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Technology
of clean tomorrow





INSTAL-FILTER SA – leader in the industrial air protection systems

"We have only one Earth, and its future depends on each of us!"

– Florian Plit

Striving for clean air requires decisive steps. We deal with modern de-dusting, filtrating and neutralizing technologies for all industries in Poland and worldwide.

Our technologies reduce emissions of harmful chemical compounds from flue gases, post-process gases and gases from waste thermal treatment to vestigial quantities. Our installations meet the strictest environmental standards which allows our clients to enjoy the joint contribution in favour of our planet.



We think ahead

In recent years, we have modernized several hundred industrial facilities, which has contributed to a significant improvement of air quality.



We use modern technologies



We base on innovative solutions



We set new standards in efficiency and operation of devices up



We guarantee the reduction of emission in accordance with the EU standards

INSTAL- FILTER SA means:



Durability and reliability of installations



High quality of materials used for the construction of devices



Low maintenance costs



Ergonomic servicing thanks to internal structure

Legal regulations

EU Directives and BAT Conclusions initiated a new approach to the control of combustion sources and pollution emissions. In order to meet all the applicable standards, it is no longer enough to reduce dust emissions. The new legal regulations that were introduced oblige energy and heat enterprises along with other sources of emissions, such as local waste incineration plants or municipal waste treatment plants, to also curb the emissions of the following chemical compounds: SO₂, NO_x, HCl, HF and Hg. INSTAL-FILTER SA has experience in elimination of all types of such pollution.

You can rely on us at every stage of implementation!

Design

Every project by INSTAL-FILTER SA is preceded by a thorough analysis of the Client's needs, followed by a design stage. Our specialists are entrusted with choosing adequate devices, connections and structures.

Production

Modern and automated production facilities enable us to complete individual and non-standard orders. Since the elements of an installation are manufactured by us, we can offer the advanced products at competitive prices.

Installation

Properly performed installation work guarantees unproblematic start-up and long-lasting, failure-free operation of the installation. Our systems are installed in Poland and abroad.

Service

We not only offer professional guarantee services, but also service devices in the post-guarantee period. We provide 24/7 support.

Bag filters





are modern devices. At the same time they meet:

- ✓ the requirement of high efficiency of the de-dusting process,
- ✓ the economic requirement of low capital expenditures.

The devices by INSTAL-FILTER SA meet the quality and emission legal standards applicable in Poland and throughout the EU.



Our filters:

-  mean high quality of filter materials,
-  have wide variety of applications,
-  are manufactured on the basis of the verified technologies,
-  ensure failure-free operation for many years.

We offer **horizontal** and **vertical** module bag filters. Our clients can count on counselling with respect to selection of an appropriate product adjusted to their needs and the type of implemented investment.

Our devices may be used in installations with a capacity from 20 000 to 1.5 million m³/h.





Neutralization of harmful compounds

INSTAL-FILTER SA has modern technologies which reduce the emission of all gaseous compounds and heavy metals listed in the BAT conclusions, both in energy and heating sectors as well as in waste thermal treatment plants. The proven methods of neutralization based on own know-how guarantee the highest efficiency and low maintenance costs.

- ✓ Comprehensive de-sulphuring systems with innovative methods
- ✓ Possibility to use various reagents and their mixtures
- ✓ NO_x, HF, HCl, Hg, dioxin and furan reduction installations
- ✓ High availability of the implemented applications
- ✓ High flexibility of system operation



How to reconcile civilization development with care for the environment?

