

PRESS SCRUBBERS FROM SCHEUCH

MAXIMUM OPERATIONAL SAFETY
AND EFFICIENT CAPTURE WITH
THE ORIGINAL



✓ THE BENEFITS

- Efficient collection of exhaust air using specially shaped hoods
- Low dust and formaldehyde concentration in the production hall
- Clean separation of chips, fibres or strands
- Minimizes accretions (accumulation) in the exhaust system
- Press emissions are transported through ducting for final treatment
- Fire protection
- Machine protection
- Low maintenance and cleaning
- Operational safety and availability

INNOVATIVE EXHAUST AIR CLEANING

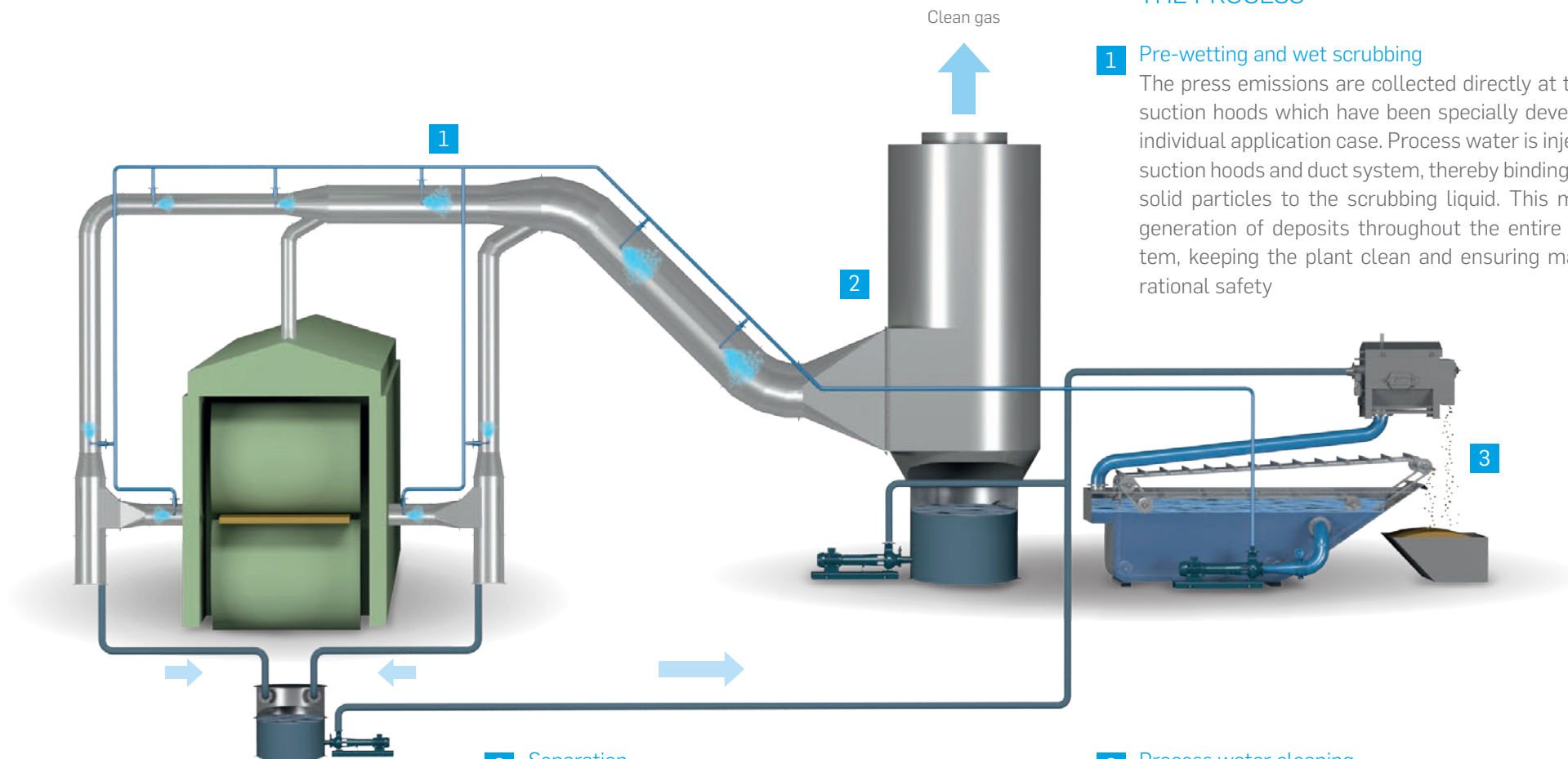
THE BASIS FOR HIGH PRODUCTIVITY

Manufacturers of PB-, OSB- and MDF-boards require an efficient system for suction and cleaning the press emissions in order to meet their high standards with regard to plant availability, productivity and quality. For this purpose Scheuch provides application-oriented solutions with individual exhaust air cleaning concepts. When solutions are well thought out, they create synergies for the entire production site.

