

COGENERATION IN A SAWMILL

Josef Ziegler GmbH's concept for success

SUSTAINABLE (ENERGY) PRODUCTION

In Plößberg near Tirschenreuth (Bavaria), Josef Ziegler GmbH produces sawn timber and lumber, solid structural timber, laminated wood, and duo as well as trio beams from about 250,000 solid cubic meters of roundwood. To do so, the company relies on sustainable and resource-conserving production processes. And that also includes the energy generation process. In addition to large-scale solar power modules, Ziegler stays true to the raw material it works with and also uses wood cogeneration units by Burkhardt.

BASED ON POSITIVE EXPERIENCES

In 2012, Ziegler had already decided to use renewable energy solutions by Burkhardt. The raw material, wood chips, was basically already lying around in their own back yard. These wood chips are pressed to wood pellets and used in two wood gasifiers (model V 3.90) to produce wood gas. Then, two pilot injection combined heat and power plants use this wood gas to generate heat and power. Back then, the company already achieved an output of 360 kW electrical and 540 kW thermal energy. And the system also convinces by virtue of its availability: with an operating time of more than 91%, or about 8000 h/y,

the plants have already surpassed the guaranteed minimum operation time of 7500 h/y.

THE DECISION TO EXPAND

With the expansion of the drying facilities in 2014, the heat demand naturally rose as well. Since the company had had good experiences with the Burkhardt systems, it decided to turn to them again for the expansion. Currently, two additional V 3.90 wood gasifiers and two ECO 165 HG CHPs with Otto engines generate 165 kW of electric power each. The total amount of produced heat (520 kW) fully covers the additional demand of the company. The Otto engines might be less powerful than the pilot injection generator sets, but the costs saved for ignition oil completely make up for it. The pellet consumption of 110 kg/h is the same as with the pilot injection set. Moreover, the company can do without the ignition oil components, making the plant easier to maintain and saving even more costs. For the entire year 2015, both of the new machines even ran with an efficiency of 95%! Compared to the first plants, all expectations were met and even surpassed. The saw mill is perfectly equipped for the future when it comes to its energy supply!

FACTS AND FIGURES

Location: Saw mill Josef Ziegler GmbH, Plößberg (Bavaria)

Info company: finishing of 250.000 solid cubic meters of round wood

Information Burkhardt plants:

4x Burkhardt wood gasifier V 3.90

2x Burkhardt CHP ECO 180HG

2x Burkhardt CHP ECO 165HG

total power:

690 kWel and 1,06 MWth

Comissioning: 2012/2014



Focus on wood – Also in energy production.



The two flares of the new gasifiers



Two of the four Burkhardt wood gasifiers