

# SwissKrono GmbH Heiligengrabe

## Reference Story ProcessOPT BC



Since 1993, the Swiss KRONO Group supplies products such as MDF, HDF and OSB boards and flooring products from the site in Heiligengrabe. Various power and heat generation plants are operated at the site, using different fuels, both fossil and renewable. The optimized plant using the APOS system is a biomass power plant with 65 MW firing power and is fueled by non-contaminated waste wood (A1-A2).

Due to high fuel moisture contents, especially in the winter months, the plant had continuously issues achieving full production as the total primary energy amount transported into the boiler was unknown and potentially insufficient. The target amount of fresh steam in those years was adjusted manually by the plant team, simply based on experience. However, as the calorific value and the water content of the fuel were unknown and only rough estimates, this did not lead to the desired result, although positive trends were achieved.

With the system ProcessOPT BC APOS has fundamentally changed this. The APOS system determines water content, heating value and ash content and does not only transfer these key values to the boiler control system, but actively manages the target steam production as a function of flue gas flow volume, heating value and boiler load.

All relevant values are parameterized individually to the plant requirements so the “system”, consisting of ProcessOPT BC and boiler control system, automatically adjusts steam flow now to the maximum possible, but still under the limiting factors such as maximum flue gas volume. In sum, the steam production has increased significantly. Obviously, the electricity production has increased accordingly. All fully automatic and without involving the plant team.

Alternatively, the “disturbance value” calorific value equivalent can be transferred in real time to the boiler control system to enable more intelligent adjustments of the boiler, led by the original control system only. In both cases, the APOS system does not transfer raw measurement data, but data that is smoothed through a low-pass filter APOS has developed in cooperation with the University of Hamburg.



Biomass CHP Heiligengrabe



APOS Unit installed in Heiligengrabe



*Hartmut Lemke about ProcessOPT BC: “Finally we have automatic and online information about our fuel flow. Moreover, the plant is now controlled fully automatic and adjusts itself to the ever changing calorific value. We are achieving a significantly higher performance now.”*

-Hartmut Lemke; Plant Manager-