

RESUMEN REF 131

The opportunity of Cogeneration in the Brazilian Ceramic Industry – Study of Case for Drying Clay in the Dry process for Making Ceramic Tiles

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In this work two alternatives (turbo and motogenerator) using natural gas were considered as an application of Cogeneration Heat Power (CHP) scheme comparing with a conventional air heater in an artificial drying process for raw material in a dry way process for ceramic tiles.

Considering the drying process and its influence in the raw material, the studies and tests in laboratories with clay samples were focused to investigate the proper temperature of dry gases and on the type of drier in order to maintain the best clay properties after the drying process.

Considering a few applications of CHP in a ceramic industrial sector in Brazil, the study had demonstrated the viability of cogeneration opportunities as an efficient way to use natural gas to complement the hydroelectricity to attend the rising electrical demand in the country in opposition to central power plants.

Both aspects was the innovative view in the industries in the most important ceramic tiles cluster in Americas with the amount of 370 million squares meters a year.

Keywords: ceramic tiles, raw material drying, cogeneration with natural gas.