The SAP-system from Scheuch is a well proven method for the collection of press emissions. Its sophisticated design means that it remains virtually deposit-free. The directed air and water flow prevents contamination which may impair the functioning of the system, thus effectively eliminating the risk of fire. Thanks to the integrated process water cleaning function, the Scheuch press scrubber ensures that the system works reliably in continuous operation.

EFFICIENT COLLECTION
OF PRESS EMISSIONS
OPTIMIZES AIR QUALITY IN
THE PRODUCTION HALL





THE PROCESS

1 Pre-wetting and wet scrubbing

The press emissions are collected directly at the source by suction hoods which have been specially developed for the individual application case. Process water is injected into the suction hoods and duct system, thereby binding the wettable solid particles to the scrubbing liquid. This minimizes the generation of deposits throughout the entire exhaust system, keeping the plant clean and ensuring maximum operational safety

2 Separation

Specially designed mist collectors are used to efficiently separate the liquid and solids contained in the gas stream. The cleaned press exhaust air is then – depending on the required air emission limit values – either discharged into the atmosphere or fed into a final air pollution control system. If necessary, a final cleaning stage can be added to the SAP.

3 Process water cleaning

All of the process water is screened to remove coarse particles and then it flows into a clarifier for further treatment. There, floating and settled solids get discharged. After the clarification process, the cleaned water is recirculated and used for cleaning the press emissions. Some water evaporates, while the press emissions get cooled in the quench, therefore it is necessary to add some fresh water to keep a constant water level in the system.

SEPARATION PERFORMANCE

BY PRODUCT STAGE IN COST/BENEFIT COMPARISON

	DUST REDUCTION	FORMALDEHYDE REDUCTION	COST BENEFIT
PRESS SCRUBBER (SAP)	+	○	👍
PRESS SCRUBBER WITH VENTURI STAGE (SAP + VENTURI)	+	○	👎
PRESS SCRUBBER WITH THERMAL PROCESS WATER CLEANING (THERM SAP)	+	+	👎
PRESS SCRUBBER WITH OXIDATIVE PROCESS WATER CLEANING (OXI SAP)	+	++	👏
PRESS SCRUBBER WITH BIOLOGICAL PROCESS WATER CLEANING (BIO SAP)	+	+++	👍
PRESS SCRUBBER WITH WET ELECTROSTATIC PRECIPITATOR (ESAP)	+++	○	👍
PRESS SCRUBBER WITH WET ELECTROSTATIC PRECIPITATOR AND THERMAL PROCESS WATER CLEANING (ESAP + THERM SAP)	+++	+	👏
PRESS SCRUBBER WITH WET ELECTROSTATIC PRECIPITATOR AND OXIDATIVE PROCESS WATER CLEANING (ESAP + OXI SAP)	+++	++	👏
PRESS SCRUBBER WITH WET ELECTROSTATIC PRECIPITATOR AND BIOLOGICAL PROCESS WATER CLEANING (ESAP + BIO SAP)	+++	+++	👍



