

Flexible Slurry/Micro Surfacing

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What are we trying to do?

- To develop a user friendly option to tight blading with HMA as pre-overlay treatment.
- Alternate to thin overlays as surface treatment.

Problems with current tight blading

- Has lower density than a normal overlay lift.
- Does not flow down into cracks and small potholes very well.
- Segregation
 - Temperature
 - Aggregate
- Leaves a rough surface to pave over.

Traditional Tight Blading.

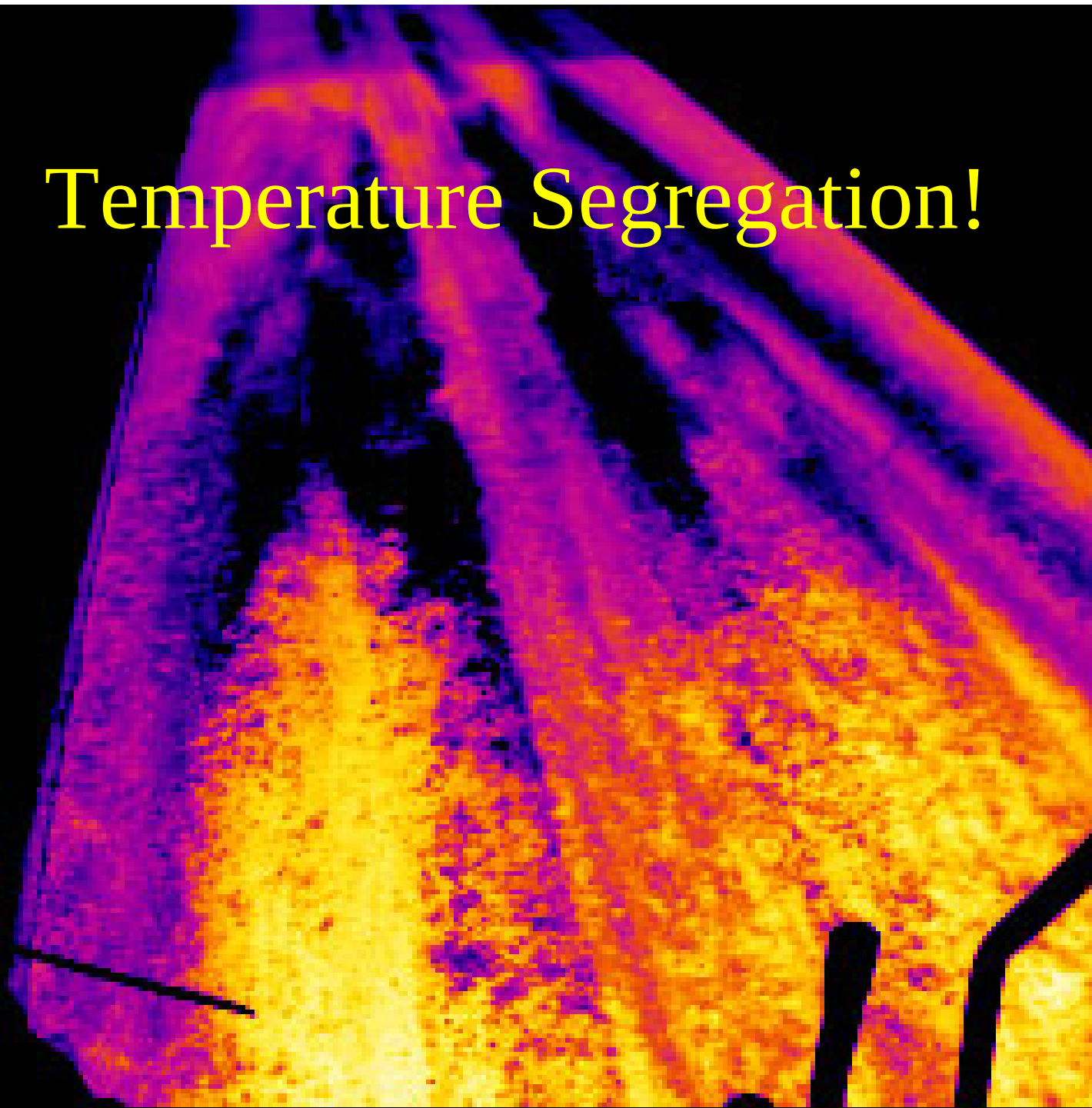








Temperature Segregation!



Flexible Liquid Tight Blading

- What is it?
 - It is a high AC content Micro Surfacing mixture.
 - It has lower viscosity
 - Allow it flows into the cracks, dips and potholes.
 - Is self compacting.
 - Is self tacking.
 - Allows the material to be only placed where needed.
 - Environmentally friendly
 - Is made at ambient temperature
 - By-product is water

Flexible Liquid Tight Blading



Flowage mixture is only placed
where needed.



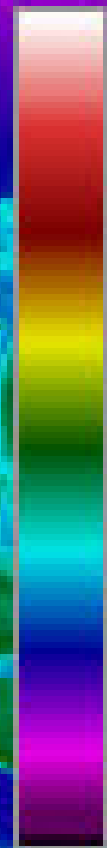
 **FLIR** ThermoCAM

No Segregation

Saving F0920-03



128



48.7



Filt=N0F Lens=FOV 24-40 - 248 °F
09/20/05 12.35.25 e=0.97 Zoom=1.3

What is the difference from traditional Micro Surfacing?

