

CRD-C 6-74

**METHOD OF TEST FOR REMOLDING EFFORT OF
FRESHLY MIXED CONCRETE**

1. Scope

1.1 This method of test covers a procedure to be used in the laboratory for determining the mechanical effort required to remold samples of freshly mixed concrete from the molded form of a frustum of a cone to a cylindrical disk. The apparatus described is for use with concrete samples containing coarse aggregate of not over 1-1/2 in. (37.5 mm) nominal maximum size, or from which larger aggregate has been removed by wet-screening.

2. Apparatus

2.1 Remolding Apparatus. - The remolding apparatus shall consist of a cylindrical metal container 12 in. (305 mm) in diameter and 8 in. (203 mm) high, and an inner ring with a three-arm assembly. The assembled apparatus is shown in Fig. 1. The apparatus shall be made of the materials and to the dimensions shown in Fig. 2.

2.2 Flow Table. - The flow table shall conform to the design shown in Fig. 3 and shall be mounted on and bolted to a concrete base having a height of 15 to 20 in. (or 380 to 510 mm) and weighing not less than 300 lb (136 kg).

3. Sample

3.1 The sample shall be taken in accordance with the requirements of CRD-C 4. When more than 10 percent of the coarse aggregate is retained on a 1-1/2-in. (37.5-mm) sieve, the sample shall be wet-screened through a 1-1/2-in. (37.5-mm) sieve and the concrete passing through the sieve shall be used to mold the test specimen.

4. Procedure

4.1 The container shall be clean and damp and shall be clamped firmly to the center of the flow table. The inner ring shall be adjusted to give the appropriate clearance based on

