



ZANNI COMBUSTION GRATE TYPE SR10S

A PERFECT GRATE DESIGN

Suitable for all types of waste, such as clinical waste, contaminated materials, other solid and sludgy wastes, like sewage sludge.

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THERMAL ENGINEERING

Know-How for clean solutions

For decades we have been supplying mechanical, electrical, control and regulation technology for every main or auxiliary system of thermal plants and power stations.

Over the years, we have therefore gained extensive experience in the combustion plant, power plant and power generation sector.

Modernisation, retrofitting, refurbishment and upgrading of existing plants and boiler equipment, such as burners, burner control, sootblowers, furnace equipment and more are included in our delivery range.

In the past, we have used old-fashioned technology that reliably fulfilled its tasks, but reached its limits in the area of wear and tear and also in maintenance.

We took a closer look at these problems and created a new type of combustion grate that is easy to maintain and favourable in its manufacture and replacement, as combustion gratings are wearing parts.

But easy to maintain is not the only target what we had focused on.

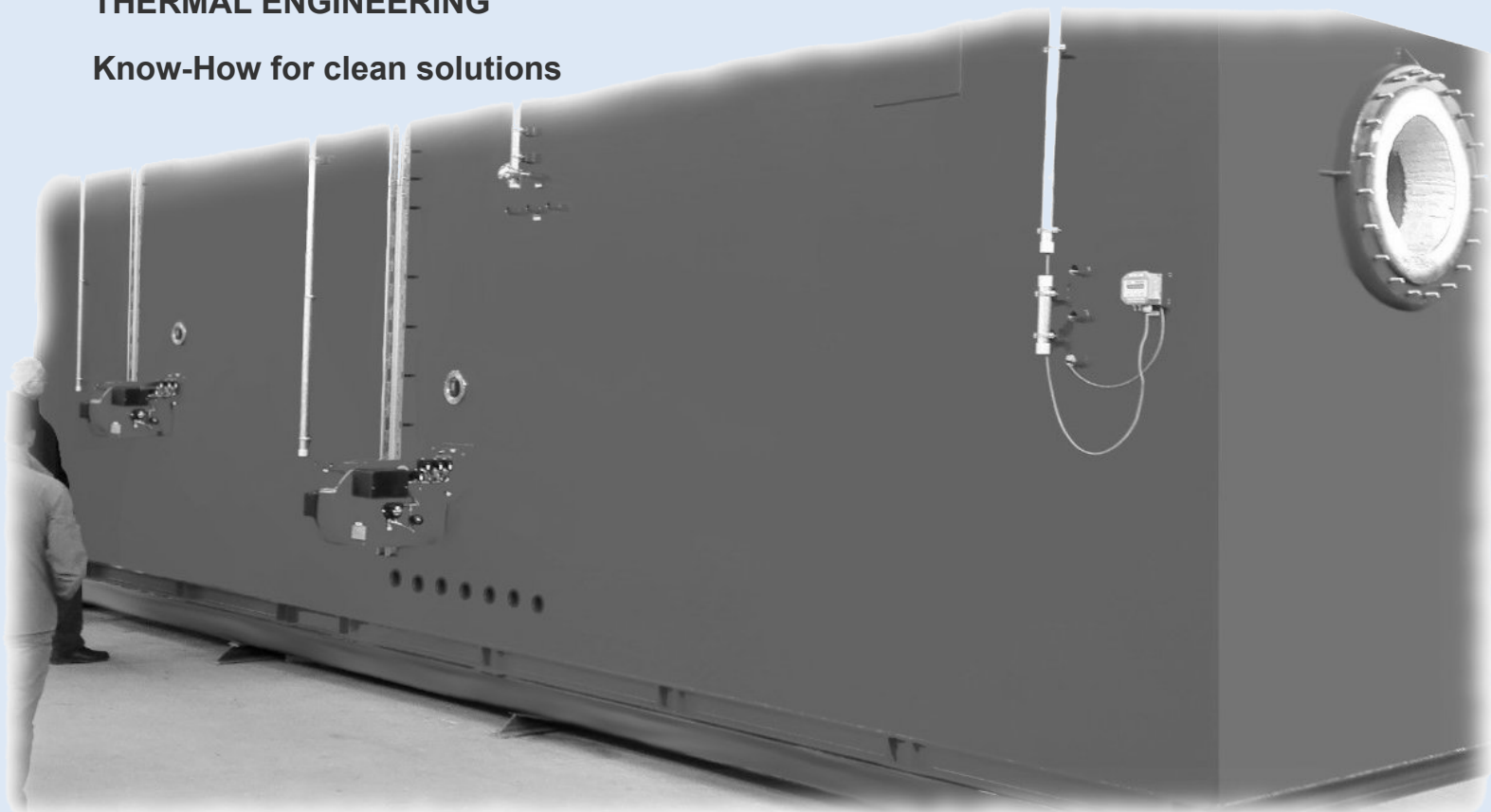
The new design enables an optimum flow of combustion air through the combustion medium. That means we reach an optimum combustion condition due to the new grate design.

