

## REVAMPING...

The service for your kiln plant

old



new



### New times call for a change of production strategies

Due to the increasing cost pressure in the ceramics industry the plant operators are forced to react, e.g. by replacing obsolete kiln plants in order to make their firing processes more effective.

As an alternative to the purchase of a new plant, Riedhammer also offers revamping/modernization measures for existing kilns which

- in most cases are less cost-intensive than the installation of a new plant
- enable plant operators to keep up with the latest firing technology.

The most important reasons for revamping/modernizing existing plants:

- saving of firing costs (at least 10 % to 25 % of the firing costs depending on the plant condition)
- enhanced quality of the final product due to an optimized temperature and atmosphere distribution in intermittent and continuous kiln plants
- increase of the production rate thanks to an optimization of the firing conditions
- changed legal requirements in view of the composition of waste gases of kiln plants (necessity of waste gas aftertreatment plants, postcombustion systems etc.)
- Riedhammer postcombustion systems can save energy up to a total of 70 % compared to conventional technology
- significant reduction of the future CO<sub>2</sub> tax as a consequence of reduced waste gas emissions
- short-term "Return on Investment" (ROI)

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### Unconsumed energy is the best way to save energy!

Our revamping/modernization measures mainly comprise:

- Reduction of energy consumption
- Energy recovery
- Increase in production
- Improved quality which is reproducible at any time
- New and/or improved visualization, automation and handling systems
- Optimization of the entire plant
- State-of-the art measurement and control technology
- and many other measures

new



Due to the fact that the know-how of nearly all renowned kiln constructors is available at Riedhammer, we are usually able to modernize and upgrade kiln plants of all manufacturers.

old



new



**Examples of modernization/revamping measures carried out by Riedhammer on continuous and intermittent kiln plants**

*Energy saving achieved by :*

- using better and lighter insulation materials, e.g. high-temperature wool
- installing heat exchangers for combustion air preheating
- installing heat recovery plants
- a conversion to other burner systems, e.g. pulse firing systems, where admissible in terms of safety and specific products
- installing frequency converters for saving electric energy
- using new measuring and control plants for a more precise and thus more economical/effective firing control

*Fuel conversion with new burners*

- from oil to natural gas
- from LPG to natural gas

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*Upgrades of measuring and control technology:*

- Complete control systems
- Installation of new PLCs ( Siemens S7, Omron, Mitsubishi, etc. )
- Installation of new visualization systems
- Upgrade of old Windows systems

*Further technical optimizations:*

- Retrofitting of postcombustion plants for waste gas cleaning corresponding to "TA Luft" (German Technical Instructions on Air Quality Control) valid in many countries
- Change of sites / relocation of kiln plants
- Design modifications, e.g. protection of heating elements from chemical attacks
- Further development of roof constructions in case of products being extremely sensitive to contamination
- Capacity increase
- Replacement of old piping systems by oxidation-free material
- Upgrade of the safety technology according to EN 746
- Upgrade of the safety technology for the transport systems by means of corresponding safety fences, doors etc.
- Installation of new transport and/or handling systems
- Installation of new gas stations due to official requirements

Please contact us and let us give you detailed and competent advise on the occasion of a visit to your company.