ZANNI COMBUSTION GRATE
TYPE SR10S

On this simple but clever combustion grate, the waste can be burned out completely at high temperatures.

The ZANNI combustion grate is suitable for almost all types of fuels (waste).

It is flexible in design and can be adapted to the given boundary conditions. It is therefore also very suitable for retrofitting existing plants! In addition, the combustion can be excellently controlled. Depending on the requirements, the combustion time can be reduced or increased to achieve an optimum combustion result with maximum fuel cost savings.

The grate can be described as:

- multi-medium combustion grate,
- suitable for solids and sludge, such as sewage sludge,
- simple but clever,
- rigid and strong,
- no moving parts,
- dynamic and efficient,
- high throughput rates,
- advantageous investment costs,
- advantageous operating costs,
- advantageous maintenance costs,
- designed as a wear part for easy replacement.

A very large potential is contrasted with a very small investment. Especially in existing plants, which have operation problems, an enormous advantage in operation conditions and environmental protection can be achieved with minimum effort for conversion or retrofitting.

The steps of the grate are equipped with air openings like nozzles. Via the combustion air fans the fuel is swirled by air pulses and enriched with sufficient oxygen from the combustion air supplied.

This results in maximum burnout of the fuel.

In addition, the combustion air flow transport the burning waste step by step over the combustion grate. Due to the combustion air fans, the air pulses and the resulting swirling of the fuel, a very high throughput capacity is achieved on the combustion grate.
Another advantage of the ZANNI combustion grate is that heavier particles of the burning waste remain on the grate until their thermal utilisation is completed.

With classical grate systems or other mechanical solutions, the fuel must be available in small pieces. That required a mechanical preparation of the waste in almost all cases. On the ZANNI combustion grate also bigger pieces can be burned. Due to the design of the individual grate stages, it is also possible to burn slags and sludge.

Of course, the quantity of waste depends on the consistency of the combustible material. It is therefore also a flexible system. The condition of the waste determines the throughput on the combustion grate.

Working principle and advantages on a view:

- The waste is fed to the combustion grate through an opening on ceiling or via a front filling system depending on the local requirements.
- On the first stages of the combustion grate system the waste will be dried.
- After the drying area the waste will be slowly transported further by the combustion air ventilation of the grate as well by air impulses, pyrolysed and ignited on the subsequent stages before it be burnt out at a maximum on the rear stages.
- The residence time of the waste can be shortened or extended by air injection.
- Low investment and follow-up costs, as well as low installation and maintenance times.
- Higher availability of the system.
- All mechanical parts are located outside the combustion chamber.

- In many cases, the combustion grate system can be adapted to the structural conditions of old plants and makes these plants a valuable investment again.
- In many cases, modifications, also due to the circumstances mentioned on the previous pages, are a sensible measure and good for the environment.

The ZANNI combustion grate is a sustainable innovation for an environmental friendly incineration.
Zanni + Partner Ltd.
London, United Kingdom
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