- Historically Micro Surfacing has been designed as a very tough mixture.
 - To be used as a rut filling
 - Surface treatment
- Because of the nature of the mixture almost all of the working cracks reflect though.
- The normal Micro Surfacing mixture has a very high viscosity that does not allow the mixture to flow into crack very well.

How is Micro Surfacing modified into Liquid Tight Blading.

- The total amount of emulsion is increased by 20%
 - Total residual AC is increased from 8.6% to 10.6%
 - AC to fines ratio of 1 to 1.
- The base AC used to make the emulsion is softer than normal Micro Surfacing AC.
 - PG 48 – 34
 - Residual grade a 57 – 34
 - PG 64 – 22 AC for regular Micro Surfacing emulsions.
 - Residual grade a 70 – 22
- Why?
 - Crack treatment.
 - More flexible
 - Improve flow-ability

Traditional Micro Surfacing

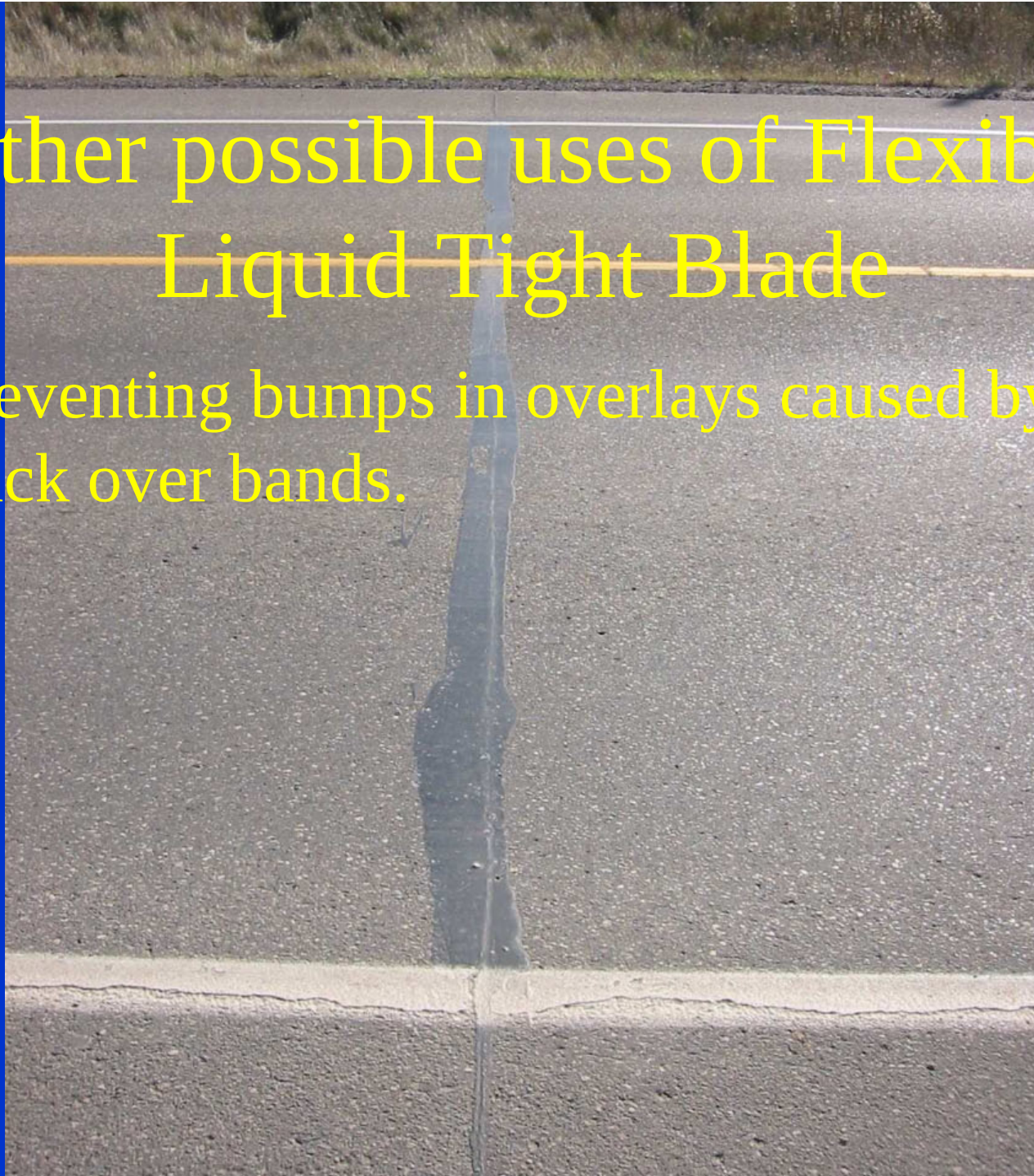


Flexible Micro Surfacing



Other possible uses of Flexible Liquid Tight Blade

- Preventing bumps in overlays caused by thick over bands.



Leveling coarse for other surface treatments



As Surface Treatment!



Shoulder Edge Drop Offs.



Construction Joint Failures.



Questions?



Thank You!