The incineration options range from solid waste to sludge. Just by the arrangement of the grate the possibilities are great. Sludge-containing waste, as well as sewage sludge, can be incinerated. Caking is largely dissolved by a pulse jet process. Since a grate is a wearing part, this cleaning serves to maintain the operating conditions between maintenance intervals. An excellent solution for many problems .



THERMAL ENGINEERING

Know-How for clean solutions



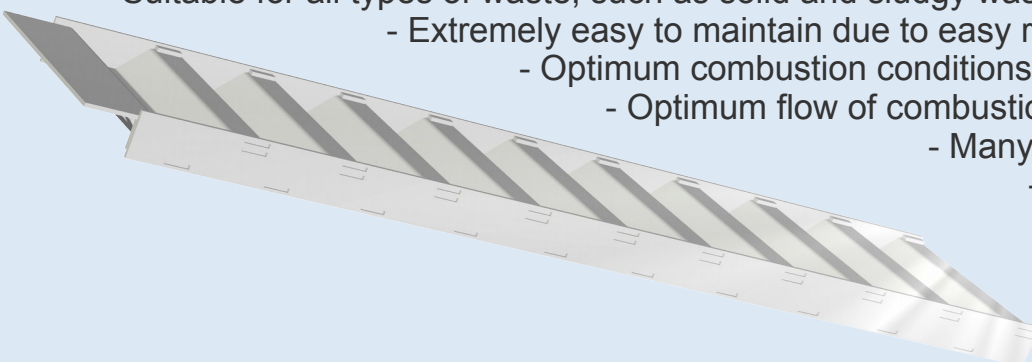
Beside the grate system is extremely easy to maintain and it has only a low maintenance time. Therefore also low downtime costs and due to the design features also low wear part cost.

Our combustion grate system can be a solution for existing plants that are prone to failure or unusable. A plant conversion is often possible and is also cheaper than demolition and new construction. Furthermore, it helps to convert existing plants in an environmentally friendly way. Of course also the efficiency of an older, existing plants, like fix bed plants and moving bed plants, can be increased with the new grate design.

Combustion gratings are physical wear parts and therefore these aspects naturally play an important role when selecting a plant.

ADVANTAGES OF THE ZANNI GRATE A PERFECT GRATE DESIGN

- Suitable for all types of waste, such as solid and sludgy wastes, like sewage sludge.
- Extremely easy to maintain due to easy replacement of the grate.
- Optimum combustion conditions due to the grate design.
- Optimum flow of combustion air through the waste.
- Many application possibilities.
- Low maintenance time.
- Low downtime costs.
- Low wear part cost.



DESIGN ADVANTAGES

What is special about this grate from a design point of view?

As described above, the waste is optimally supplied with oxygen during its combustion. It is not simply placed on a grate, but is flowed through in a targeted manner. This enables us to achieve effects similar to those of a mechanical grate, but without having to use complex and expensive plant components.

The combustion process therefore takes place under optimized conditions.

The individual grate modules are not mechanically connected to each other. Therefore the exchange is very easy and fast.

Who has ever carried out grate maintenance knows what a great effort and also which shut down time of the plant is required.

Now we will show you step by step what easy maintenance and replacement of a grate as a classic wear part of the new grate design means.

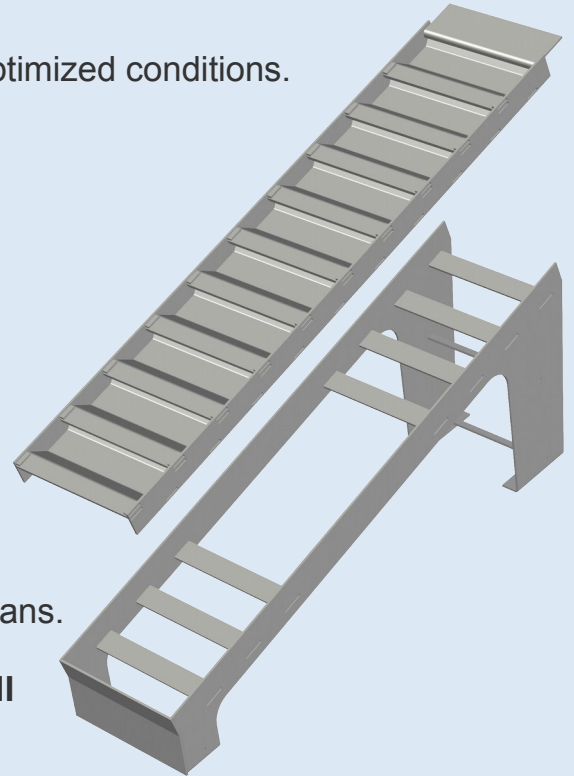
MAINTENANCE AND REPLACEMENT OF THE ZANNI GRATE

Replacing of the grate using the example of our new combustion plants:

