

Engineering Information

Fluid Memoranda

Engineering Information

WEIGHTS OF MATERIALS		
Material	lb/cft	kg./cu.m.
Battens	0.50	2.5
Bituminous roofing felt	1.50	7.3
Boarding : 1" thick	3.00	14.7
3/4" thick	2.00	9.8
Cooper Sheet per mm. thickness	1.78	8.7
CGI. Sheets : 18 gauge	2.75	13.4
22 gauge	1.75	8.6
24 gauge	1.50	7.3
Country tiles with battench single	14.00	68.4
Double	24.00	—
Eternit sheet or tiles	2.50	12.2
Felt Asphalted	3.00	14.7
First class mud roof	100.00	488.8
Flat and pan-tiles	30.00	146.5
Glazed roofing (with 1/4" glass with lead-covered steel bars) 6.00	29.3	—
Jack arch roof	150.00	732.4
Lath and plaster ceiling	8.00	39.0
Lead sheet per mm. thickness	2.25	11.0
Linoleum per mm. thickness	0.27	1.3
Mangalore tiles	11.00	53.7
Mangalore tiles bedded in mortar over flat tiles	22.00	107.4
Mangalore tiles with battens	14.00	68.3
Mangalore tiles with flat tiles	16.00	78.0
Playwood per mm. thickness	0.14	0.7
Rafter	1.00	4.9
Thatch : with frame 9"	10.00	48.9
with frame 6"	6.50	31.7
Timber trusses : with light roofs	2.00	9.8
with heavy roofs	3.00	14.7
Zinc sheet per mm. thickness	1.45	7.1
Dead Load of Tissues		
1. For heavy covering : $W = 7/8 \times DL \times (1+L/12)$		
2. For medium covering : $W = 3/4 \times DL \times (1+L/12)$		
3. For light covering : $W = 11/16 \times DL \times (1+L/12)$		
Where : W = weight of one truss in pounds : D = Distance apart of trusses L = Span in feet.		

20

Engineering Information

FLUID MEMORANDA			
Gallon of Water = 10lb. Fluid Memorand of Curne petroleum = 8 1/4 lb.			
1 Cubic Feet of water - 6 1/4 glas. (approx.) 62 1/2 lb = 7.84 U.L. Gal.			
1 U. S. Gal = 231 cub. in. = 0.1307 cub. ft.			
1 lb Water at 62° F = 0.016 cub. ft.			
B.I. Gal = 217.418 cub. in. 1 cwt of water = 1.8 ft. = 11.2 gal.			
British = 12009 U.S. Gal. 1 ton of water = 35.9 cub. ft. = 224 gal.			
1 Inch of Rainfall = 22,622 glas. per Acre = 100 tons (approx.)			
Average rain fall			
Gallon of milk weights approximatly 10 1/2 lb.			
Strength of Ordinary Concrete at Various Ages			
Lbs. Into Kilos			
Lbs.	Kls.	Lbs.	Kls.
1	0.454	20	9.071
2	0.907	21	9.525
3	1.361	22	9.979
4	1.814	23	10.432
5	2.268	24	10.886
6	2.721	25	11.339
7	3.175	26	11.793
8	3.629	27	12.246
9	4.082	28	12.700
10	4.536	29	13.154
11	4.989	30	13.607
12	5.443	31	14.061
13	5.896	32	14.514
14	6.350	33	14.968
15	6.804	34	15.421
16	7.257	35	15.875
17	7.711	36	16.329
18	8.164	37	16.782
19	8.618	38	17.236

21