TO:        K. E. Schraulin
Testing and Research Engineer

SUBJECT: Demonstration of Heating Kettle for Rubber Joint Sealing Compound

On Monday afternoon, August 16, Mr. Lynx E. Young, District Representative for "Seals", 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 I-10 west of leasing airport for the purpose of acquainting highway officials and contractors with the merits and operation of the equipment.

Present at the demonstration were K. H. Dorey, H. S. Schraulin, Bert Ferrier, Homer Cauley, L. A. Davidson and William Martin, LeRoy Potton and E. A. Pifer from the Research Laboratory.

Although Mr. Young claimed that the unit would normally heat a batch of material to pouring temperature (600°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 Leasing, and the operator and designer of the equipment also 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 squeezer to confine the molten material in the joint during pouring.

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

Mr. Davidson, who holds the pavement contract on US-67 north of Leasing, has arranged with Mr. Young for use of the heating unit on his project. The proximity of this project to Leasing will provide an opportunity for others to see the equipment in operation.
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 "Seals" 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 testing kettle at different time intervals while pouring joints on WF-16. Temperature of material maintained at 325° F. during pouring operations.

<table>
<thead>
<tr>
<th>Sample</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetration cm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>at 72° F.</td>
<td>.707</td>
<td>.737</td>
<td>.64</td>
<td>min. .23</td>
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<tr>
<td>at 77° F.</td>
<td>.703</td>
<td>.695</td>
<td>.952</td>
<td>1/2 to .75</td>
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<tr>
<td>Flow cm.</td>
<td>2.7</td>
<td>3.4</td>
<td>3.4</td>
<td>max. 0.5</td>
</tr>
<tr>
<td>Bond</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>no break</td>
</tr>
</tbody>
</table>

Pavement Temperature 115° F.
Air Temperature 95° F.
Clear Day

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