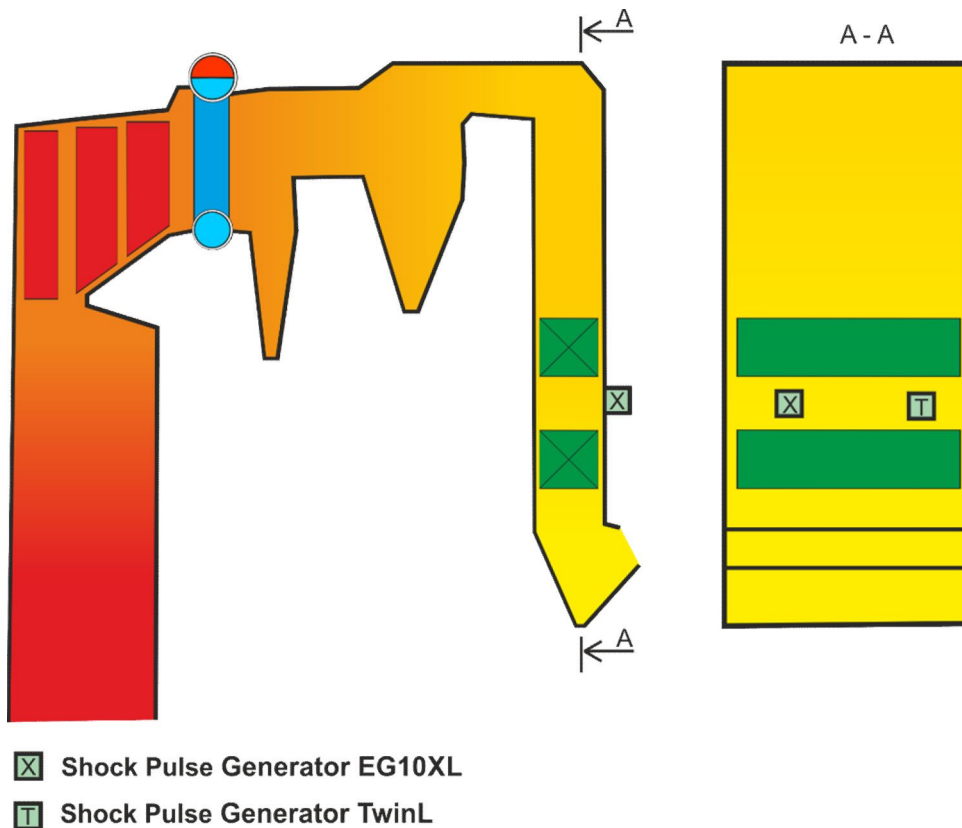


Reference Plant

Biomass Boiler Nesle / FR (Finned Tube ECO)



- 110 t/h steam capacity (83 MW), 16MWel, process heat and cooling water for adjacent industry
- Fuel: natural wood
- Dimensions ECO bundles:
 - W 6.5m x L 2.5m x H 1.5m
 - PT 76mm, PL 73mm, tube diameter 31.8mm
 - Finn geometry: 120mm x 70mm rectangular fin plates connecting two tubes
 - distance between fins: 19mm
 - Manufacturer: Favier-Setrem
- Initial cleaning equipment: rake soot blower above each ECO bundle (RSG-AR, 10t/h steam consumption soot blowing 3x/day); 2 Nirafon sonic horns between bundles; manual online boiler cleaning every 14 days
- 1 x EG10XL, 1x TwinL since 07/2016 with Shock Pulse Interval (SPI) of 1h
- Switched off soot blowers most of the time and sonic horns permanently; no regular manual online boiler cleaning required; flue gas temperatures drop over ECO can be kept constant
- Plant owner: Akuo Energy
- Plant supplier/operator: CNIM/CNIM EB

Reference Plant Biomass Boiler Nesle / FR (Finned Tube ECO)



EG10XL discharge nozzle cleaning right side of finned tube ECO bundles. Rake soot blower stays installed.

FR – Nesle Finned Tube ECO



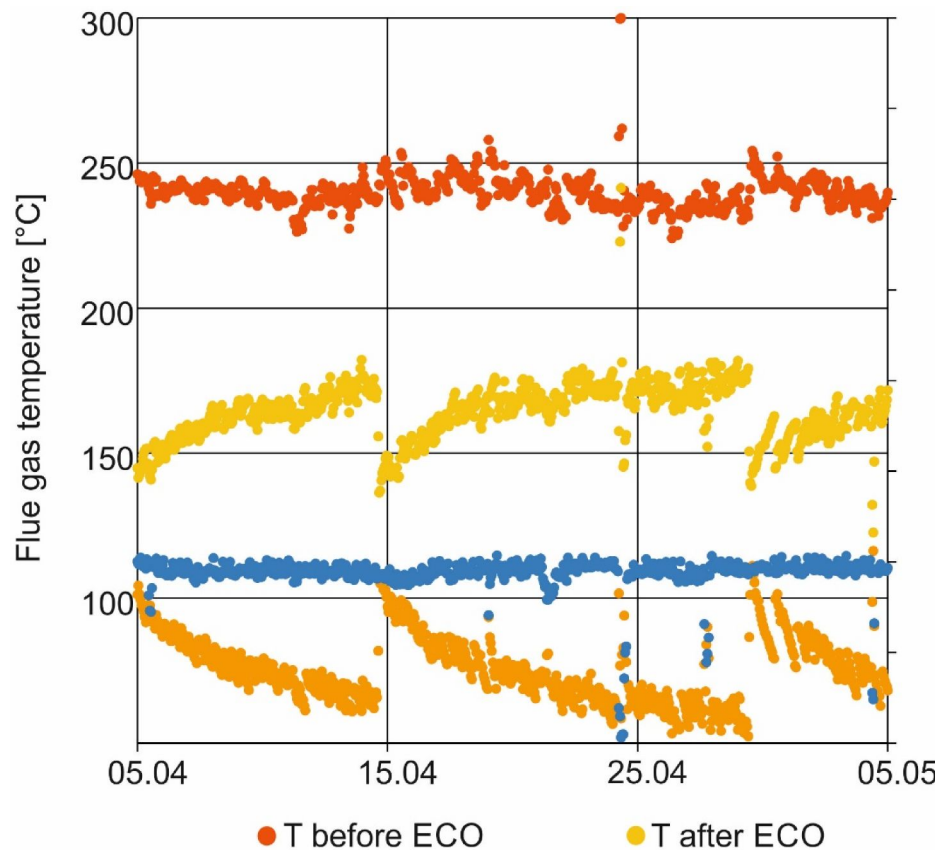
TwinL 90° rotated cleaning left side of finned tube ECO bundles. Met tight installation restrictions outside of boiler.

Reference Plant

Biomass Boiler Nesle / FR (Finned Tube ECO)



April 2016:
Installed ECO boiler cleaning equipment:
Rake soot blower, sonic system, manual
online boiler cleaning every 2 weeks



August 2016:
Installed ECO boiler cleaning equipment:
TwinL/EG10XL with SPI=1h, rake soot blower
cleaning 5-7 times a month

