

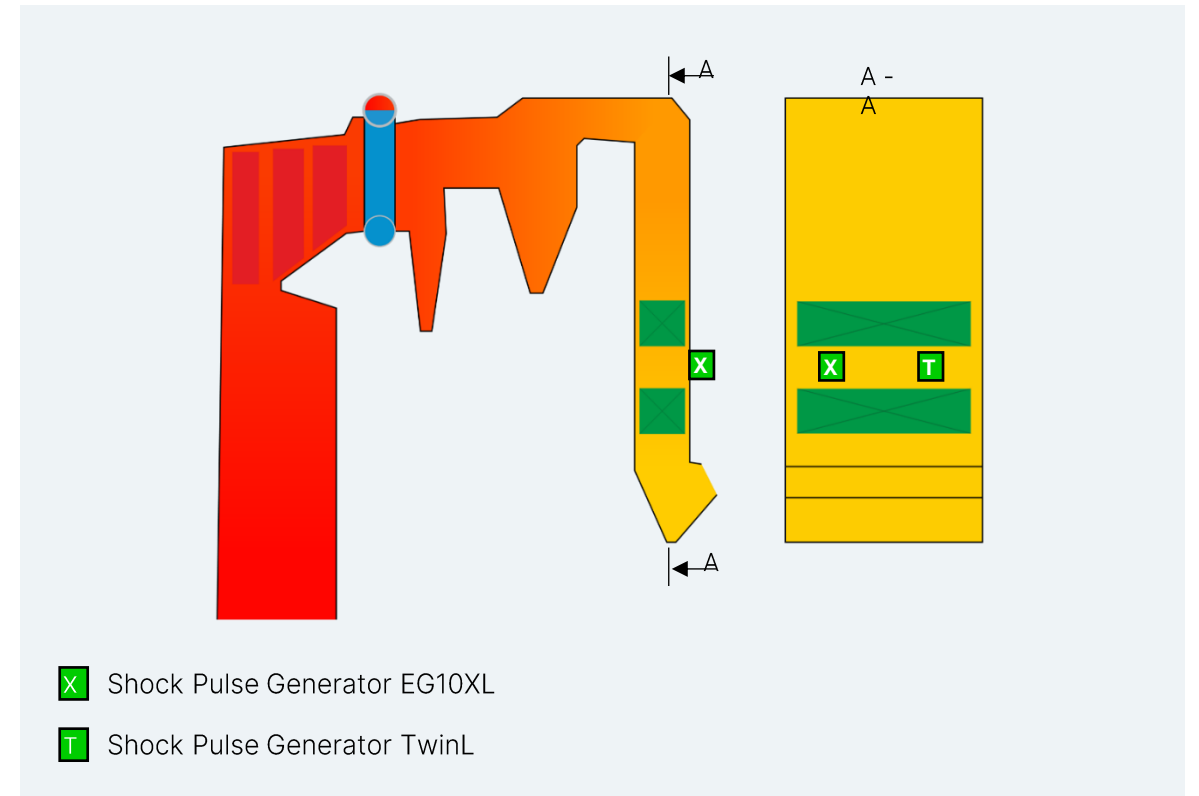
## Biomass: Nesle (FR)

### Boiler Data and Information on Shock Pulse Generators

- 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 (10t/h steam consumption soot blowing 3x/day); 2 Nirafon sonic horns between bundles; manual online boiler cleaning every 14 days
- Since 07/2016: Shock Pulse Generators, 1x EG10XL, 1x TwinL; Shock Pulse Interval 1h

### Customer Benefit

- Since installation of SPGs, the flue gas temperature difference over the ECO can be kept constant; without sonic horn, without repeated manual online boiler cleaning; mostly without use of sootblowers.



**Plant Supplier:**  
CNIM/CNIM EB

**Plant Operator:**  
Akuo Energy

# Annex



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



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

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

