JUNE 2010 MEETING

Wednesday, June 12, 2010

TECHNICAL PROGRAM

Monolite Systems

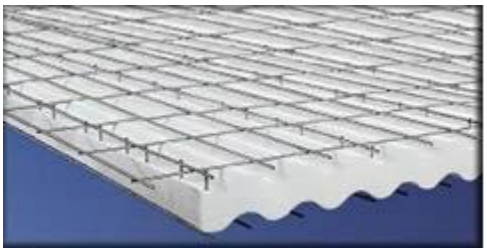
Speaker: John Luna with Monolite Systems, Tel. 281-933-7533

John Luna is President of Houston's Monolite Systems, LLC, which produces and installs the Monolite System. Mr. Luna was born in the Dominican Republic and came to the United States at age 10. He grew up in New York City and studied education at NYU. After service in the army, he moved to Houston and starting a painting business. This business eventually grew into a stucco and masonry construction company for new residential and commercial projects.

PRESENTATION SUMMARY

To an audience of about 60 at the HESS Club, Mr. Luna presented information on Monolite Systems, an insulated structural panel used in the construction of residential, commercial and industrial structures. These panels originated in Europe and have been in use around the world successfully for over twenty years.

Monolite is a prefabricated three-dimensional lightweight structural panel consisting of a polystyrene (EPS) core sandwiched between two engineered layers of 12 ga Steel welded wire fabric mesh. To complete the panel form process a 12 ga Steel wire truss is pierced completely through the polystyrene core and welded to each of the outer layer sheets of 12 ga Steel welded wire fabric mesh. These prefabricated panels are delivered to the job site, erected, plumed, wire-tied and then once inch (25 mm) of 3000 psi Shotcrete is field applied to each side of the panels after the utilities are run.



A variety of panels are manufactured for different applications, including walls, roofs, floors, etc. The load demands are met by engineering the structure and using a variety of panel types and thicknesses. The panels are lightweight and only hand labor is needed for assembly. According to Mr. Luna the final structure is thermally and acoustically insulated, fire, mold and termite resistant, is resistant to wind and seismic loads, and is comparable in cost of construction to a completed 2x6 wood stud wall or CMU wall.

According to Mr. Luna the standard 3" panel (which makes a 5" wall after 1 inch of Shotcrete is applied to each side) can be used for walls up three stories in height, 8" panels up to eight stories, and double panels up to 20 stories. The 8" panels, which are hollow core, have an R rating of 31. The 3" panel can withstand hurricane winds (and possibly tornadoes) up to 225 MPH.

Mr. Luna said that to date three Monolite structures have been constructed in the Houston area. At this time no IBC prescriptive designs have been approved or adopted so all uses must be engineered. It was not apparent from the presentation how the vapor barrier would be accomplished in the wall for Houston's climate. Mr. Luna suggested applying an elastomeric coating to the outside Shotcrete to retard moisture transmission. The inside Shotcrete can be painted to the desired wall coloring.

All engineering design data and construction details are available for use by contacting Mr. Luna or Monolite Systems. Additional data may be found at the Monolite Systems website**.**

PAST PRESENTATIONS (click here)