



SPECIAL CARE HOME HAS SPECIAL WALLS

Sydney Home for Special Care Sydney River, Nova Scotia.





Residents at the Sydney Home for Special Care will be “in the pink” when their new building is completed in Sydney River, Nova Scotia. Walls with PINK extruded foam insulation will surround them because the home’s tilt-up structure was made with Owens Corning PINKCORE foam insulation and patented connector ties.

The builder and the owner are already delighted with the many benefits of tilt-up wall construction using the PINKCORE system. Topping their list are durability, speed of construction, built-in thermal performance and resistance to moisture and the mold and mildew that can result from condensation.

“What I like about it is when I am finished tilting the walls into place, I don’t have to revisit the exterior and interior, except for painting,” said Donald MacDonald, Project Manager for Rideau Construction Inc., of Nova Scotia. “I don’t have to drywall the inside; I don’t have to cover the outside with brick. The process went very quickly once we got our sequencing down.”

Planning is Key

MacDonald says the key to a smooth construction process is planning. “It is sort of a cliché in the tilt-up world, but it is really true; you’ve got to take the time to plan,” he explained. “Once you have the good plan, the only thing that holds you up is weather.”

“We had four wings A, B, C and D plus a connecting structure called the Link to cast and erect. We started off in C, then D, B, A and lastly the Link. If you looked at our schedule, you would see there was a lot of overlapping. On a given day, you would pour maybe six architectural faces. The next day, you had to pour six structural portions of those tilt panels and six more new architectural faces. When you finished pouring, you had to wait a week for it to cure before starting to erect the walls.”



The architectural side is the outside face of the wall. The exterior layer at the Sydney Home for Special Care is three inches thick and include “reveals,” which are decorative indentations molded into the outer surface. At the Sydney home, reveals were two per panel and three-quarters-of-an-inch deep. They will be painted in a different color than the rest of the exterior surface.

Strong Connector Ties

Once the exterior surface has been poured, patented PINKCORE connector ties are put in with the insulation, and then the wall is left to cure. The next day, workers put the rebar in and pour the structural side. The structural layer at the Sydney home is six-and-a-half inches thick.

“By planning ahead, we kept the flow of the whole project rolling along,” said MacDonald. “You want to keep everyone working together and you don’t want to run out of any key materials. Having our 130-ton crawler crane onsite throughout the whole duration of tilt-up was important in not delaying our five lift sequences. We made a deal with the crane supplier to keep the crane onsite until the end of the tilt-up so we didn’t have to specially book the crane for each lift sequence.”



“When we had about a week or a week-and-a-half left in one wing, we would start preparing for work in the next wing. We had a crew that prepared the panels and poured them, and another crew to erect the finished walls.”

MacDonald says his wall crews began pouring panels in September of 2001 and starting erecting them about three weeks later. They finished erection at the end of November. The project required about 200 insulated panels. Another 150 panels were not insulated.

More PINKCORE Insulated Walls

“Once we got going with the insulated panels and saw how well it was going, we considered switching the whole project to insulated panels, but it was too late to make the change without disrupting our schedule,” said MacDonald.

“We did change the Link walls to the PINKCORE process,” he added. “Those walls were originally designed as traditional masonry walls but we changed them to PINKCORE insulated walls because of the speed of the process.”

According to MacDonald, the insulated tilt-wall project at Sydney River is the tallest to date by Canadian design-and-build firm Rideau Construction. The un-insulated panels are three-and-a-half stories high, or about 50 feet (15 meters).

The PINKCORE insulated panels are two-and-a-half stories high, or about 30 feet (nine meters).

The gross floor area of the building is about 220,000 square feet (20,446 square meters). The wall area is more than 100,000 square feet (9,294 square meters). About 85,000 square feet (7,900 square meters) of Owens Corning PINKCORE foam insulation was used in the walls.

Already More Comfortable

Now that the walls are up and the building is almost fully enclosed, MacDonald and his crew are noticing another benefit of the PINKCORE system – the insulation in the walls is already making things more comfortable inside.

PINKCORE Insulating System

The *PINKCORE* insulating system makes a foam sandwich using concrete for the slices of bread. Poured-concrete walls are made on the ground at the job site and then tilted into place. Using *PINKCORE* rigid foam insulation and patented connector ties, the poured-concrete wall panels are insulated during casting, prior to erection.

Before this system was developed, concrete wall panels were insulated after casting and erection. Now the insulation can be integral to the wall for faster, easier construction. And since the insulation is sandwiched between two layers of concrete, the panels maintain a hard, durable surface, both inside and out.

For architects and engineers, the system provides a step-by-step process for designing durable, energy efficient buildings. They have the means to design-in the thermal performance of the building, a benefit that can bring lower operating costs throughout the life of the structure.

“Just walking around inside now that the building is enclosed, you can feel that it’s not as chilly,” said MacDonald. “Eventually, we’ll need to put heat in when we get ready to start the drywall on the non-concrete interior walls, but the insulation in the concrete exterior wall will definitely help. It could cut the number of heaters somewhere between 30 and 50 percent.”

MacDonald says the owner likes the PINKCORE foam insulation system because it makes a finished, insulated wall that won’t need to have drywall on the inside of the concrete face. “When



PINKCORE System Benefits at Sydney River

- Fast, efficient, cost-effective construction process
- Durable walls insulated during forming
- Moisture resistant and won't support mold or mildew growth

you look at the building, you will see a concrete face," he said. "If that was a traditional tilt-up system you would need to have some type of insulation on the inside with drywall. With the PINKCORE system, you don't; you see concrete on the inside and you see concrete on the outside. Right now it looks a little cold because you see the concrete, but once the surface is painted, it will look great."

The building owner is also looking forward to avoiding the mold and mildew problems experienced with other types of construction.

Avoids Mold and Mildew

"Mold and mildew can be a problem in Nova Scotia," said MacDonald. "It's a problem all over Canada. It's a problem when you don't have a tight building envelope, your vapor barrier is not properly installed or you don't have the proper vapor barrier specified. In those situations, you will get air infiltration with cold air hitting moist, warm air inside and producing condensation or water. Water and heat don't mix, they produce mold. It can grow on the fibers in wood or dry wall. And in a nursing home, mold growth can be a bigger problem because they like to keep the heat jacked up."

The PINKCORE wall system will help avoid those problems by being moisture resistant and not providing an environment in which mold spores can grow.

It seems like mold spores will be the only things disappointed with the new building. Everyone else will be tickled pink.



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