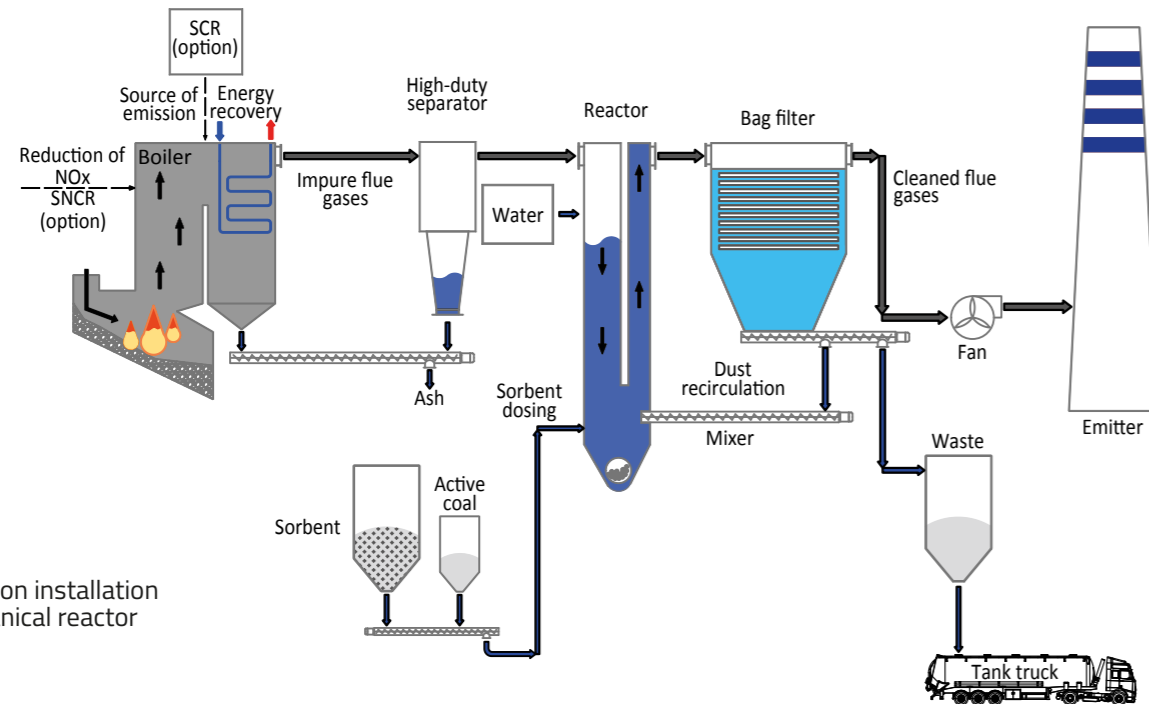
The answer to this question has already been learned by many companies, including: Energetyka Sp. z o.o. in Lubin, part of the Group KGHM and PGNIG Termika, for which we launched the installation in Pruszków CHP Plant.

We have demonstrated that this is possible!

Neutralization installation with mechanical reactor

The investment for PGNiG Termika, which was comprehensively implemented by INSTAL-FILTER SA, serves as an example illustrating the possibility of construction of coal boilers that meet all the applicable, restrictive emission regulations.

- ✓ The air protection system consists of two installations to neutralize harmful compounds from flue gases with horizontal bag filters.
- ✓ Both hydrated lime and soda may be used as sorbent.



Neutralization installation with mechanical reactor

The modernisation of Pruszków CHP Plant is **the first in Poland** installation that meets the requirements of the MCP Directive for new boilers.







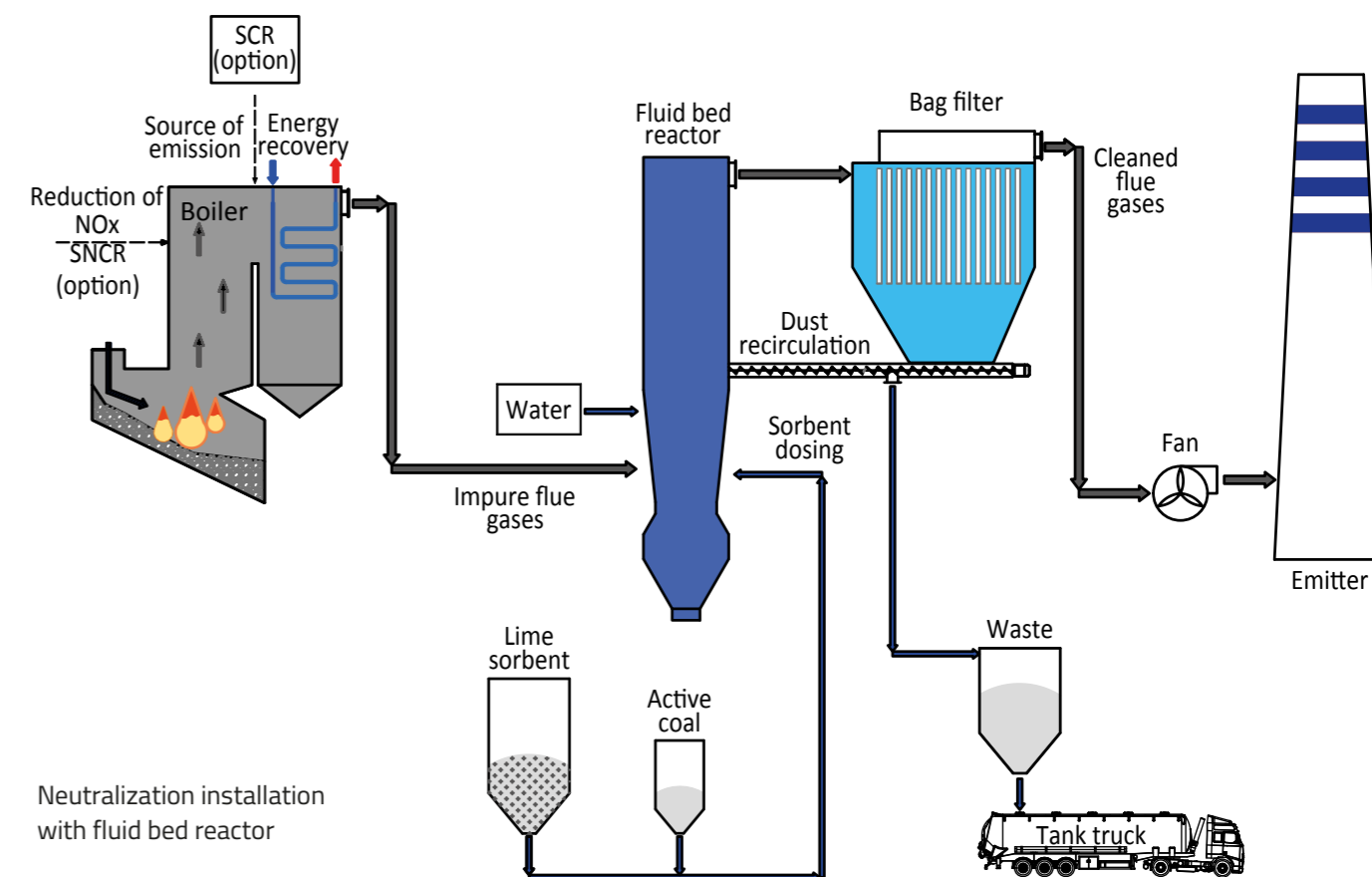
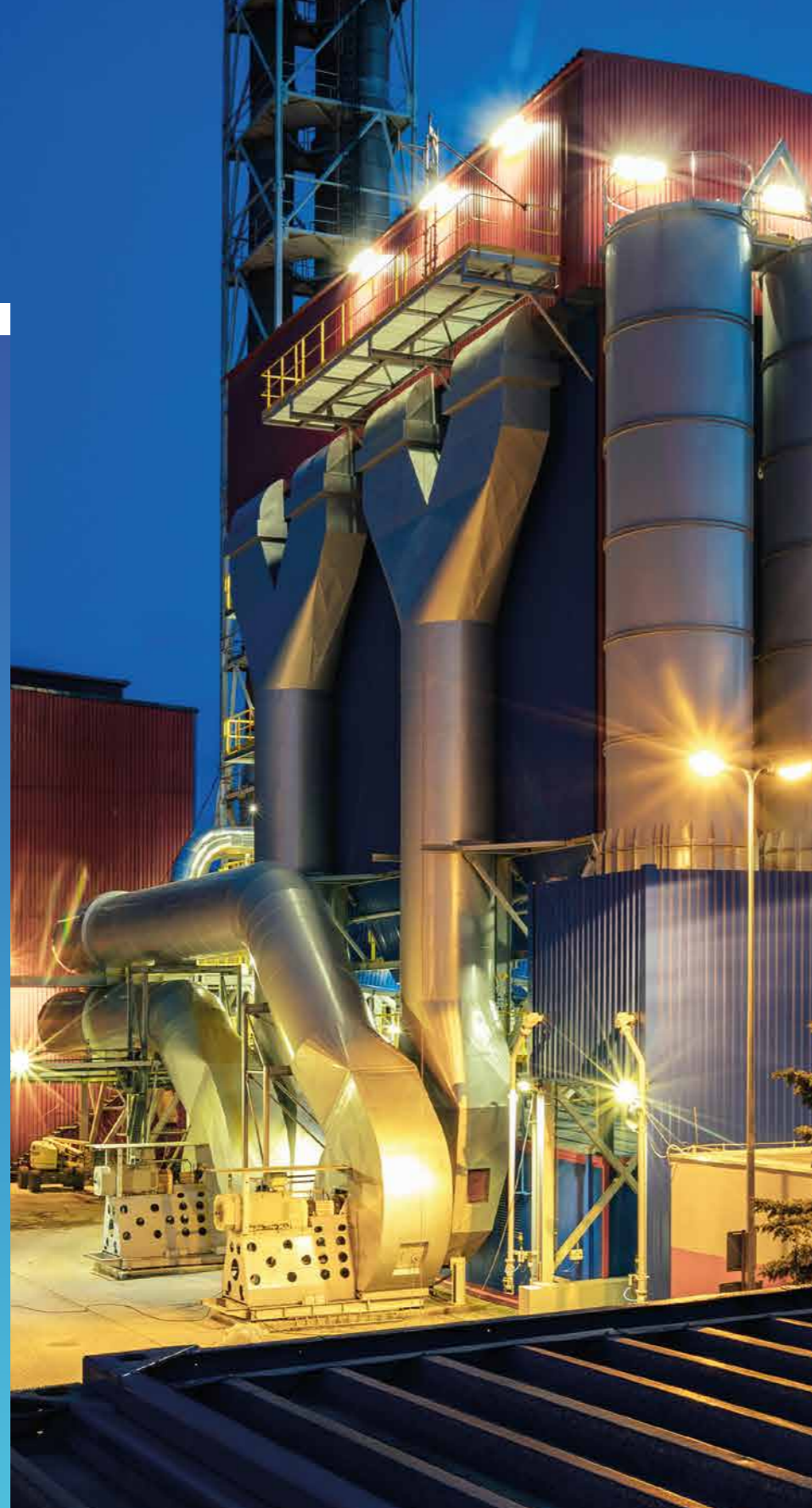
Application of technology with mechanical reactor gives the opportunity to design the installation with much smaller dimensions. This reduces the investment costs and allows to adjust a new installation in place of the existing one.



