

POROUS BURNER RADIMAX - for the Use in the Paper Industry

1. Problem

In paper industry most of the paper machines use infrared burners for the drying of the coatings. However many machines run at their production limit, i.e. a slow drying process impedes an increase of production and efficiency. How can this problem be eliminated?

2. Solution

In cooperation with the University Erlangen GoGaS developed a completely new concept for gas infrared burners. The combustion of the gas does not take place at the burner surface, as for conventional combustion, but in the centre of the burner. The principle is shown in fig. 1.

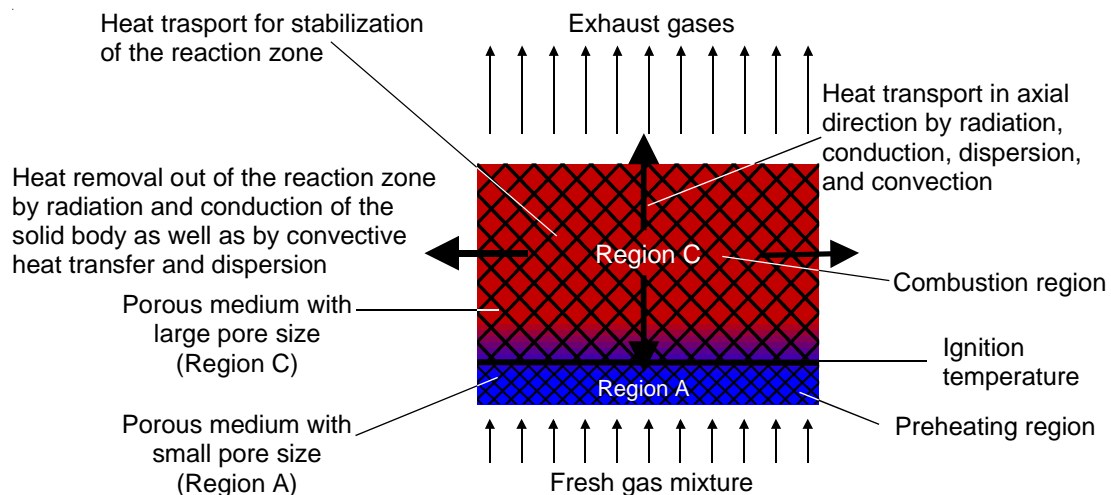
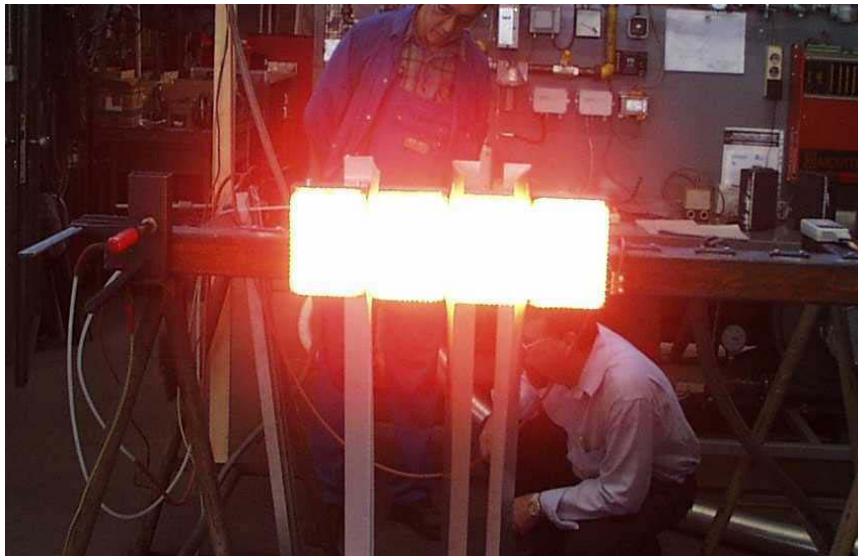


Figure 1

By using this new combustion principle GoGaS could realize the manufacture of a burner with an extreme high thermal surface load. Compared to the conventional burners with a thermal surface load of approx. 350 kW/m² and a constant temperature of 1100 °C the porous burner RADIMAX reaches a temperature of 1450 °C at a thermal surface load of more than 1000 kW/m².



RADIMAX at max. load on the testing stand

The mounting situation is shown in fig. 2.

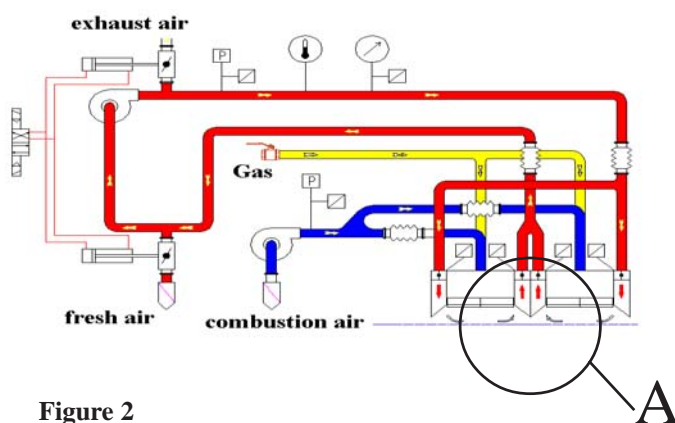
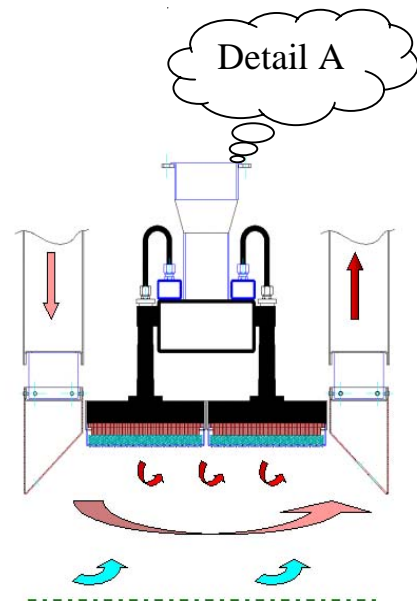


Figure 2



3. Advantages

The porous burner RADIMAX stands out against comparable products of our competitors due to the following characteristics:

- Thermal surface load 1000 kW/m²
- Temperature 1450 °C
- Wide range of control (1:6)
- Combustion with low emission
- Constant λ for complete range of control
- Compatible to all systems, i.e. quick and simple exchange
- Safe ignition and control system

4. Benefits

The use of the porous burner RADIMAX shows the following profits:

- Increase of evaporation capacity of existing lines without modification
- Low spare parts costs
- Increased production
- Smaller space requirement for new plants