



**COST SAVING
ACOUSTIC CLEANERS**

PROKON Nord Energiesysteme GmbH, Biomass fired CFB Boiler in Papenburg, Germany



- cleaning during the process
- fewer down times
- improves operating efficiency
- no damage to structures
- low operating costs
- short refund time

*Two Nirafon CSD Gas pulse Cleaner units
installed to the Superheater of the CFB boiler.*

NIRAFON ACOUSTIC CLEANING KEEPS THE BIOMASS FIRED BOILER CLEAN

After a successful test with one *Nirafon CSD Gas Pulse Cleaner* in the Superheater of the Biomass fired CFB Boiler at PROKON Nord Energiesysteme GmbH in Papenburg, Germany, three NCSD units were taken into use permanently.

Two of the three *NCSD* units are keeping the superheater of the boiler clean, drastically reducing the use of steam sootblowers and lengthening the operation period of the boiler. The third *NCSD* unit is installed on to the top of the Economizer and is keeping the Economizer Area clean together with five *Nirafon NI100SS* acoustic cleaner units.

In addition to the Nirafon Cleaners in the superheater and economizer areas, there are also two units *Nirafon NI250SS* acoustic cleaners keeping the air preheater clean.

Nirafon Oy Hirsimetsäntie 14 FI 15200 Lahti

Phone +358 (0) 207 780 840, Fax +358 (0) 207 780 841, E-mail: nirafon@nirafon.com www.nirafon.com

The advantages of the Nirafon system:

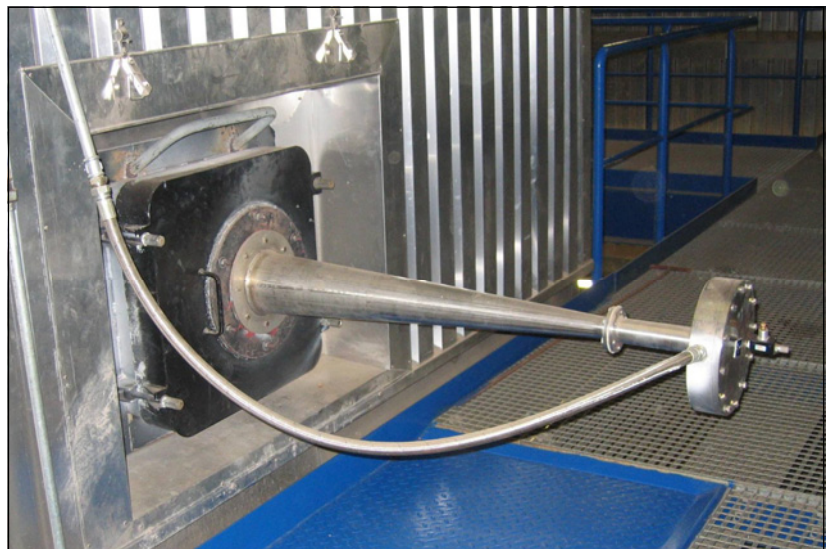
- heat transfer and other surfaces to be cleaned stay permanently clean and the process can continue without interruptions, rendering expensive shut-downs unnecessary.
- acoustic cleaning drastically reduces the use of water at the plant, without causing corrosion or erosion.
- the acoustic cleaners require little space, the maintenance and operating costs are low. The refund time of the system is short.
- a tailor-made plan is always drawn up by Nirafon Oy according to the buyer's need and application.



The third Nirafon CSD Gas Pulse Cleaner installed on top of the economizer

Five units Nirafon NI100SS Acoustic Cleaners Installed to the Economizer.

Two units Nirafon NI250SS Acoustic Cleaners installed to the air preheater



Nirafon Oy
Hirsimetsäntie 14
FI 15200 LAHTI
FINLAND

Phone: +358 (0)207 780 840
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E-mail: nirafon@nirafon.com
www.nirafon.com