

September 3, 1947

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TO: W. W. McLaughlin
Testing and Research Engineer
"Sealz matter"

SUBJECT: Demonstration of Heating Kettle for Rubber Joint Sealing Compound
Research Project 366-4 (3E) Report P. 111

On Monday afternoon, August 18, Mr. Lynn S. Young, District Representative for "Sealz", a hot poured asphalt rubber joint seal compound manufactured by the U. S. Rubber Company, gave a demonstration of a new heating unit recently developed by his organization. The demonstration was given at a joint seal test area located on US-18 west of Lansing airport for the purpose of acquainting highway officials and contractors with the merits and operation of the equipment.

Present at the demonstration were E. R. Downey, P. G. McKenna, Bert Ferrier, Homer Cash, L. A. Davidson and William Martin, LeRoy Peterson and E. A. Finney from the Research Laboratory.

Although Mr. Young claimed that the unit could normally heat a batch of material to pouring temperature (400° F.) in 1-1/2 hours, it required approximately 2-1/2 hours to heat the material during the demonstration. The heating unit apparently did not function properly and the trouble was traced to the type of heating gas used. Butane gas is normally used for heating but the cylinders were refilled in St. Louis, Missouri before coming to Lansing, and the operator and designer of the equipment who assisted Mr. Young in the work was certain that an inferior heating gas was substituted for Butane.

Included in the demonstration was a pouring pot with a specially designed spout and orifice which acts both as a reservoir and a squeegee to confine the molten material in the joint during pouring.

Six old joints were cleaned out by the Maintenance Department and all were revealed with "Sealz" during the demonstration.

Mr. Davidson, who holds the pavement contract on US-27 north of Lansing, has arranged with Mr. Young for use of the heating unit on his project. The proximity of this project to Lansing will provide an opportunity for others to see the equipment in operation.

September 7, 1947

I believe that the equipment demonstrated is superior to other types so far developed for the purpose of handling the new asphalt rubber joint sealing compound.

As I understand it, the equipment will be available on a loan basis to contractors who purchase "Sealz" joint seal only, but may be purchased outright by State and Government agencies for maintenance work.

The following data represents physical conditions of joint seal when drawn from heating kettles at different time intervals while pouring joints on US-16. Temperature of material maintained at 300° F. during pouring operations.

<u>Sample</u>	A	B	C	<u>Spec.</u>
Penetration cm.				
at 32° F.	.707	.737	.634	min. .20
at 77° F.	.363	.365	.332	not to .75
Flow cm.	0.4	0.4	0.4	max. 0.5
Bond	OK	OK	OK	no break
Pavement Temperature	118° F.			
Air Temperature	95° F.			
Clear Day				

E. A. Finney
Assistant Testing and Research
Engineer in charge of Research

EAF:bls



1. Expan. Joint
cleaned out ready for filling.
US16 near Lansing airport.
BBD--2-18-47



3. Rear view of
heater. US-16
near Lansing
airport.
BRD--8-18-47

3



4. Front view
of heater. US16
near Lansing
airport.
BRD--8-18-47

4



5. Pouring Pot
US-16 near Lan-
sing airport.
BRD--8-18-47



6. Pouring Pot
US-16 near Lan-
sing airport.
BRD--8-18-47

(6)



11. Pouring new
matl. into pre-
viously cleaned
expan. joint.
US16 near Lan-
sing airport.
BRD--8-18-47