"Use of Application Equipment to Control Product Reproducibility and Reduce Engobe and Coating Waste"

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INTRODUCTION

U.S. face brick production is without any doubt the most advanced in the world, both for output volume and level of finishing. The extended use of face brick in the buildings combined with the diverse trends for each area, makes it necessary to create a wide range of different products – it's all about the colors.
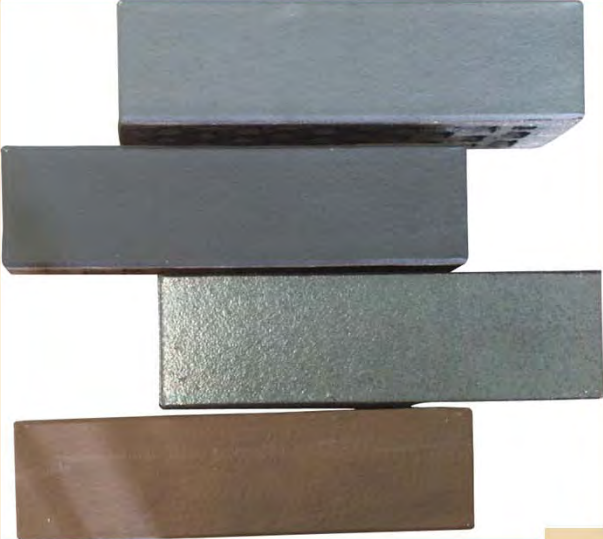
Today, my purpose is to give you some ideas on how to make the color application process as efficient as possible, by the use of engobing machinery which allow you to run your production in a constant way through time, without raw materials dispersion along the process.

UNIFORM ENGOBE COATING

PRODUCTS:

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UNIFORM ENGOBE COATING

SIT1/L2:

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SLINGER APPLICATION

FEATURES:

•uniform, solid one color coating;

•no air, so low dispersion in the environment;

•easy and durable setting thanks to the calibrated nozzles;

•coating tickness extremely flexible;

•no mechanical blocking during operation;

•3 brick faces colored in a single passage;

•easy cleaning and maintenance;

•very limited waste engobe: 98% of the unused liquid is reclaimed inside the booth, on the belts and in the water filter

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AIR SPRAYING

PRODUCTS:

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AIR SPRAYING

MULTICOLOR, MULTIPOINT:

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AIR SPRAYING

FEATURES:

•for flashing and applying multiple color nuances on the brick;

•mix of engobe and air, so it needs less liquid than the slinger;

•low production cost;

•setting very easy and adaptable to the decoration needs: both nebulization and fan opening can be varied; the spraying can be continuous and/or intermittent; a sequence of colors can be reproduced from a spraying recipe (Multicolor);

•3 brick faces colored in 1 passage;

•easy cleaning and maintenance;

•limited waste engobe: 90% of the unused liquid is reclaimed in the booth, on the belts and in the water filter

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DRY APPLICATION

PRODUCTS:

DRY APPLICATION

STABLIDRY:

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DRY APPLICATION

FEATURES:

•applies dry engobes to create a natural aging, solid, tactile look;

•3 brick faces colored in a single passage;

•no air or water needed;

•easy and durable setting;

•low cost of dry engobes and huge available selection;

•reduced required space on the line;

•easy cleaning and maintenance;

•no powder dispersion in the environment, total reclaiming of the unused engobe.

HOW TO RECLAIM THE MAXIMUM QUANTITY OF UNUSED COLOR DURING OPERATION?

1) Wherever the transport line may be placed (right after the extruder or as a separate unit between dryer and kiln), it is essential to keep each color separated in a close ring circuit. Therefore, the line will be made up of modules, each of them will run just under one application. The belt line being interrupted, it avoids unwanted pollution between different colors, we can scrape the overspray falling on the belts and send that part again into the cycle. Doing so, each booth will be a self reclaiming/feeding apparatus.

2) Cut every possible way out to the colors: that's why we design our booths in a way that, except for the inlet and outlet mouths (which are anyway adaptable to fit perfectly each brick size), there is no leakage of liquids or fumes - even though the booths are openable for an efficient cleaning process.

3) Screening of the reclaimed material: this prevents possible circulation of unwanted particles into the system, thus avoiding mechanical blockage and granting constant good functioning.

4) Water filters: these units are the last barrier standing before the color dispersion. Each slinger and spray booth should have their own water filter connected. These units breathe the mixture of liquid and air coming from the booths and, thanks to their internal labyrinth structure, drag down into water the color particles and let the air out. Then, from time to time, the color is extracted and brought back into the cycle.