

BESTWALL GYPSUM COMPANY

INDUSTRIAL GYPSUM DIVISION
BULLETIN NO. 164

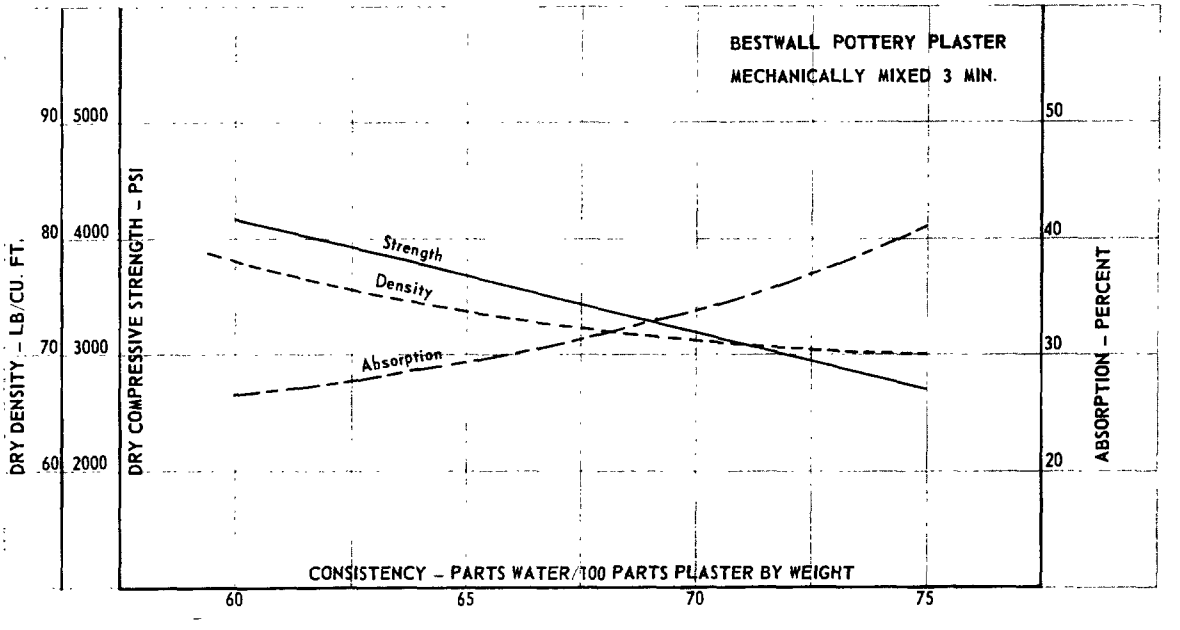
March 1, 1962

BESTWALL POTTERY PLASTER

Bestwall Pottery Plaster is a new pottery plaster from our new gypsum plants located at Brunswick, Ga., New Orleans, La., and Wilmington, Del. It was developed by the Bestwall research laboratories to satisfy the known needs of the Pottery Industry for a pottery plaster with uniform absorption, uniform grind, uniform consistency and uniform setting time.

Bestwall Pottery Plaster is light green in color insuring easier mold inspection and less eye strain.

INSURE HIGH QUALITY WARE WITH HIGH QUALITY MOLDS OF BESTWALL POTTERY PLASTER.



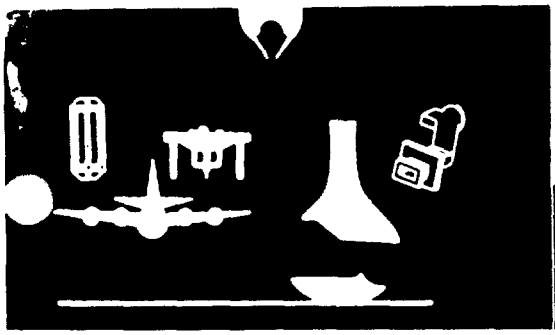
Other literature available from Bestwall for the Ceramic Industry.

#3	Field Test Procedure – Pottery Plaster
#5	Mechanical Mixing of Plaster
#205	Bestwall Pottery Plasters for the Ceramic Industry
#206	Check List – Common Troubles – Pottery Mold Shops

PLAINTIFF'S EXHIBIT

GP-669

SGP 0026139



GEORGIA-PACIFIC
GYPSUM DIVISION

INDUSTRIAL PLASTER

BULLETIN NO. 206

CHECK LIST – COMMON TROUBLES – POTTERY MOLD SHOPS

The best insurance against trouble is using sound practices at all levels of production.

