

the stone processing equipment, provide a surge storage capacity that has proved desirable.

Minus 4-in. blue stone is ground in Raymond mills into mine dust, mineral feed fillers, chicken grits, agricultural limestone, etc. The white stone is put through separate mills for pulverizing into special, higher quality products.

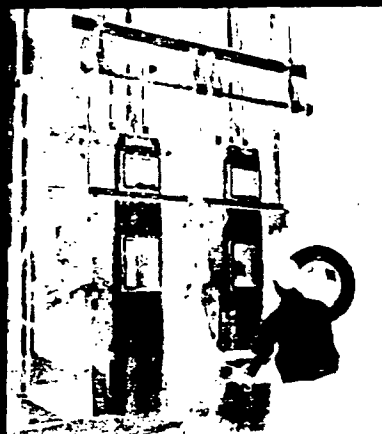
Lime is calcined in two 24-ft. diameter x 80-ft. high vertical gas-producer kilns that are probably the largest in the United States. They are Azbe kilns with center walls dividing each kiln into two parts with a center burner and two side burners for each side. Capacity ranges between 80-

150 tons of lime per day for each kiln or a ton per sq. ft. of effective cross sectional area per day. The gas producers are 10-ft. 6-in. Chapman units.

Lime is drawn at 1½-hr. intervals, and is put through a hammermill for reduction to minus ¼-in. for feed to a Schaffer continuous hydrator. Hydrate is put through two Raymond pulverizers and bagged. Most of the production of lime is converted to hydrate. Ground limestone products are produced through five separate Raymond mills. Another improvement has been construction of storage facilities for 5000 tons of bagged products to provide, principally, for the peaks in demand for agricultural limestone.

**PLAINTIFF'S
EXHIBIT**

JM 1076



Bagging granulated slag automatically

MINERAL WOOL PLANTS

**Waste heat boilers generate
steam for blowing fibers**

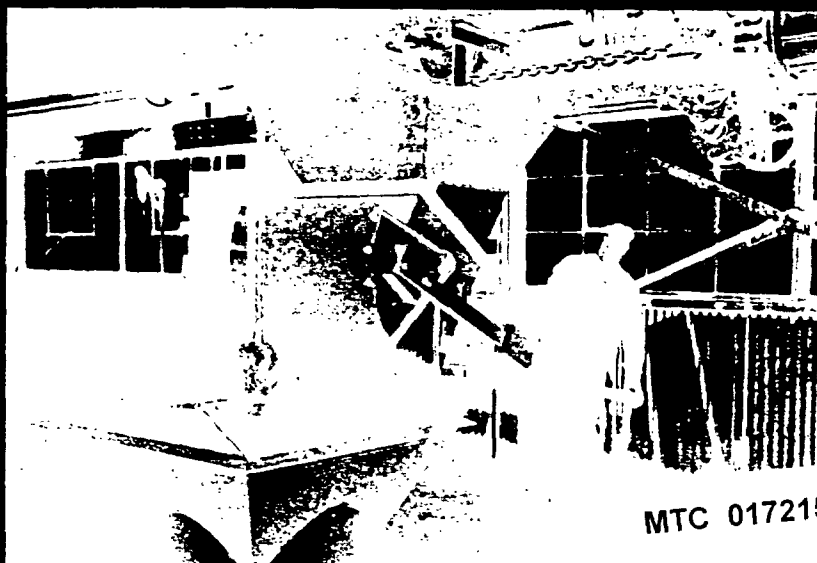
NATIONAL GYPSUM Co. operates three rock wool plants which are among the most modern and efficient in the industry. The Dover, N. J., plant and the Alexandria, Ind., plant each have four vertical cupolas and the Mansfield, Mass., plant has two cupolas. They are all fired by the conventional layer method, using slag as feed and coke as fuel and each produces a full-line of batt products and granulated and loose wool. Each has the conventional blowing chamber and uses a 6-stream split and steam at 100 p.s.i. to blow the fibers from the melt.

As part of the postwar modernization program of the company, the two largest plants have been completely mechanized. Automatic weighing equipment has been installed featuring overhead bins from which batches are weighed out and conveyed to the respective cupolas by lorry. Previously each cupola had an individual skip charging bucket. Controls for batching are centered on the charging floor at each plant.

By far the most important development at these two plants has been installation of individual waste-heat boilers for each cupola to recover heat from the gases to generate steam for blowing wool. The company has patents pending on this installation. Gases are drawn at almost 1400 deg. F. from the top of the bed in a cupola and the boilers exhaust at about 450 deg. F. The cupolas are charged from the sides near the top of each. An oil-fired auxiliary is provided to supply any needed steam over and above that generated by waste heat, if required. Operation must be kept in perfect balance and is being done effectively with considerable overall fuel saving. All three plants feature mechanical weighing and automatic bagging machinery.



The rock wool plant at Alexandria, Indiana



Feeding charge to cupola; note air ram in upper right corner

MTC 017215