Exhaust Plants for Flame-Cutting Smoke

Flame-cutting with fuel gas as propane/methane and oxygen is generally used for cutting down large machine structures or other bulky pieces of non-shearable scrap. These processes are generating large amounts of smoke and dust.

These clouds of yellow/ocher smoke cause not only environmental problem, but also problems for the lance operators and with surrounding neighbours. These processes have to be operated in closed halls including an appropriate air treatment process, to avoid the above-mentioned problems.

The smoke is not easy to handle and the filter systems must be adapted to the corrosive iron dust mixed with sticky hydrocarbon compounds and the constant risk of fire caused by flying sparks in order to ensure a long service life of the filter materials.

According to the latest EU-directives open air flame cutting generating large dust and smoke emissions are not allowed anymore. These processes have to be operated in closed halls including an appropriate air treatment process.

Based on it´s experience of ex-proof air treatment facilities for shredder installations, Oberländer is offering different solutions for these processes.

Depending on the requirements of the feedstock and the resulting combustion gases, additives can be used in the filter system to separate hydrocarbons and heavy metals.

The design of the halls facilitates the unloading of the scrap material and the subsequent removal of the cut parts using standard material handlers.

The systems are designed so that the burner can perform rough cutting operations from outside the facilities via access openings, and also from inside the halls via an access point for lighter tasks.

Movable window access points with lifting supports for the cutting lances allow for precise burner positioning, even in remote corners of the hall.

The halls are moved by drive units along rails embedded in the floor. The fume extraction pipes have docking stations with valves at each working position, which can be opened and closed as needed.

Power and fuel gas supply are provided via robust trailing lines within the protected area of the systems.

The interior of the halls is lined with fire-resistant material. Interior lighting ensures safe working conditions. The halls are moved via control units on each side with corresponding signaling systems.

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Hk/26.09.25

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Oberländer offers two different fume extraction hall designs:

Movable hall type BH 8x4 with 2 working positions

Technical data BH 8x4:

Hall dimensions:	8.0 x 4.0 x 3.0 m
Travelling length:	16 m
Exhaust air volume:	approx. 70,000 m³/h
Fan power:	approx. 75 kW

Movable halls type BSB 6x4 for storage bays:

Technical data BSB 6x4:

Hall dimensions:	6.0 x 4.0 x 3.0 m
Travelling length:	12 m
Exhaust air volume:	approx. 50,000 m³/h
Fan power:	approx. 55 kW

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