Good mold shop practices can be summarized as follows:

1. Plaster stock is rotated. The oldest is used first.
2. Plaster is stored in a dry and warm area.
3. Uniform mold density is assured by maintaining careful control of consistency used by the shop. Plaster and water are both weighed.
4. The soaking and mixing times are carefully controlled by time switches on the mixer.
5. Only water fit to drink is used and it is always used at the same temperature.
6. Molds are carefully dried at 125° F. with forced air before they are put into use.
7. Mechanical mixers with properly designed buckets and propellers are used or a continuous mixer of proper size and design is used.
8. Molds are treated as precision tools. They are handled with care and stored carefully.
9. The casting shops keep close checks on each mold's performance.

When trouble is experienced, the mold shop foreman should examine the problem to see which of the above conditions are being ignored. The best procedure is, of course, to see that the rules are not violated in the first place.

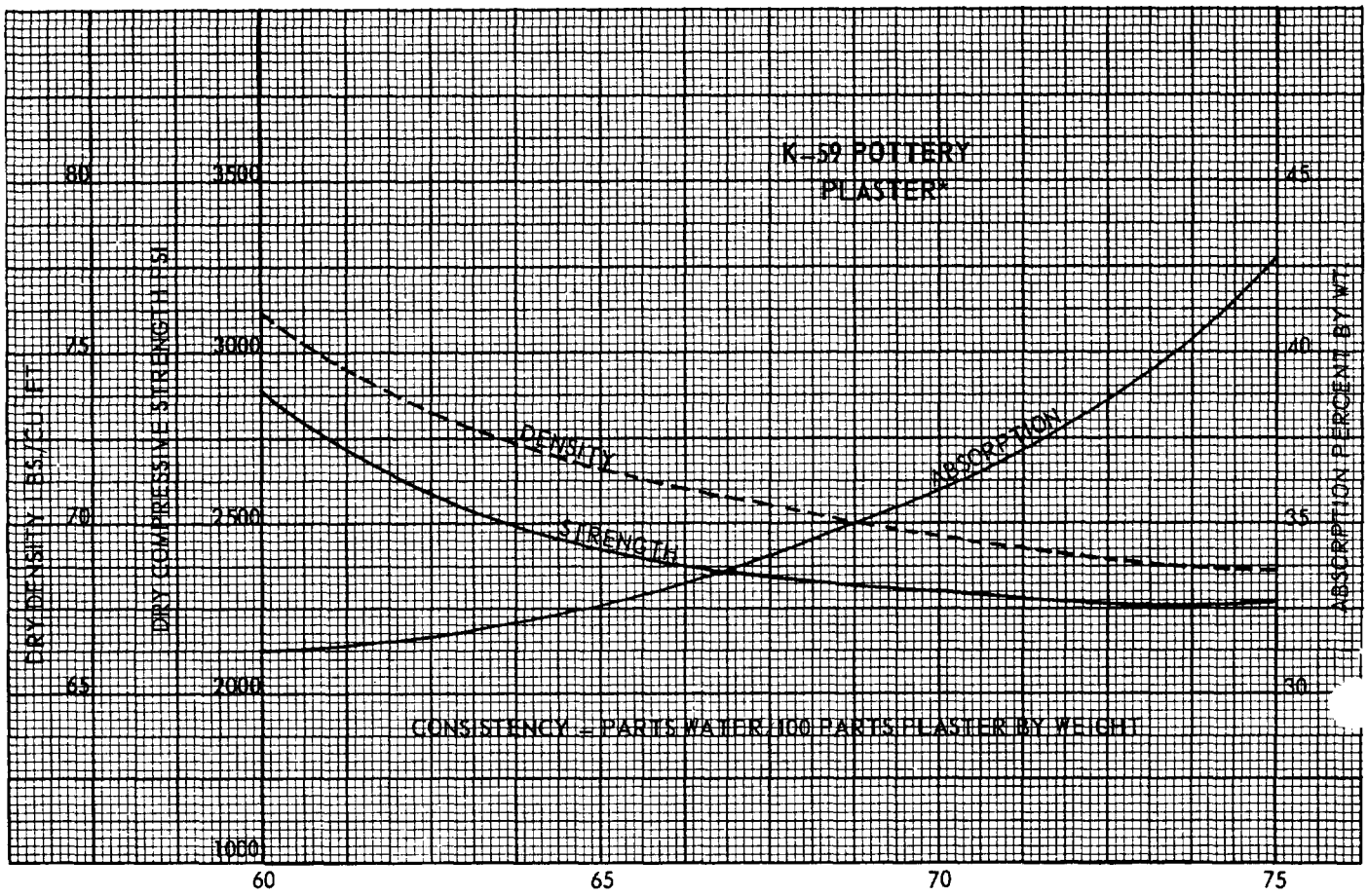
In the table that follows there is a list of the more common troubles encountered in pottery mold shops. Probable causes and suggested cures are shown for each trouble.

