



SEELEN

ENGINEERING

CLEANING SYSTEMS FOR FIRED HEATERS

DESIGN • ENGINEERING • MODERNIZATION • SUPPLY • MAINTENANCE

- Brief Company Background
- What we Do, What you can Expect
- Most Common Problems with Sootblowers
- The “Seelen” - Solutions
- References
- Dialogue / Q & A

BRIEF COMPANY BACKGROUND

WHO WE ARE

- Medium-sized supplier of cleaning systems for fired heaters
- Founded in 1978 by Managing Director, Mr Josef Seelen
- Headquarters located in Xanten, Germany
- Global market position, partners all over the world
- E.g. Jimah Power Station Malaysia, Aqualectra Utilities Curacao, RWE Frimmersdorf Power Station Germany



WHAT DO WE DO?

**WHAT CAN YOU
EXPECT?**

WHAT WE DO

- Seelen Sootblower Solutions offers design, manufacture, supply, commissioning of whole new sootblowers
- Maintenance, repair, modernization and supply of spare parts for existing sootblowers from different manufacturers

*Do you have any individual problem?
We advise and support according to your specific requirements.*



WHAT YOU CAN EXPECT

- German quality & reliability
- Customized service by a very experienced specialist
- Short delivery times
- Detailed solutions to your specific problems

*Internationally leading-edge
production facilities driven
by the German quest for
excellence*



“WE ARE A GLOBAL PLAYER WITH A LOCAL TOUCH”

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MOST COMMON PROBLEMS IN SOOTBLOWERS

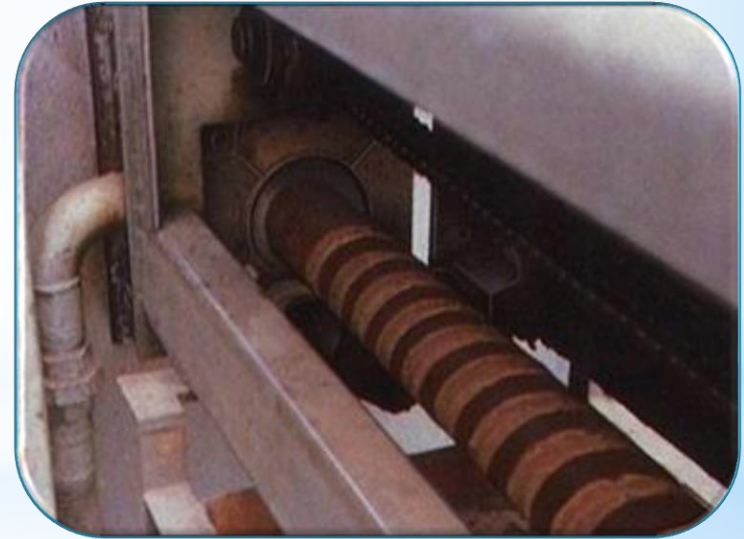
1. Corrosion of lance tubes due to flue gas ingress in the lance and inner tubes
2. Lance stuck (leading to bent lance) due to fouling jamming the opening
3. Flue gas / oxygen leakage through wall box opening



4. Lance/feeder tube wear due to abrasive roller



5. Electric motor overload due to high friction and seized packings

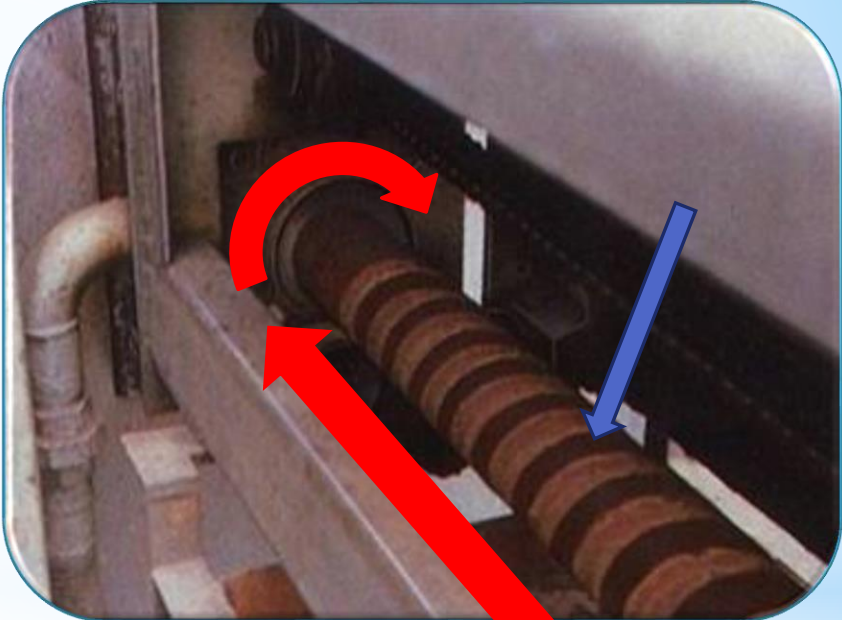
6. Steam leakage because of malfunctioning gland packing



