Hardened Concrete Properties
KT-23 Flexural Strength Of Concrete (Third-Point Loading Method)

Revised July 2023

Two attempts may be made by the applicant. The applicant may stop themselves once and not have that count as one of the two attempts. If the applicant stops voluntarily, draw a line at that point and note that the applicant stopped themselves then restart at the top of the next attempt.

Applicant: _____ **CIT #:** _____

Employer: _____

		1st Test		Stopped Test		Re-Test	
	Test Specimen						
1.	A nominal 6 by 6 by 21 in (152.4 by 152.4 by 530 mm) concrete beam, molded and cured according to KT-22. The beam must be kept moist until time of test. (4.1)	PASS	FAIL	PASS	FAIL	PASS	FAIL
2.	Draw lines on the beam 6" intervals equally spaced from the end of the beam representing the support and load applying block locations. Use these marks when installing the beam in the test fixture. (4.2)	PASS	FAIL	PASS	FAIL	PASS	FAIL
	Test Procedure						
3.	Place the specimen on its side in the machine in such a manner that a minimum of 1 in of the beam extends outside the support rollers. (5.2.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
4.	Apply a load of between 3 and 6% of the expected ultimate load.	PASS	FAIL	PASS	FAIL	PASS	FAIL
5.	If there is a 1 in or longer gap in excess of 0.004 in, grind the contact surfaces of the specimen, or shim with leather strips. (5.2.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
6.	If full contact is not obtained between the specimen and the load-applying blocks and the supports so that there is a 1 in (25 mm) or longer gap in excess of 0.015 in (0.38 mm), grind the surfaces of the specimen as stated above. (5.2.1.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL

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7.	If specimen is twisted or warped 1/8" (3.2 mm) or more in any plane, discard the specimen and repair or replace the mold. (5.2.1.2)	PASS FAIL	PASS FAIL	PASS FAIL
8.	Load the specimen continuously and without shock.	PASS FAIL	PASS FAIL	PASS FAIL
9.	Note and record the total load required to break the beam. (5.3.1.1.)	PASS FAIL	PASS FAIL	PASS FAIL
10.	Take three measurements at the fractured face across each dimension to the nearest 0.05 in to determine the average width, average depth and line of fracture location of the specimen at the section of failure. (5.4.1.)	PASS FAIL	PASS FAIL	PASS FAIL

Overall Score

Circle One

1st Test	Stopped Test	Re-Test
PASS	PASS	PASS
FAIL	FAIL	FAIL

Witness Examiner: _____ _____

(First Try) Signature Date

Witness Examiner: _____ _____

(Stopped Try) Signature Date

Witness Examiner: _____ _____

(Re-Test) Signature Date