SR-Schindler Maschinen - Anlagentechnik GmbH, 93057 Regensburg, Germany

Curling line for paving slabs and paving stones in Dubai

In Nov. 2009 company Transgulf ordered a curling line with SR-Schindler Maschinen – Anlagentechnik GmbH. The line was shipped in June 2010 and commissioned in August. Meanwhile Transgulf delivers value added products to several customers in the Middle East region.

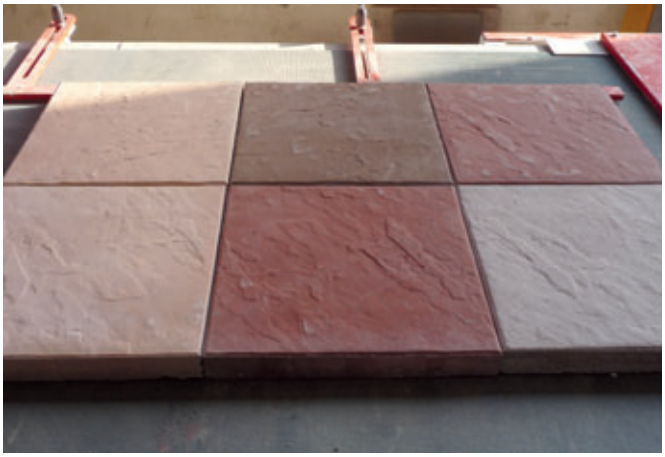
The new curling line at Transgulf

Slabs after the treatment

The line has a working width of 1200 mm, products 50-300 mm thick can be processed. The max. passage height is 350 mm. The line is currently working in semiautomatic mode. I.e. loading and unloading of product layers get done by means of cranes and clamps provided by customer.
After depositing of layers on the belt conveyor the products get pushed together, are forming then an endless row and run through the curling machine. The machine is equipped with two tunnel segments with three carborundum coated brushes each. The coating thickness varies and gets less in feeding direction; i.e. the first two brushes show the max. coating thickness whereas the last two brushes have the thinnest coating because more surplus material (cement) has to be removed in the beginning of the treatment whereas during the continuing process mainly the exposed aggregates are to be brought out.

During treatment three brushes rotate in clockwise direction and the other three brushes work anti clockwise to avoid treatment marks on the surfaces. In the end of the treatment the products show a subtle brilliance and more intense colour as shown in fig. 5. Different from grinding also products with textured surface can be treated with the curling machine because the brushes reach also lower portions without affecting the textured surface.

Curlingbrushes



Products before treatment

Products after treatment

The surface appearance can be variably generated by means of machine control Siemens PLC S7-300. Treatment parameters like belt speed, contact pressure of the brushes, rotation speed, treatment angle (up to 25°) per brush segment and number of brushes in operation can be easily changed and saved per product type. Upon wear the brushes adjust themselves automatically. The occurring dust gets removed by means of dust suction.

After treatment a layer separator reformats the endless row to layers which get taken off from the belt conveyor and put on pallets.

Due to the brisk demand Transgulf already considers a plant enlargement. Loading and unloading are to be automated by layer destacking/stacking devices at the input and exit of the line. For the nearer future also a bushhammer/antiquing line for further value adding gets envisaged. Together with an existing shotblaster products could be treated then in a line linearly or parallelly arranged. A parallel line configuration would have the advantage that different product types could be produced simultaneously provided that the automated loading/unloading devices will get equipped with 2 travelling trolleys with one 4-sided clamp each. Independantly from each other one product type could be bush-hammered and/or aged while the other type could get shotblasted and curled. Of course, products could get transferred from the antiquing line to the shotblasting - curling line for linear treatment also.

No matter which line configuration Transgulf will be going for in the end, Schindler lines are always engineered already in the beginning of a project that way that line enlargements in one or even more steps can be executed without problems.

FURTHER INFORMATION

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