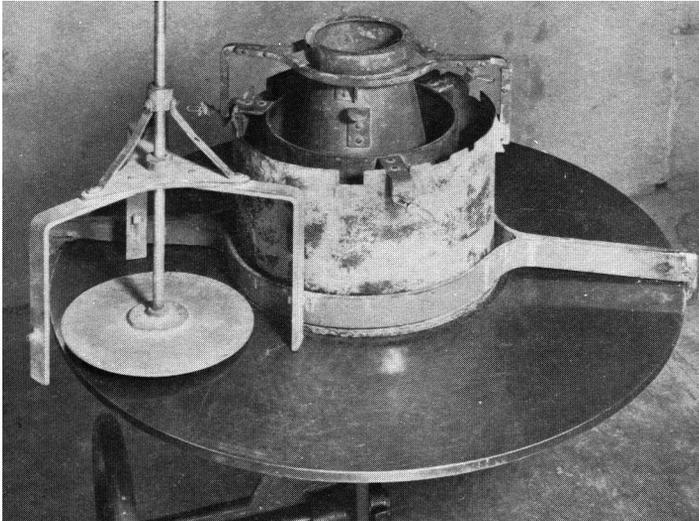
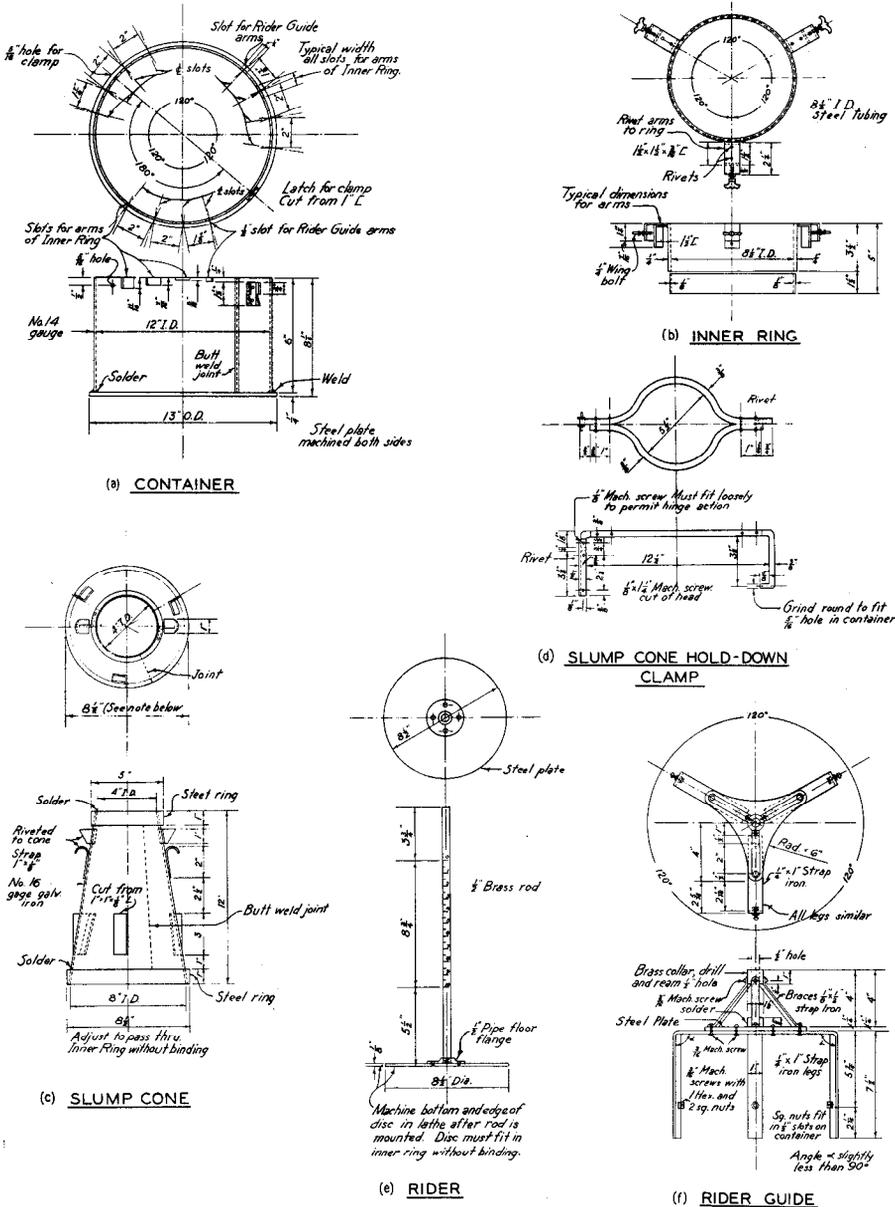


Fig. 1. Remolding apparatus assembled and mounted on flow table

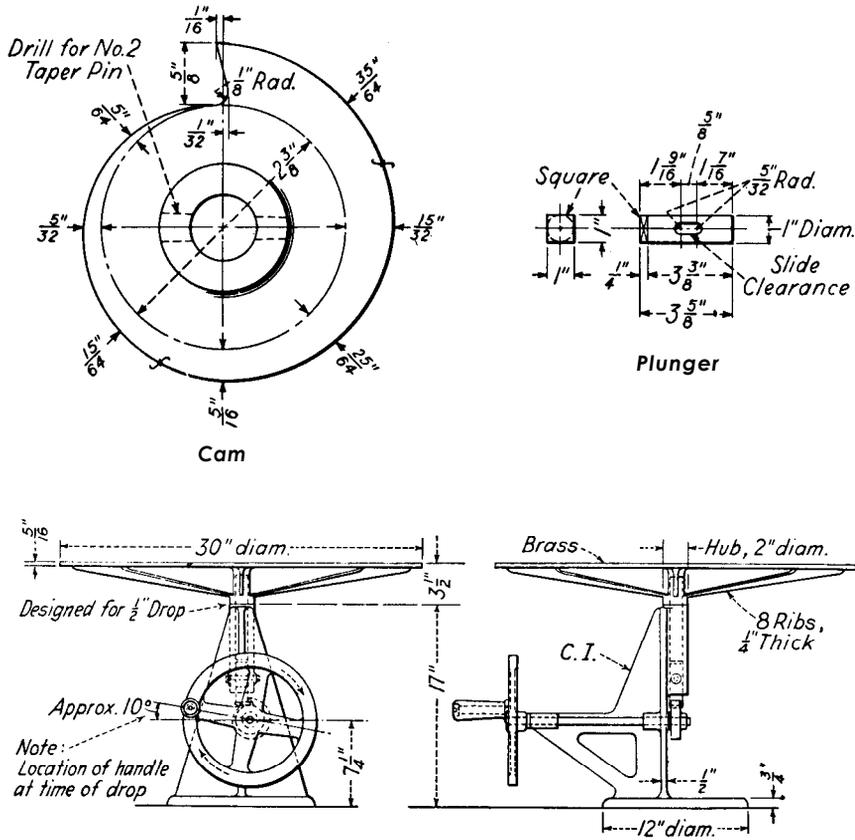
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Metric Equivalents