DUST REDUCTION

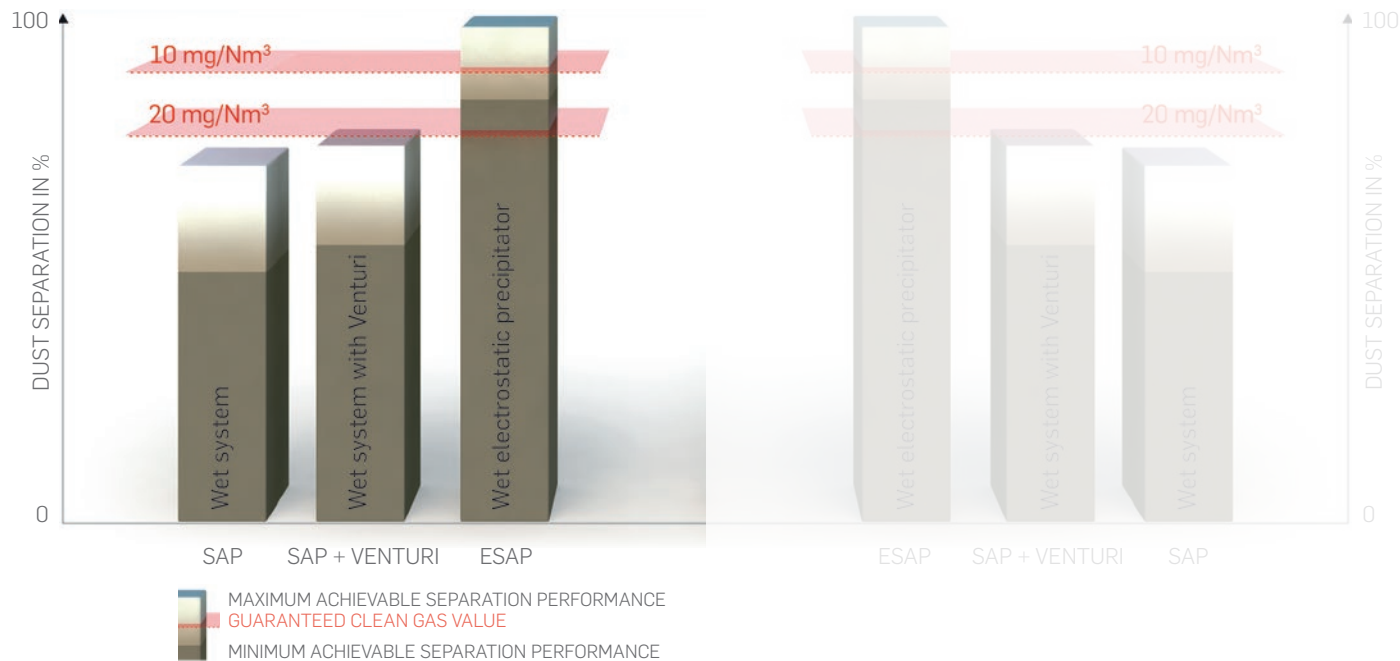
WITH WET ELECTROSTATIC PRECIPITATOR

ESAP FOR PRESS EXHAUST AIR CLEANING

Depending on the required air emission limits, a wet electrostatic precipitator (ESAP) can be added to the system. This ensures reliable reduction of fine dust.

The wet electrostatic precipitator, which has a honeycomb design, separates out fine dust and aerosols from the gas stream to ensure long-term compliance with even the strictest legal requirements.

COMPARISON OF SEPARATION PERFORMANCE FOR VARIOUS PRESS SCRUBBERS



BENEFITS

- Very good aerosol separation (oils, paraffins, „blue haze“)
- Good separation of fine dust
- Maximum dust separation levels of up to 98%
- 80% less pressure loss in the electrostatic precipitator compared to a Venturi stage with mist collector



SCHEUCH PROVIDES PRACTICAL POLLUTANT REDUCTION PROCESSES TO SUIT FOR ANY SITUATION.

FORMALDEHYDE REDUCTION

INNOVATIVE SYSTEM SOLUTIONS

Formaldehyde and other organic pollutants are absorbed from the press exhaust air into the process water by means of intensive spraying. In order to guarantee efficient separation of organic pollutants in continuous operation, the pollutant concentration in the process water must be kept at a consistently low level. Scheuch offers the following innovative systems for this purpose:

BIOSAP – BIOLOGICAL CLEANING OF THE PROCESS WATER

The circulating process water is cleaned by micro-organisms in a separate stage to remove formaldehyde and other organic pollutants. This well proven biological system from Scheuch is characterized by very low operating costs and reduction efficiencies of up to 95%.

OXISAP – LESS FORMALDEHYDE THROUGH OXIDATIVE WATER TREATMENT

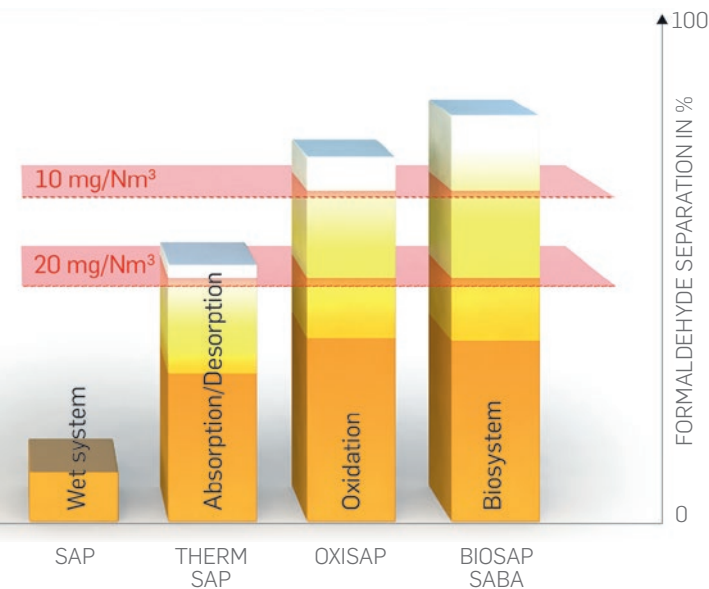
In this process, formaldehyde from the wood treatment process is efficiently reduced by adding oxidation agents. The process water retains its ability to separate and absorb formaldehyde from the emissions.

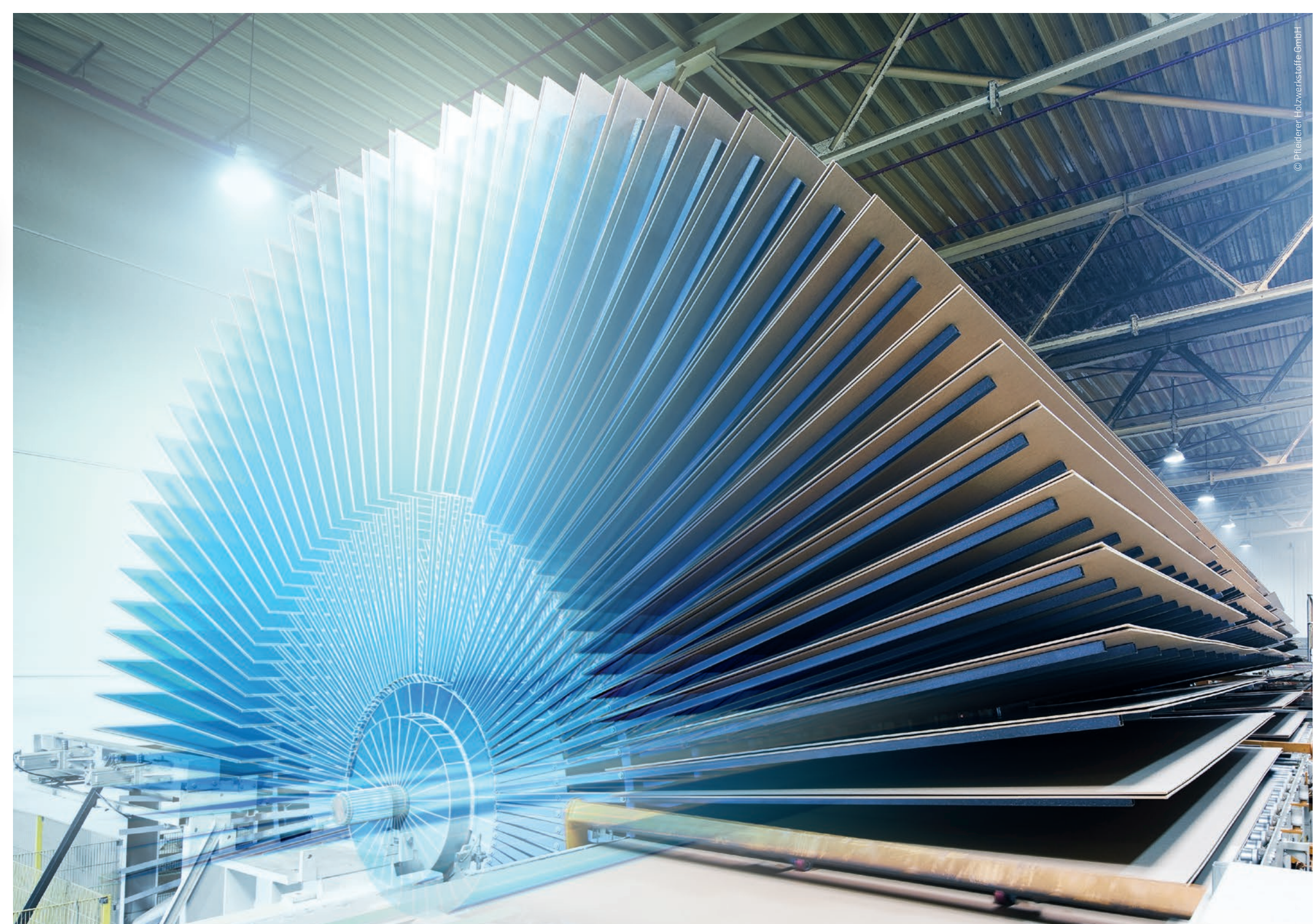
The particular advantage of this system is that it is very simple, and is ideally suited to retrofitting in existing plants.

THERMSAP

Thermal water treatment reduces formaldehyde: In this system, a partial flow of the process water that is loaded with formaldehyde is cleaned by stripping in a desorption column. To do this, the water must be heated with a heat exchanger – for the most part through external energy. The exhaust air from the desorber, which is enriched with formaldehyde – around one tenth of the original air quantity – must be further treated. One possible option is to burn this polluted air. The treated water with a lower concentration of formaldehyde is recirculated in the circuit and can absorb more pollutants.

FOR VARIOUS PRESS SCRUBBERS





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