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IF THE TROUBLE IS:	INVESTIGATE:	CORRECT BY:
1. Slow set	Mixing speed	Mix faster
	Mixing time	Mix longer
	Water temperature	Use warm water (Add accelerator)
	Age of plaster	Use fresh plaster
2. Snap set	Contamination in bag	Open fresh bag – Check storage
	Contamination in bin	Clean bin – Screen plaster
	Contamination in mixing	Clean mixer – Clean bucket
3. Lumpy plaster	Exposure to water	Determine where wetting occurs In bag – In bin – While in storage – While in transit? Take appropriate action.
4. Soft molds before use	Mix consistency	Decrease water
	Burning in drying	Lower oven temperature
5. Hard molds before use	Mix consistency	Increase water
6. Excessive expansion	Mix consistency	Increase water
	Water temperature	Increase temperature
	Mixing time	Decrease time
7. Soft molds after use	Sweating-out	Dry at 125° F.
	Drying	with forced hot air.
8. Chalky molds after use	Burning in drying	Decrease temperature
9. Efflorescence	Contamination	Dry so evaporation takes place
	Poor drying	from back.
10. Pinholes	Soaking	Increase soaking time
	Mixing	25° Pitch propeller blades Position propeller shaft 15° from vertical. Use bucket of proper design.
11. Hard spots	Mixing	Increase soaking time – sift plaster into water.
	Drying	Dry so evaporation takes place from back of mold.
	Soaping	Use less soap
12. Rough surface	Not creamed in	Increase mixing time
	Mix coarse plaster	Use only high quality pottery plaster.

IF THE TROUBLE IS:	INVESTIGATE:	CORRECT BY:
13. Cracked molds	Handling	Handle molds with care
	Thermal shock	Protect hot molds from drafts – Use special thermal shock plaster
	Burning	Decrease temperature in drying Decrease drying time
14. Warped molds (Uneven drying)	Parting compound	Wash mold to remove parting compound
	Plaster quality	Use only high quality pottery plaster
15. Short life	Wrong type plaster	Use only high quality pottery plaster
	Excessive soap	Clean molds – use less soap
	Hard spots	See #11 on preceding page
	Efflorescence	See # 9 on preceding page
	Pinholes	See #10 on preceding page
	Mixing	Use clear water Weigh water and plaster Sift plaster into water Soak until all plaster is wet Time soaking period Use mechanical mixer Use clean equipment Mix until creamed Control mixing time
	Used while green	Dry molds before using
	Handling	Draw to attention of Supervisory Personnel
	Consistency	Adjust consistency
	Soft molds	See #7 on preceding page
16. Low Absorption	Dirty mold	Keeps molds clean
	Wrong consistency	Mix at higher consistency
	Wrong plaster	Use only high quality pottery plaster
17. Mildew	Not dry	Wash molds Dry molds thoroughly
18. Voids on surface	Trapped air in mixing	See #10 on preceding page
	Trapped air in pouring	Pour plaster while still fluid Pour deepest part of cavity first Pour plaster so it flows over surface
19. Poor fit	Worn-out	Make new case molds
	Poor design	Redesign

The following graph illustrates the importance of controlling use consistency (consistency is the parts water per hundred parts plaster by weight.)



*K-59 Pottery Plaster is one of several superior plasters for the ceramic industry produced by Georgia–Pacific.

Write us direct or ask our technical salesman for our Bulletin No. 205, "Industrial Plasters for Ceramic Industry" and Bulletin No. 5, "Mechanical Mixing of Plaster."

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