

employees of 600 clay products manufacturing plants and 30,000 dealers and salesmen.

It is appalling to realize that America's largest industry, the multi-billion-dollar construction giant each spring performs a primitive rite that follows the same pattern year after year. After a winter of inactivity, suddenly spring arrives and millions of people, architects, engineers, contractors, manufacturers, craftsmen and laborers leap into a state of confused action, attempting to make up for at least some of the three or four months they have just squandered.

This kind of operation is expensive, chaotic and largely unnecessary.

In the light of current technology—which makes it possible and practical to continue building operations the year around, construction is reduced to a pleading tradition. It is a wasteful tradition; and the waste of human resources is so great that it is difficult to measure. For example—here are some of the problems facing a brick and tile manufacturer. Every fall he must prepare for a winter slow down because building activity is curtailed. Most of his employees are laid off for several months depending on the duration of unfavorable weather. This is not his only problem. It takes time to gear up production once building activity begins. Therefore, out of necessity he is required to have large storage facilities in order to carry huge inventories if he is to service his clients promptly.

If he has read his crystal ball properly he will have enough of the right kind of material to satisfy the demands of his customers. Many times he guesses wrong, which results in further delays to construction or loss of business to him.

If the traditional construction pattern were changed from a seasonal operation to a year around operation—just think of the economies manufacturers and suppliers could achieve through more efficient production, inventory and shipping operations. Waste could be eliminated throughout the industry. Architects and engineers would benefit by a more regulated year around construction activity, rather than eight-or-nine-month haphazard operation. Contractors, by working year around could stabilize their overhead and manpower requirements. Owners would benefit by having their projects completed several months earlier than is possible at present.

There is no question that the cost of "seasonality" is enormous. A study by the Department of Commerce found that the annual loss to the construction industry due to weather is a minimum of \$3 billion and a maximum of \$10 billion.

The masonry industry has been greatly concerned about this problem for several years. We don't know all the answers but we are learning, and as we discover new and proven technology, we are changing our recommendations and keeping each other informed. The Mason Contractors Association has carried on outstanding work in conducting seminars to inform their members on all the methods for covering buildings with the many kinds of lightweight, transparent plastic materials that are available, also the many kinds of scaffolding methods used for temporary shelters, how to care for their materials, equipment and machinery in bad weather, how to operate portable heating equipment that is available, which is safer, cleaner and provides healthier working conditions for construction workers, than the old type coke or oil salamanders.

We have all joined together, the Mason Contractors Association of America, The Bricklayers International Union, The Laborers' International Union, The Concrete Masonry Association, The Portland Cement Association and The Structural Clay Products Institute, in joint cooperation through the "Masonry Industry-All-Weather Committee". This Committee is studying the "State of the Art" and reviewing all of the available technology so that our industry will have the most efficient and economical information to build in all kinds of weather. Winter time is not our only problem. We also have the problem of protecting men and materials during wet weather and excessive heat.

As a further contribution to the effort of obtaining information and finding answers to our problems the Structural Clay Products Institute is continually researching methods of All Weather Construction. This includes research into the effects of freezing and thawing, and the effects of heat and moisture on brick and mortar in building practice. This past year we have sent our engineers to Europe to investigate European methods of All Weather Construction. We also have documented a field study we made on winter construction in Boston.

Because of our findings to date we have issued new recommendations for masonry construction in cold weather. Copies of our recommendations, our field study and our European investigation is attached to this statement.

I have briefly explained to you industry action now underway within the masonry industry. I would also like to inform this Committee that steps have