EQUIPMENT

1. ROTATIONAL VISCOMETER: equipped with level adjustment capability and measures torque required to rotate spindle and display in Pa.s .... _____
2. TEMPERATURE CONTROLLER: proportional, maintains temperature ± 1.0°C in range of 60 to 165°C .... _____
3. CYLINDRICAL SPINDLES: various sizes to accommodate asphalt binders of different viscosities .... _____
4. OVEN: maintains temperature in range from room temperature to 260°C to within ± 3°C ... _____
5. THERMOMETERS: for range of 60 to over 200°C and readable to 0.2°C .... _____
6. BALANCE: 2000g capacity and readable to 0.1g .... _____

CALIBRATION AND STANDARDIZATION

1. ROTARY TRANSDUCER: accuracy checked by use of reference (Newtonian) fluids .... _____
2. TEMPERATURE CONTROLLER: accuracy checked by measuring temperature of sample in test chamber with a traceable thermometer and comparing it to the controller set temperature .... _____

PROCEDURE

1. VISCOMETER: level .... _____
2. TEMPERATURE:
   a) sample chamber and spindle preheated according to manufacturer's recommendations _____
   b) proportional controller set to desired temperature .... _____
3. SAMPLE:
   a) required amount of asphalt binder heated sufficiently to enable pouring .... _____
   b) when desired test temperature reached, sample holder is removed and required amount of asphalt binder added to the sample chamber .... _____
   c) sample chamber inserted into the proportional controller unit .... _____
   d) preheated spindle inserted into the sample chamber and connect to viscometer .... _____
   e) sample covers upper conical portion of cylinder .... _____
   f) sample reaches desired temperature within approximately 30 min and equilibrated for 10 min .... _____
   g) viscometer speed set to 20 rpm and read in Pa.s .... _____
   h) if torque is out of range speed is adjusted or cylinder is changed .... _____
   i) viscosity is measured at one minute intervals for a total of three minutes .... _____

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REPORT

1. DATE AND TIME OF TEST: .... ____
2. TEST TEMPERATURE: to nearest 1°C .... ____
3. ROTATIONAL SPEED: in rpm .... ____
4. SPINDLE: size used... ____
5. TORQUE: in percent .... ____
6. VISCOSITY: average of three readings expressed in Pa.s .... ____

7. EQUIPMENT MANUFACTURER:_____

8. MODEL_____

REMARKS:

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