RPA PROPOSAL

FOR

TRAINING AND CERTIFICATION OF TECHNICIANS FOR ASTM D 7741

" Standard Test Method for Measurement of Apparent Viscosity of Asphalt-Rubber or Other Asphalt Binders by Using a Rotational Hand Held Viscometer"

BACKGROUND

For many years the use of a hand held viscometer, commonly referred to as a Haake or Rion viscometer, has been used by the asphalt rubber industry to quickly and accurately measure the apparent viscosity of asphalt rubber binder produced and reacted in the field. This viscosity test has proven to be an accurate predictor of other properties typically used as acceptance criteria for the binder. These properties, including the apparent viscosity of re-heated laboratory samples, include the softening point, the cone penetration and the resilience, all measured in a laboratory setting requiring adequate time for sample preparation and conditioning.

The initial apparent viscosity as measured in the field from hot production samples has been a staple of the contractor's quality control program. The test is simple to perform, does not require exotic equipment, and sample preparation is adapted to field conditions for heating and maintaining proscribed temperatures for the test. Additionally, field personnel who actually operate the blending plants have historically been trained to perform the test. This permits the field producers of asphalt rubber binder to obtain accurate data regarding the quality and suitability of the material they are producing prior to its use in a field application.

PROBLEM STATEMENT

While many contractors' personnel have been trained to correctly perform the apparent viscosity test in the field using the hand held viscometer, very few of them are actually certified through an agency or group. These field personnel have historically been trained by the contractor and have gained valuable experience through actual on-the-job training. Also, many of these operations personnel performing this test each day are not affiliated with a materials testing laboratory that might include ARML or other certifications. A need has been identified for a certification program whereby an industry-recognized entity can train, test and certify operators of the ASTM test and issue a Certificate of Proficiency that project owners can, with confidence, know that this field quality control test is being performed correctly.

Fortunately, through the extensive efforts of the Rubber Pavements Association, the American Society for Testing Materials (ASTM) has adopted a standard for performing the viscosity test. This test standard is ASTM D 7741, "Standard Test Method for Measurement of Apparent Viscosity of Asphalt-Rubber or Other Asphalt Binders by Using a Rotational Hand Held Viscometer". This test procedure would be the basis of the training.

TRAINING AND CERTIFICATION PROPOSAL

The Rubber Pavements Association (RPA) was established in the 1980's to encourage the greater usage of high quality, cost-effective asphalt pavements containing recycled tire rubber. As the premier organization dealing with issues related to the field production of asphalt rubber binders, the RPA is uniquely positioned to address the issue of training and certification of field personnel to accurately perform ASTM D7741. RPA's membership includes many of the asphalt rubber binder contractors whose employees are in need of the hand held viscometer test certification process. Additionally, the RPA's members include materials testing laboratories that have the expertise and facilities to administer the RPA program.

The RPA proposes to develop a technician training and certification program with one of its material testing laboratory members whereby the attendees, in a laboratory setting but trained to perform the test as a field procedure, would be instructed how to correctly perform ASTM D7741. The instructors would be seasoned laboratory professionals, under the direct supervision of a California Registered Professional Engineer, who would step by step go through the procedure. Each attendee would be trained and required to perform the procedure under the auspices of the instructor and to the instructor's satisfaction. Upon successful completion of the course the RPA would issue to the attendee a "Certificate of Proficiency" for performing ASTM D7741. This certificate would be applicable for a one year period. RPA would establish a renewal procedure for the technicians to recertify annually. RPA also would establish a tracking and reporting system to the satisfaction of Caltrans. RPA would charge a reasonable fee to conduct the "Training and Certification" program.

Caltrans personnel could also be trained and certified in the program. It is anticipated that the training class would last approximately 3 hours and would be conducted in convenient locations to the students. The class would be advertised statewide by RPA and the classes would be offered on multiple dates and in locations both in northern and southern California. Most importantly Caltrans would recognize the validity of the certification of contractor technicians and improve quality control measures from the overall program.