

Example of Pugmill Calibration

Given: Rate of cement required = 3.5%

Optimum moisture = 5.3%

In-place moisture of Aggregate = 3.2%

One gallon of water = 8.33 lb. (1.5% tolerance)

Two one-minute runs of ABC = 10,400 lb. & 10,700 lb. = 10,550 lb. avg. weight/min.

Solution: 10,550 lb./min. divided by 1.032 = 10,223 lb./min. of dry Aggregate
10,223 lb./min. x 3.5% = 358 lb./min. cement divided by 4 to get weight per 15 seconds = 89.5 lb. cement per 15 seconds (89.5 lb. is an easier amount to weigh for calibration)

10,223 lb. dry Aggregate + 358 lb. cement = 10,581 total dry wt. of Aggregate and cement

10,581 lb. (weight of ABC and cement) x (.053 + .015 - .032) = 381 lb. water

381 lb. water x 1 gallon / 8.33lb. = 45.7 or 46 gallons of water per min.

1. 10,223 avg. lb. dry Aggregate per min.
2. 358 lb. cement per min.
3. 46 gallons of water per min.

Example: For figure “pull” or area to be covered by truckload of cement:

Given: Unit weight (ABC) = 140 lb./c.f.

Truckload weight (Cement) = 45,000 lb.

Road width = 34 ft. (1 ft. outside pavement = 24', 4', 4', 2')

Recommended rate = 29 lb. (4% for 7" depth)

Solution: Road width (34') divided by 9 = 3.78 sy per linear ft.

Rate (29 lb.) x sy (3.78) = 109.62 lb. per linear ft.

Truckload weight (45,000) divided by lb. per linear ft. (109.62) = 410.5 per linear ft.