Time for a Change

MOVEMENT PROBLEMS WITH SOOTBLOWERS

- Retractable soot blowers perform
 translational
 and rotational
movements.



- These movements lead to the formation of **helical notches** when using the conventional **roller support**

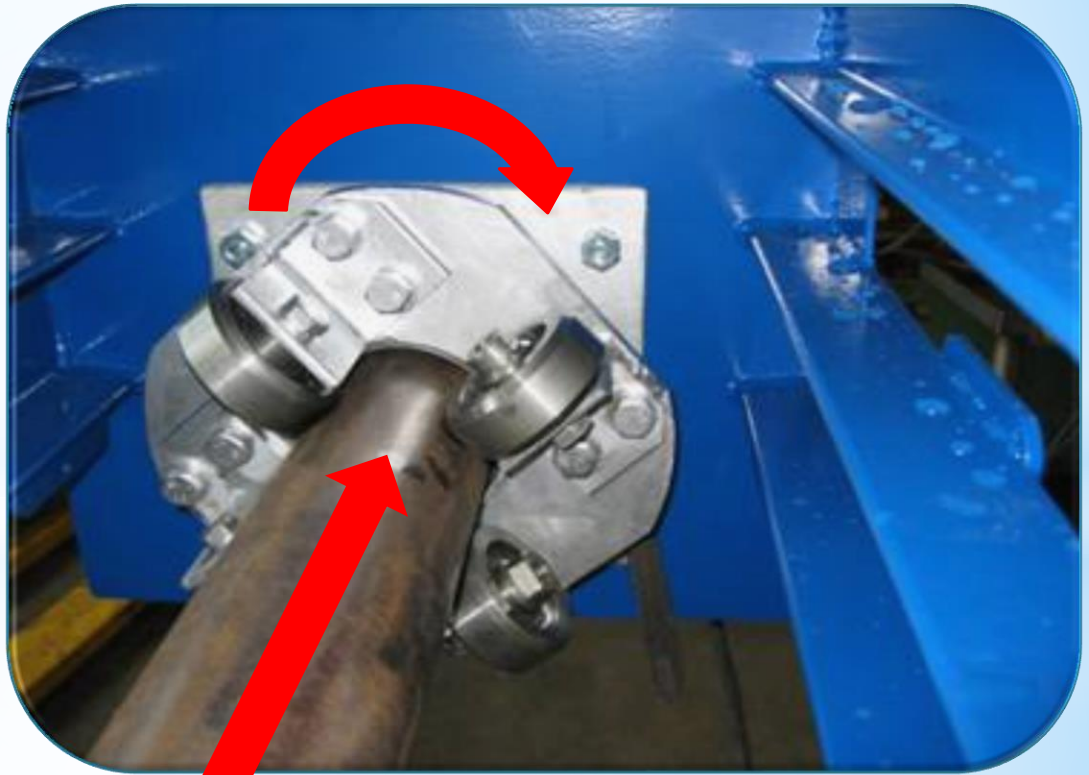


THE “SEELLEN”

