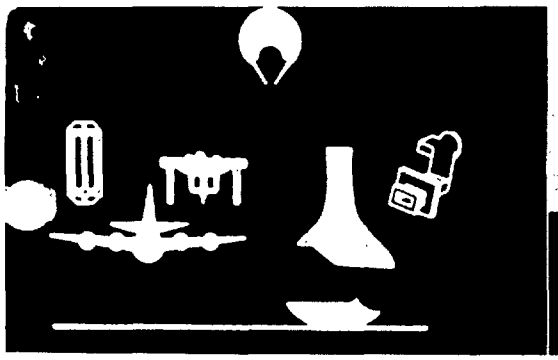


GP
GEORGIA-PACIFIC
GYPSUM DIVISION

INDUSTRIAL PLASTER

BULLETIN NO. 5

MECHANICAL MIXING OF PLASTER

Once the proper use consistency (water to plaster ratio) has been determined, proper mixing can only be accomplished by:

1. Weighing the plaster accurately.
2. Measuring the water carefully.
3. Timing the soaking period.
4. Timing the mixing cycle.
5. Using a mixer of proper size in a bucket of correct shape.

RECOMMENDED EQUIPMENT AND CONDITIONS

Mixer: Direct drive, propeller type mixer of 1760 RPM

Motor Size:

1/3 H. P. for small mixes	50 lbs. of slurry or less
1/2 H. P. for medium mixes	50 – 100 lbs. of slurry
3/4 H. P. for large mixes	over 100 lbs. of slurry

(The weight of the slurry is the combined weight of the water and plaster).

Propeller:

3 inch, 3 blade for small mixes (50 lbs. of slurry or less). Larger mixes will require 4 or 5 inch blades and in some cases more than one blade will be necessary.

Position of mixer:

Position the mixer so that:

1. The propeller clears the bottom of the bucket by one or two inches.
2. The propeller is off center from bottom of bucket.
3. The propeller shaft is from 10° to 15° from the verticle and from 20° to 30° from a top diameter of the bucket.

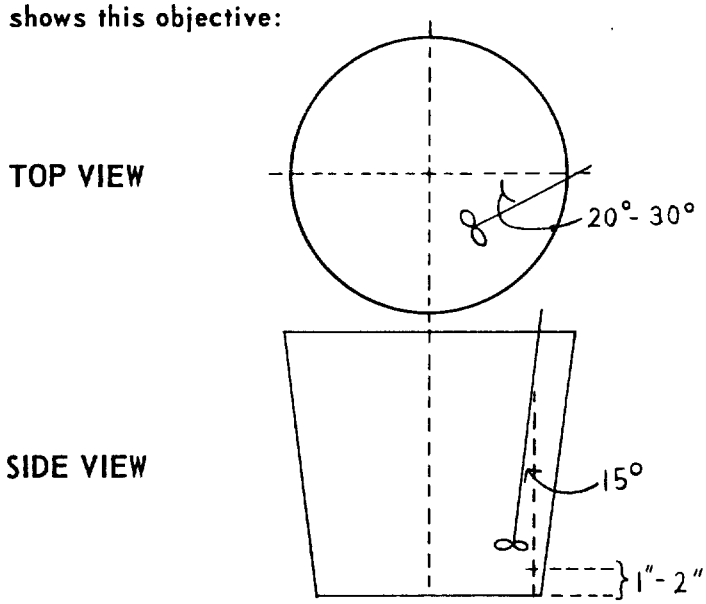
PLAINTIFF'S EXHIBIT

GP-674

(over)

DENSITE AND DENSCAL GYPSUM CEMENT • MOLDING PLASTERS • STATUARY PLASTERS • DENSFLOR • CERTROCK
ORTHOPEDIC PLASTERS • POTTERY PLASTERS • PLATE GLASS PLASTERS • SPECIAL INDUSTRIAL PLASTERS

The sketch below shows this objective:



Bucket Design:

Height should be equal or greater than top diameter. Bottom diameter should be approximately 2/3 top diameter. Correct flow patterns of the slurry should be developed by positioning the mixer. Baffles can be used to correct faulty flow patterns. However, they waste energy and offer a cleaning problem.

Uniform Slurry Temperature:

1. Dry plaster should be room temperature. When weather is cold and storage is in unheated areas, bring in next day's supply of plaster the evening before.
2. Provide hot and cold water lines to a thermostatically controlled mixing valve to insure a constant water temperature.

Clean Equipment:

1. All equipment must be kept clean. Set plaster on any part of the mixing equipment in contact with the slurry will accelerate the set.

Mixing:

1. Sift plaster into the water. Do not allow large quantities to drop into the water at one time.
2. Let plaster soak so that all particles are wet. This will take from two to four minutes.
3. Mix only as long as is necessary to cream the slurry. This will take from two to five minutes. The slurry must cream enough to prevent settling. Overmixing will increase setting expansion, hasten the set, and also increase air entrapment. Undermixing will result in watering out, weak molds and casts with uneven absorption.

Pouring:

1. Put lip of bucket as close as practical to the mold or pattern.
2. Pour at a constant rate.
3. Keep splashing of slurry at a minimum.
4. Try to have slurry flow over pattern or mold face rather than splashing it on.