How the neutralization installation with fluid bed reactor works?

In the case of the project for KGHM Energetyka, our task consisted in design, construction and start-up of an installation characterised by low investment costs and low reagent consumption. This installation was designed for the cleaning of flue gas stream of 0.5 million m³/h. Operating costs were also minimised and - last but not least - air quality was significantly improved.

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 The implemented technology uses the fluid bed reactor which ensures low consumption of reagents and emission parameters compliant with the strictest standards. The reactor does not have any moving parts, which guarantees its high reliability.
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 A high efficiency bag filter is responsible for separation of solid particles.
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 A cheap and generally available hydrated lime is the reagent.
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 This solution ensures high flexibility of operation and adjusts the operation to current load of the CHP plant.



Furthermore, our technology allows for enhancing installation efficiency without additional capital expenditures. Thanks to the devices proposed by us, the entrepreneur may continue to reduce the emission of harmful substances by increasing the sorbent dose used.



Measurable effects

After application of flue gas cleaning system with fluid bed, the following emission parameters were obtained:

- ✓ sulphur dioxide (SO_2) concentration below 150 mg/Nm^3
- ✓ nitrogen oxides (NO_x) concentration below 150 mg/Nm^3
- ✓ dust concentration below 5 mg/Nm^3
- ✓ hydrogen chloride (HCl) concentration below 3 mg/Nm^3
- ✓ hydrogen fluoride (HF) concentration below 2 mg/Nm^3
- ✓ mercury (Hg) concentration below $3 \text{ } \mu\text{g/Nm}^3$



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