum.

Ventilation is done using virtually inert exhaust gases, thus eliminating fire hazards.

This system combines excellent energy efficiency, operational robustness, environmental protection and overall economy.



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