

IA Checklist

T 152 Air Content of Freshly Mixed Concrete by the Pressure Method (Type B Meter)

Procedure	P	F	NA
1 Obtain a sample of freshly mixed concrete in accordance with R 60.			
2 Fill container in three layers, slightly overfilling the last layer.			
3 Rod each layer 25 times with hemispherical end of rod, uniformly distributing the strokes.			
4 Rod bottom layer throughout its depth without forcibly striking bottom of container.			
5 Rod the middle and top layer throughout their depths and penetrating about 1" [25 mm] into the underlying layer.			
6 Tap the sides of the container smartly 10 to 15 times with the mallet after rodding each layer.			
7 Strike off concrete level with top of container using the bar and clean off rim.			
8 Clean and moisten inside of cover before clamping to base.			
9 Is the aggregate correction factor records determined on the actual concrete proportions being tested.			
10 Open both petcocks.			
11 Close air valve between air chamber and the bowl.			
12 Inject water through petcock until it flows out the other petcock.			
13 Continue injecting water into the petcock while jarring and tapping the meter of insure all air is expelled.			
14 Close air bleeder valve and pump air up to initial pressure line.			
15 Allow a few seconds for the compressed air to stabilize.			
16 Adjust the gauge to the initial pressure.			
17 Close both petcocks.			
18 Open air valve between chamber and bowl.			
19 Tap sides of bowl sharply with the mallet.			
20 Read the air percentage after lightly tapping the gauge to stabilize the hand.			
21 Close the air valve and then open petcocks to release pressure before removing the cover.			
22 Calculate air content correctly: Air content = (meter reading) minus (aggregate correction factor)			

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Equipment		P	F	NA
Measuring Bowl and Cover Assembly				
1	Measuring bowl is cylindrical in shape made of steel, hard metal, or other hard material not readily attacked by the cement paste, having a minimum diameter equal to 0.75 to 1.25 times the height and a capacity of at least 0.20 ft ³ [5.7 L].			
2	Cover assembly is made of steel, hard metal or other hard material not readily attacked by the cement paste. It is flanged or otherwise constructed to provide for a pressure-tight fit between bowl and cover assembly and has machined smooth interior surfaces contoured to provide air space above the level of the top of the measuring bowl.			
3	Air Meter calibration records are current and have been performed at intervals not to exceed 3 months.			
Tamping Rod				
4	Tamping rod is a round straight steel rod 5/8" [16 mm] in diameter and not less than 16" [400 mm] in length.			
5	Tamping rod has the tamping end or both ends rounded to a hemispherical tip, the diameter of which is 5/8" [16 mm].			
Mallet				
6	Mallet has a rubber or rawhide head and weighs approximately 1.25 ± 0.50 lb [0.57 ± 0.23 kg] for use with measures of 0.5 ft ³ [14 L] or smaller or 2.25 ± 0.50 lb [1.02 ± 0.23 kg] for use with measures larger than 0.5 ft ³ [14 L].			
Strike-Off Bar or Plate				
7	Strike-off bar is a flat straight bar made of steel or other suitable material at least 1/8" [3 mm] thick and 3/4" [20 mm] wide by 12" [300 mm] long.			
8	Strike-off plate is a flat rectangular metal plate at least 1/4" [12 mm] thick or a glass or acrylic plate at least 1/2" [12 mm] thick with a length and width at least 2" [50 mm] greater than the diameter of the measure with which it is to be used.			
9	Edges of the plate are straight and smooth within a tolerance of 1/16" [1.5 mm]			

Remarks: