Don’t let that masonry look fool you. The contractor used sculptured foam shapes up to 7 inches thick—and wound up insulating the building, too, while not encroaching on valuable interior space.

The Need For Insulation and Retrofitting Will Provide Enormous Business Potentials in the Immediate Future

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What is an energy crisis?
This entire issue could consist of the many answers to that question. Why it happened and what to do about it is consuming miles of newsprint and hours of commentary. In the United States our extravagant use or misuse of energy takes many forms, each with its own myriad of potential solutions.

As far as building construction is concerned, it is safe to say that the energy crisis is described in the fact that energy is introduced into our buildings at a rate (on the average) 50% more vigorously than the building is capable of containing it. No matter what alternate forms of energy may eventually become significantly available, there is no question that the major factor in the solution of the energy crisis in building construction is to design and construct new buildings and retrofit our existing buildings in such a way as to contain or utilize the energy put in them much more efficiently.

While these statements are more easily said than done, I hope to show you that the “doing” constitutes big business and a big profit opportunity for the wall and ceiling contractor. At this point in time, we are only seeing the tip of an iceberg from which there are enormous opportunities to be thawed out.

In the last week of November, 1977, there was an International Insulation Seminar in Reston, Vir-

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ginia sponsored by iaWCC/GDCI and the National Bureau of Standards (NBS). I think many that attended were surprised at the focus and infancy of the insulation business. Surprised or not, the Seminar was an accurate picture of the state of the art. Retrofit technology and emphasis is mostly concerned with the single family house.

One day of the Seminar was spent at NBS, and the information available concerning the technology and economics of re-insulation, while plentiful, is not yet complete. Basically the scientists at NBS know about all there is to know about a particular 1200 square foot house but the process of extrapolating this information to include housing in general has only just begun.

The technology and economics of retrofit for commercial/institutional/industrial is sketchy at best and, when available, is generally developed and published by a manufacturer.

Before leaving the single family house, let me say that there are good reasons for the emphasis. The initial investment for retrofit is low ($100 to $2000), the results are immediate, and energy savings are substantial. Retrofit of single family houses is good business with a crying need for good, substantial contractors. The opportunity for profit and growth is good, and it is a business the wall and ceiling contractor should consider.

Commercial Growth

What about the market many wall and ceiling contractors are now most active in—Commercial/Institutional/Industrial? Is there a retrofit market? What stage is it in? The answer is that the reinsulation of walls and roofs on commercial buildings is, in fact, destined to grow into a giant industry.

The Commercial retrofit is obviously more complex than the single family house. This contract can easily run into the hundreds of thousands of dollars. The building will require a more complex economic and engineering analysis to determine feasibility. Getting into the commercial retrofit market is similar to the light gauge metal framing business of five years ago.

While the single family homeowner may be interested in comfort and resale value as primary benefits of retrofit, the owner of a commercial property is primarily concerned with return on investment—that is, “How soon will this retrofit investment pay for itself.”

Exterior insulation is the best solution for the reinsulation of exterior walls—an important element of a retrofit and a ready-made profit opportunity for the wall and ceiling contractor. The placement of insulation on the outside of the building

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shell is the ideal solution for four primary reasons:

1. Placing insulation on the exterior is the most efficient method. It allows the wall structure to “store” energy and reduces peak load heat demand permitting smaller equipment and more efficient operation.

2. The “total” exterior is insulated. There are no “heat leaks” at floors, wall intersections, or other framing members.

3. Air infiltration, which can be as critical as poor insulation, is eliminated where exterior insulation is present.

4. All work is done on the exterior of the building. Occupants are not disturbed and there is little or no demolition.

The three case studies taken from the more than 4,000 projects by Dryvit over the past 8 years, have three things in common. They are all retrofit projects—that is, renovation for energy conservation. They each represent exterior wall insulation work that would not have been done by the wall and ceiling contractor had that concept not been used. And the profit in each job was excellent.

As with any process, proper performance testing, fire testing and code approval are an absolute requirement. Projects of this magnitude, unlike single family house retrofit, are subject to building code, architectural and engineering scrutiny. Be sure the system you are installing satisfies all requirements.

The first “strictly energy” renovation job done was a bleach factory owned by Clorox in Chicago, Illinois. Only the window areas were involved. The windows were typical factory-type metal casements. The windows were originally used for light, but federal, state, and union regulations had long since required that whatever light was necessary be provided artificially.

The windows were not only unnecessary, they were painted to cut down on the heat gain and glare in the summer months. There are literally thousands of industrial buildings of this type throughout the country and the Clorox job was a prototype.

Clorox, as is many other companies, was faced with high energy costs and, worse yet, energy allocations. That means, when the energy allocation is used, the plant faces shutdown! The only question was, “What can we do that will plug the leaks (thermal) and pay for itself as soon as possible?” The window openings were framed in steel studs, gypsum sheathing and one-inch thick Insulation board.

The bottom line on this project was that the cost of the retrofit was supposed to pay off in 2.5 years—it paid off in energy savings in one
half the time. Part of the payoff was a $3100 per year saving in heater repair and maintenance. An added benefit was that all work was on the outside of the building—no interference with ongoing production.

A commercial project in Willimantic, Connecticut illustrates a comprehensive rehabilitation of an existing structure. A circa 1920 hardware store and warehouse was converted to a bank headquarters. Part of the rehabilitation involved giving the building a new, unified look and update the energy efficiency as well.

Sculptured Foam

Sculptured foam shapes up to 7 inches thick were adhered to the existing brick. The resulting sloped window jambs and sills provide a massive masonry appearance. Not so incidently, the building ends up with an average of 3 inches of insulation board. The insulation is on the exterior of the masonry—the most efficient placement, and takes no valuable rentable space from the inside of the building. The importance of this project to this subject is emphasized by knowing that the contract for the exterior wall insulation system was slightly in excess of $200,000.

A final case study and an especially exciting prospect for new business is a retrofit of the Park View Junior High School in Cranston, Rhode Island. At a cost of over $100,000 the window wall exterior was covered with frame, gypsum sheathing and the dry vit System 2 inches thick. Certainly the typical school building has vast expanses of glass. Prior to 1970, most states required a very large amount of glass wall area and most now permit a much smaller area. This, however, leaves the school building, as one of the most energy wasteful classes of building.

Only 75% of the wall area at Park View was covered leaving a modest window area in each classroom. As is typical with exterior insulation, not only does the insulation value conserve energy, but cuts down on air infiltration which can be as large a factor in heat loss.

Energy savings are so significant that the school district is proceeding with another school next year, and are evaluating the rest of the schools in the district. There is a potential contract value of over $750,000 in one school district!

As stated in the beginning, we are now looking at only the tip of the iceberg. I am convinced that this type of business will grow geometrically. The best part is that it is all new or “found” business, and it is right up your alley.

It is commercial work, the contracts are significant, and most of it is negotiated work. Real benefits accrue to the owners, and that means repeat, ongoing business. I am certain that all manufacturers will be spending time and money creating tools to sell in this market and advertising to stimulate the market.

We should never forget that the wall and ceiling industry has the best and most versatile products, skills and therefore solutions in the building business. The “energy crisis” may be our best profit opportunity in a long time!