in.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	11/16	3/4	1	1-1/8
mm	3.2	4.8	6.4	8.0	9.6	11.2	12.7	15.9	17.8	19.1	25.4	28.6
in.	1-1/4	1-1/2	1-7/8	2	2-1/16	2-1/4	2-5/16	2-1/2	3	3-1/8	3-1/2	4
mm	31.8	38.1	47.8	50.8	52.4	57.2	58.8	63.5	76.2	79.4	88.9	101.6
in.	5	5-7/16	6	7-1/2	8	8-1/4	8-1/2	12	12-1/2	13		
mm	127.0	138.2	152.4	190.5	203.2	209.6	215.9	305	317.7	330.2		
in.	No. 14 gage = 0.0781											
mm	No. 14 gage = 1.9844											
	No. 16 gage = 0.0625											
	No. 16 gage = 1.5875											

Fig. 2. Remolding apparatus



Metric Equivalents

in.	1/32	1/16	5/64	1/8	5/32	15/64	1/4
mm	0.8	1.6	1.9	3.2	3.9	5.9	6.4
in.	5/16	25/64	15/32	1/2	35/64	5/8	3/4
mm	7.9	9.9	11.9	12.7	13.9	15.9	19.1
in.	1	1-7/16	1-9/16	2	2-3/8	3-3/8	3-1/2
mm	25.4	36.5	39.7	50.8	60.3	85.7	88.9
in.	3-5/8	7-1/4	12	17	30		
mm	92.1	184.2	305	432	762		

Fig. 3. Flow table apparatus

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the nominal maximum size of coarse aggregate in the sample as indicated in the following tabulation:

<u>Inner Ring Clearance in. (mm)</u>	<u>Nominal Maxi- mum Size of Coarse Aggregate in. (mm)</u>
2-1/2 (63.5)	3/8 (9.5)
2-3/4 (69.8)	3/4 (19.0)
3 (76.2)	1-1/2 (38.1)

4.2 The slump cone shall then be placed within the inner ring and clamped tightly. It is helpful if a funnel is used to prevent spilling of the concrete while the mold is being filled; and a 10-in. (254-mm) circular, flat, galvanized iron disk with a 4-1/2-in. (114-mm) diameter hole in the center is placed around the slump cone and over the ring clamp to prevent spilling of concrete into the remolding container outside of the cone during the strike off.

4.3 The slump mold shall be filled and rodded as required by CRD-C 5. The 10-in. (254-mm) outer ring shall be removed, the clamp released, and the slump cone shall be removed using the procedure described in CRD-C 5, with a minimum of disturbance to the concrete. The slump shall then be measured.

4.4 The rider guide shall then be placed in position and the rider lowered gently on the concrete. The table shall then be raised and dropped 1/2 in. (12.7 mm) at the rate of one drop per second until the concrete has been remolded from a truncated cone into a cylindrical disk which will be the case when the 0 reading of the rider rod descends to the upper surface of the rider guide.

5. Remolding Effort

5.1 The remolding effort (R.E.) shall be reported in terms of the number of drops required to remold.