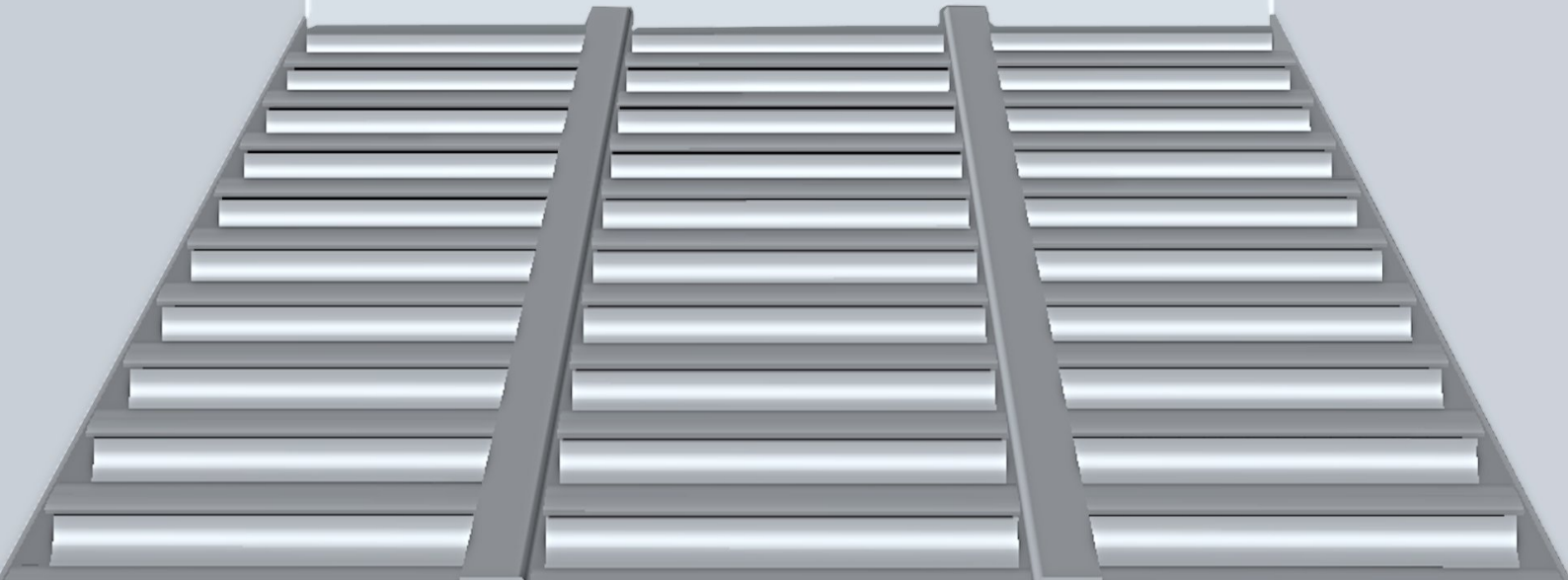
1. Unloose the bolts of the inspection opening at the front site to prepare it for removing.
2. Remove the inspection cover.
3. Open the side door of the first chamber.
4. Detach the grate modules from each other.
5. Lift grate segment after grate segment and push it individually through the inspection opening.
6. Replace the loose central support tube, if still present, as the pipe is also subject to strong material abrasion.
7. Clean the combustion chamber.
8. Check the bearing surfaces and repair damage to fire concrete or firebricks.
9. Push the new grids through the inspection opening at the front and place them on the support points, first the outer grids, then the others.
10. If everything is OK, close the inspection opening.
The job is then well done!

How much time do you think you will need?
What effort will be required?

Do the math yourself.



Retrofitting of old plants with the ZANNI grate



Especially in existing combustion plants, which have operation problems, an enormous advantage in operation conditions and environmental protection can be achieved with minimum effort for retrofitting.

Due to the retrofitting of the plant the residence time of the waste can be increased to increase therefore also the energy output.

The combustion grate system makes old plants to a valuable investment again.

In many cases, modifications are a sensible measure and good for the environment.

The adaptability of the grate is obvious

Both the number of grate steps and the parallel arrangement of several grates allow the adaptation to constructual and local requirements.

It can be supplied both as a completely closed stand system with side parts and grate, or adapted to structural conditions as a pure combustion grate.

The only condition is that a sufficient air supply is ensured and that the system and the furnace are accessible for assembly.

This can be done either by yourselves or by us.

Everything is possible!

Urkunde

über die Eintragung des
Gebrauchsmusters Nr. 20 2020 000 952

Bezeichnung:
Verbrennungsrost mit geführter Verbrennungsluft und Schindelauflage

IPC:
F23H 7/00

Inhaber/Inhaberin:
Zanni + Partner Ltd., 40789 Monheim, DE

Tag der Anmeldung:
09.03.2020

Tag der Eintragung:
27.03.2020

Die Präsidentin des Deutschen Patent- und Markenamts

Cornelia Rudloff-Schäffer

Cornelia Rudloff-Schäffer

München, 27.03.2020



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