

## **Experiment no.6 :( Sieve Analysis for coarse aggregate).**

**Purpose of Experiment:** Determination of the particle size distribution of coarse aggregates by sieving.

**Specifications:** Iraqi Specifications (IQS No.30/1984). (Determination of Particle Size and Shape of Aggregates) (ASTM C 33).

<b>Sieve size</b>	<b>Cumulative percentage passing %</b>		
	<b>Normal size of grading aggregate</b>		
	<b>37.5-5 mm</b>	<b>19-5 mm</b>	<b>12.5-5 mm</b>
<b>37.5 mm(1.5 in)</b>	95- 100	100	-
<b>19 mm (3/4 in)</b>	35-70	95-100	100
<b>12.5 mm (1/2 in)</b>	-	-	90-100
<b>10 mm (3/8 in)</b>	10-40	30-60	50-85
<b>4.75 mm (No.4)</b>	0-5	0-10	0-10

### **Equipment and Materials:**

1. Weight instrument.
2. Standard sieves for grading of coarse aggregates (37.5 mm, 20mm, 14mm, 10mm, 5mm and pan).
3. Vibrating sieving machine.
5. 2000 g coarse aggregate.

### **Test Procedure:**

1. Reduction the size sample of aggregate by quartering or riffing method, the aggregate should be surface dry.
2. Arrange the sieves (the larger at top and the finer in the bottom).
3. Put the test sample on the larger sieve and then put the sieves on sieving machine and starting the sieving process.
4. Compute the percent of material retained on each sieve and the percent of material that passes through each sieve size.

### Example:

Sieve size (mm)	Weight of retained in (g)	Percentage of retained %	Cumulative percentage retained %	Cumulative percentage passing %
37.5 mm(1.5 in)	0	0	0	100
19 mm (3/4 in)	81	4	4	96
12.5 mm (1/2 in)	520	26	30	69
10 mm (3/8 in)	398	19.9	50	50
4.75 mm (No.4)	802	40.2	90.2	9.8
Pan	114			
Total	1995			

Draw the grading chart which vertical axis Cumulative Percentage of passing and horizontal sieve size, Find the maximum aggregate size and the nominal maximum aggregate size.

