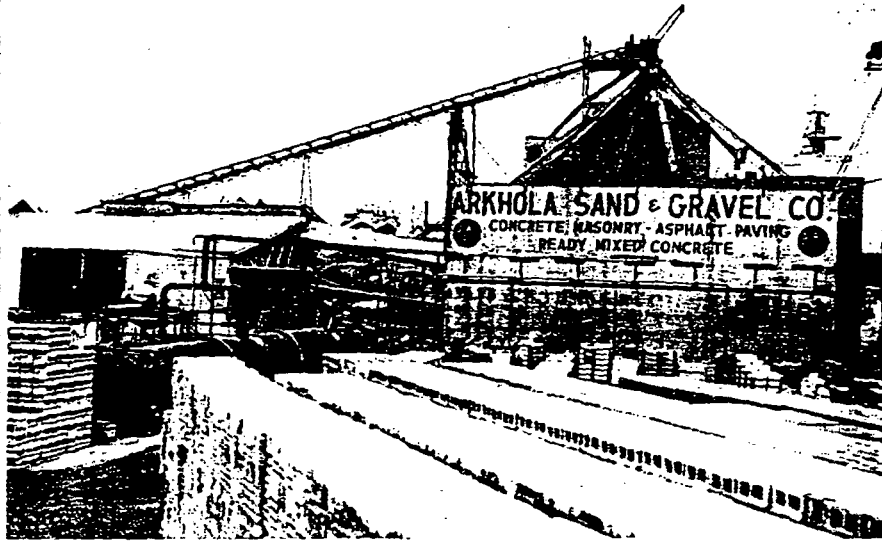


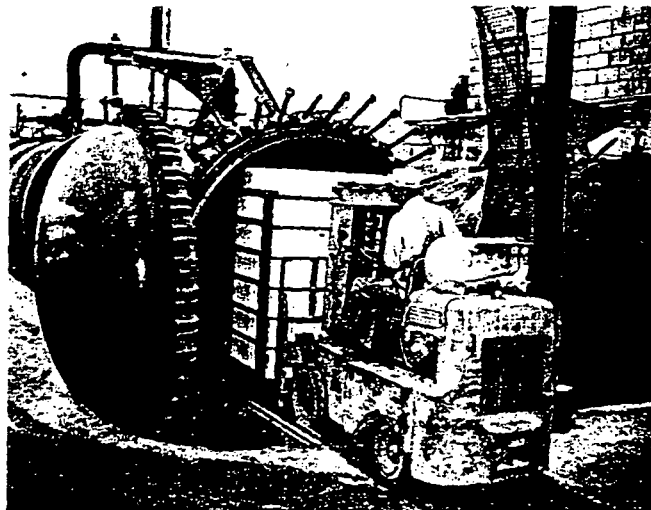
VACUUM CURING CONCRETE BLOCKS

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Looking across the storage yard of the Arkhola Sand and Gravel Company. The two long cylinders at left are the steam and vacuum curing kilns. Mounted on the corner of the building directly above the "A" in Arkhola can be seen the Elliott vacuum equipment.

A rack of green blocks being loaded into the curing kiln at the Arkhola plant.



THE use of cement dates back to antiquity, and no one knows exactly when it was first discovered or applied to masonry construction. However, the pyramids of Egypt are one of the earliest evidences. Later, the Romans made a cement composed of slack lime and volcanic ash that hardened under water, making possible the building of their great aqueducts in 67 B.C. that brought water from far-off Gaul. After the fall of Rome, not again until about the eighteenth century was any significant amount of concrete masonry construction used, and just within the past hundred years a large industry has built up around its use.

Around the turn of the century the concrete block industry began to grow. At first, anybody who had a sand bank in his back yard could take a few wooden forms, a few sacks of cement, and some water, and be in the business. With these methods the quality and strength of blocks varied considerably. Today, however, the situation is radically different. All ingredients are accurately measured and thoroughly mixed. Further, the concrete mixture is fed into rapidly vibrating steel molds which eliminate large air pockets, and in most modern plants the blocks are steam cured.

The Arkhola Sand and Gravel Company, Fort Smith, Arkansas, pictured here, goes a step further and subjects the block to an additional vacuum curing process. The vacuum equipment for this new curing process was designed and supplied by Elliott Company.

The significance of this further curing under vacuum lies in the advantage of reducing the moisture content