DIFFERENCE

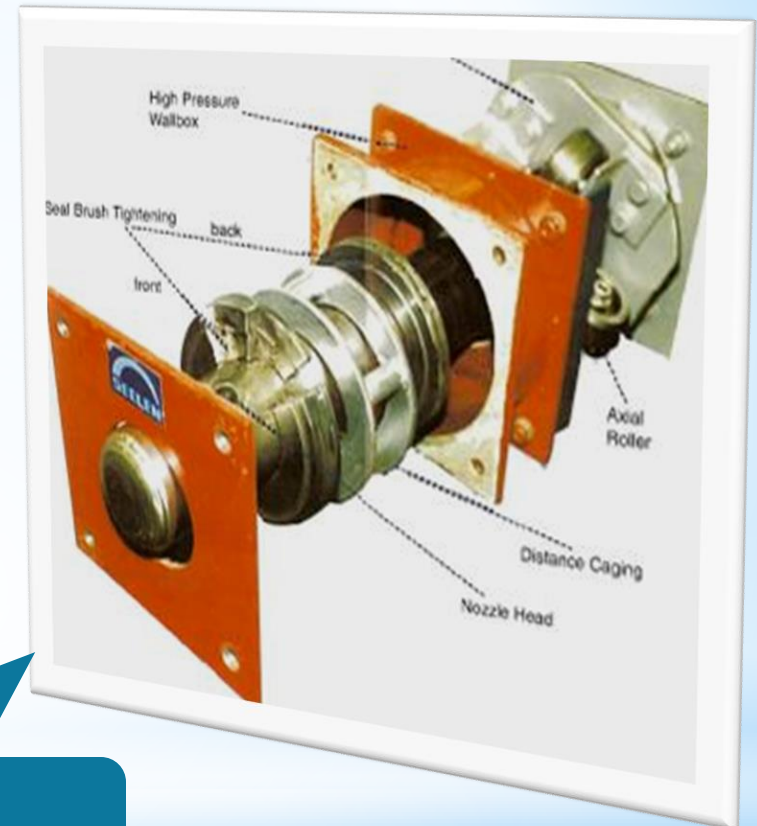
THE „SEELEN“ DIFFERENCE

- The „Seelen“ - roller bracket leads to distribution of the translational and rotational forces
- The consequence of this distribution
 - no wear of the lance,
 - no abrasion



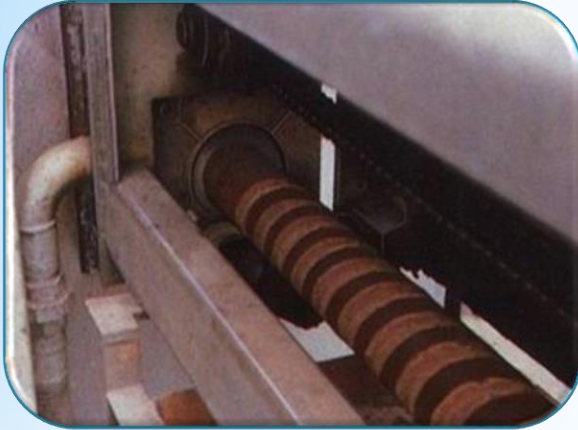
WHAT MAKES US SPECIAL

- Our success is based on the patents for two inventions: the **brush sealing** and the **roller bracket** for rotating blower lance
- Applying these unique „Seelen“ technologies helps achieve cost savings and a more efficient operation of the plant

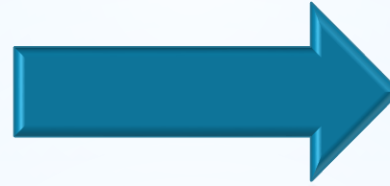


- ✓ *Less costs in the long run*
- ✓ *Protection of the environment*

BEFORE & AFTER COMPARISON



The standard lamellar seal and the conventional roller support show typical wear at the lance surface.



Using the „Seelen“ - sealbrush and the rotating lance support, there is absolutely no wear at the lance surface.



ADVANTAGES OF A SEELEN SYSTEM AS EXPERIENCED BY ISLA CURACAO

- Increase in furnace efficiency of more than 4 %
 - 3 % lower fuel consumption
 - Better heat exchange (70°C lower exit gas temp.)
- Increase of operating cycle up to 4 years without shutdown
 - Reduction of maintenance frequency and costs
- Savings of 400.000 \$ per year documented

REFERENCES



...we will be happy to answer any questions you may have...