WSDOT FOP for ASTM D 6931

Standard Test Method for Indirect Tensile (IDT) Strength of Asphalt Mixtures

WSDOT has adopted ASTM D 6931 as published at http://wwwi.wsdot.wa.gov/MatsLab/BusinessOperations/ASTMLogin.htm with the following changes:

6. Specimens

6.1 Laboratory-Molded Specimens – Prepare the 150 mm (5.9 in) laboratory-molded specimens in accordance with WSDOT FOP for AASHTO T 312, to a height of 62 ± 1.0 mm (2.44 ± 0.04 in). A minimum of three replicates shall be prepared for each mixture.

6.1.1 Air void (Va) of test specimen shall be 7.0 ± 1.0 %.

7. Procedure

7.1 Section 7.1 shall be deleted in its entirety.

8. Calculation

8.1 Calculate the IDT strength as follows:

$$S_T = \frac{2F}{3.14\,(hd)}$$

Where:

S_T = Indirect tensile strength (psi)
F = Total applied vertical load at failure (lbs)
h = Height of specimen (inches)
d = Diameter of specimen (inches)

Tester Qualification Practical Exam Checklist

Determining Indirect Tensile Strength of Compacted Bituminous Mixtures

FOP for ASTM D 6931

Participant Name _____ Exam Date _____

Procedure Element		**Trial 1**	**Trial 2**
1.	The tester has a copy of the current procedure on hand?	____	____
2.	All equipment is functioning according to the test procedure, and if required, has the current calibration/verification tags present?	____	____
3.	Specimen height is 62 ± 1.0 mm (2.44 ± 0.04 in) or 38.1 mm (1.5 in) minimum for cores?	____	____
4.	Specimen meets air void tolerance of 7.0 + 1.0 %?	____	____
5.	Specimen placed in water bath at 77 + 2°F (25 + 1°C) for a minimum of 30 minutes but not longer than 120 minutes?	____	____
6.	Press turned on and operating at a deformation rate of 2 in per minute?	____	____
7.	Specimen placed on lower loading strip?	____	____
8.	Upper loading strip lowered onto specimen with light contact?	____	____
9.	Upper and lower loading strips parallel with each other?	____	____
10.	Load applied at 2 in per minute?	____	____
11.	Total applied vertical load recorded?	____	____
12.	Indirect tensile strength in psi calculated and recorded correctly?	____	____

First Attempt: Pass ☐ Fail ☐ Second Attempt: Pass ☐ Fail ☐

Signature of Examiner _____

Comments:

Tester Qualification Practical Exam Checklist

Determining Indirect Tensile Strength of Compacted Bituminous Mixtures FOP for ASTM D 6931

Participant Name _____ Exam Date _____

	Procedure Element	Yes	No
1.	The tester has a copy of the current procedure on hand?	☐	☐
2.	All equipment is functioning according to the test procedure, and if required, has the current calibration/verification tags present?	☐	☐
3.	Specimen height is 62 ± 1.0 mm (2.44 ± 0.04 in) or 38.1 mm (1.5 in) minimum for cores?	☐	☐
4.	Specimen meets air void tolerance of 7.0 + 1.0 %?	☐	☐
5.	Specimen placed in water bath at 77 + 2°F (25 + 1°C) for a minimum of 30 minutes but not longer than 120 minutes?	☐	☐
6.	Press turned on and operating at a deformation rate of 2 in per minute?	☐	☐
7.	Specimen placed on lower loading strip?	☐	☐
8.	Upper loading strip lowered onto specimen with light contact?	☐	☐
9.	Upper and lower loading strips parallel with each other?	☐	☐
10.	Load applied at 2 in per minute?	☐	☐
11.	Total applied vertical load recorded?	☐	☐
12.	Indirect tensile strength in psi calculated and recorded correctly?	☐	☐

First Attempt: Pass ☐ Fail ☐ Second Attempt: Pass ☐ Fail ☐

Signature of Examiner _____

Comments: