



Suggested Best Practices For Pavement Smoothness

PAVER OPERATIONS – BEST PRACTICES and INNOVATIONS

Keep the hopper full: If you are not using a hopper insert leave as much surge as possible between truck exchanges and do not run the hopper empty. This will minimize “truck fans” by allowing hot, uniform material from the next truck to blend with mix from the previous dump. Keeping your mat as thermally uniform as possible will result in better densities.

Controlled hopper wing cycling: The wings are where the large, cooler stone tends to collect if not properly reintroduced back to the mix. Regular cycling, where allowed by spec, will reduce large buildups of this segregated material. Don’t wait until you are “out of material” to cycle the wings.

Use a hopper insert

If you are using pick up machines and windrow paving use a hopper insert. It will reduce or eliminate segregation

Keep a constant head of material at the spreading augers: A consistent flow of material to the spreading augers will prevent them from spinning too fast or too slow, which can cause longitudinal segregation. As a rule of thumb a proper head of material is $\frac{1}{2}$ up the spreading auger. Constant changes in the head of material make waves in the mat. If allowed to rotate too fast, longitudinal stripes will occur in line with the reversing augers; too low a rate and the larger stone will drop and collect at the bearing support

Time the conveying and spreading systems: Ensure the ratio pots or flow gates are set to deliver enough material to the spreading augers to keep them running continuously. Set your sonic feeds and leave them there.

Keep your paver speed steady: Drag race paving may be entertaining but stops and starts cause the head of material to rise and fall changing the mat thickness. This not only affects ride but can detrimentally affect density

Correct lead crown setting and proper strike off adjustment: Equipment fine-tuning issues will help eliminate longitudinal segregation. String line your screed before every job and introduce the correct amount of lead crown; usually $\frac{1}{8}$ - $\frac{1}{4}$ inches. Make sure your strike offs are correctly aligned. Refer to your owner’s manual for the recommended procedure.

Correct spread auger length: Once you have the job planned out if you need to build up the spreading augers then DO IT. Trying to compensate for spreading augers that are too short by running them faster will only result in segregation. This only gets worse with more gap graded mixes. If you have a 20’ screed and the job calls for wide paving then BUILD UP THE SCREED; use the auger extensions, wide mat grade supports and the outboard bearing supports. The finished jobs will more then compensate for the time involved in the build up. Then plan the layout so you can maximize the use of the built up screed.

Use Thermal guns: Equip your paver operator and roller hands with thermal (infrared) handheld thermometers and use them to monitor changes in the mat temperature.

Establishment of a thermal range during the test strip process gives you a working range to be used through out the paving project.

Don't broadcast material across the mat: This just gives the appearance of a segregation problem. Don't rake material off the joint onto the new mat. Don't walk on the fresh mat.

Train your personnel: not only in the operation of the equipment but in the art of reading mat defects. The sooner these defects are identified the sooner remedial action can be taken. Remember when the only tool you have is a hammer every problem looks like a nail.

JOB SET UP – BEST PRACTICES

Partnering

All personnel involved in the construction planning and design need to meet before the job so we can all “be on the same page” and resolve possible problems before they arise.

Pre Paving Planning Meeting

Meet with your crew every day to review the plan for the days construction and expectations

Plan the truck route, plan the job layout, assign people to required tasks

Communication

Constant communication with all the elements of the paving process from design engineers to the lute man. This keeps all phases of the job on schedule and free of “Uh Ohs”

Mix Selection

Insure the mix is of an adequate design for both strength and workability

Mind your temperatures

Machine Maintenance

Not only does well maintained iron contribute to a more pleasant work environment it shows your people that you care enough about them to give them the best tools. It provides for a safer work environment and a more productive and profitable organization

Smoothness-Thickness-Yield

The inspectors and field personnel need to be aware of the paving fundamental that yield, minimum thickness, and smoothness can not be obtained at the same time.

Crew Training

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Know the Consequences

of improperly operating the machines

Improper principles and techniques of paving, rolling and trucking

of poor safety awareness, designate a “job site safety man”

know the way to emergency medical care

**For more information contact:
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