

Close Up View of
Adjustable Paddle

Adjustable Paddle Screws for Mixing Clay Roofing Tile Materials at Boral Roofing in Henderson, NV

General Description of the Application

Boral Roofing is a subsidiary of Boral USA and for over 50 years has been the country's largest premium provider of complete roofing solutions. Boral Roofing operates 12 clay and concrete tile manufacturing plants in the U.S. and Canada. The Henderson, NV plant is the largest clay and concrete roof tile plant in the U.S.

At the Henderson plant, Boral Roofing offers clay roofing tiles that can be customized for infinite color possibilities. Any color combination can be made to order. Special color blends are created by mixing various colors along with sand and cement that are transported by screw conveyors. The screw conveyors operate 24 hours per day and 7 days per week. The mixtures are abrasive and Boral had to replace the screws about every year. Boral suffered production loss when the screws began to wear and fail. KWS provided a solution that improved mixing and increased the life of the screws.

Design Parameters of Application

Product Type: Sand, Cement, and Color Additive

Material Density: 95 to 110 Lbs. per Cubic Foot

Abrasiveness: Moderately Abrasive

Conveyor Capacity: 35 Tons per Hour

Duty: 24 Hours per Day, 7 Days per Week

Advantages Provided by KWS

Based on input from Boral, KWS designed and manufactured mixing screws with adjustable and replaceable paddles. To increase the life of the screws, KWS added a weld-on hardsurfacing material to the outer edge and carry face of the paddles and screw flights.

Special Features of KWS Design

KWS designed the mixing screws so that individual paddles could be replaced or adjusted to last longer. Paddles can be replaced without replacing a complete screw section, providing cost savings up to 70-percent. Boral also can change the angle of the paddles to promote or reduce mixing action.

Testimonial

"So far, so good! We are getting longer life on the new KWS screw with the addition of the hard surfacing. We have not needed to replace any of the paddles yet."

- Kevin Cruz, Maintenance Manager – Boral Roofing



**Design
Engineering
Manufacturing**

KWS Manufacturing

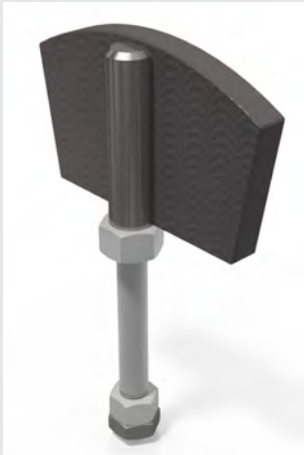
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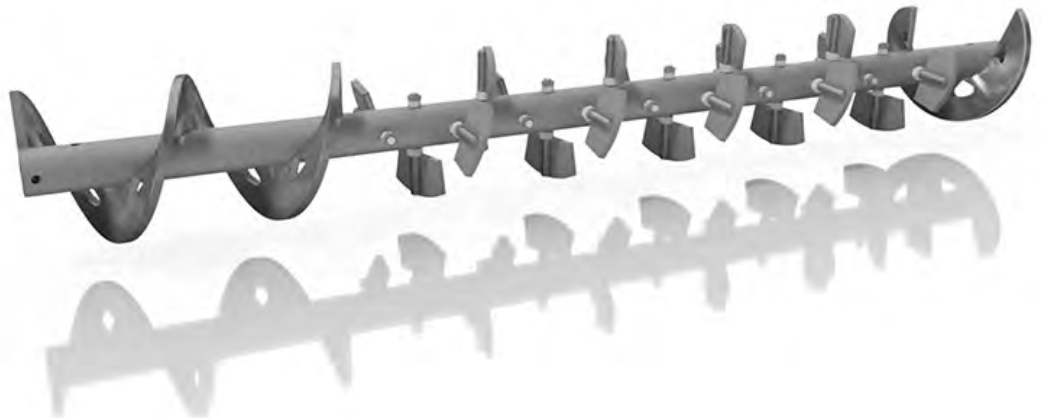


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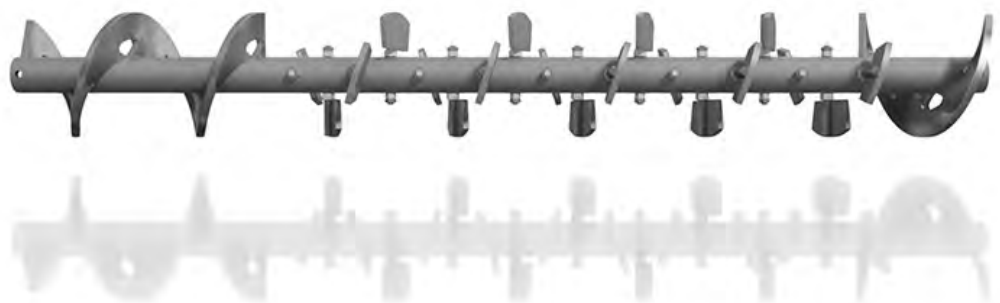
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Paddles are Located Every 90-Degrees on the Center Pipe



New KWS Paddle Screw with Adjustable Paddles



Paddles Can Be Adjusted to Promote Mixing Action



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