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PVC STAY-IN-PLACE PANEL COVERS FOR TILT-UP AND PRE-CAST CONSTRUCTION

THE NEED

Octaform™ stay-in-place concrete forming system is PVC insulated concrete form system. These forms have been used in the industry for various applications to improve the insulation and corrosion resistance of structures. Octaform™ has developed the panel covers so the advantages of PVC stay-in-place concrete forming systems could be applied to tilt-up and pre-cast construction.

FIGURE 1 A SCHEMATIC DIAGRAM OF OCTAFORM™

FIGURE 2 OCTAFORM™ FORMWORK BEFORE CONCRETING

FIGURE 3 OCTAFORM™ FORMWORK AFTER CONCRETING

FIGURE 4 FINISHED INTERIOR WALL USING OCTAFORM™

THE TECHNOLOGY

Tilt-up panels are formed on the ground at a job-site, whereas pre-cast panels are formed and then transported to a job-site. Octaform's panel covers are made by connecting multiple PVC wall components to form a single cover. Builders can customize the length of their panels by increasing or decreasing the number of wall components. For both the tilt-up and pre-cast applications, Octaform's PVC covers are used as bases and cast into low-wall concrete panels with a maximum height of 30 feet. When the panels are built, their tops are left bare once the concrete is poured. After the concrete hardens the panel covers stay in place and the panels are tilted into position using a crane. They are then welded on to anchors already embedded in the concrete footing to form a structure's walls.

THE BENEFITS

- Panel covers prevent erosion to the concrete walls as well as the rebar within the walls caused by moisture or corrosive liquids
- Octaform™ is rated food-safe by the Canadian Food Inspection Agency;

- Concrete panels are finished when formed. The cost to apply a bright, clean finish on the inside of industrial buildings can be as high as \$3-5 a square foot. Octaform™ PVC panel covers are delivered to the precast manufacturer with this finish.
- Construction projects built using stay-in-place panel covers have the potential to apply for Leed Credits
- Wall panels are easy to clean and sanitize
- Octaform™ panels improve the overall durability of the concrete walls.

STATUS

Tested by numerous third party agencies, Octaform's concrete forming systems have been evaluated for thermal analysis, water penetration, flame spread and fire resistance. The Octaform™ technology has been successfully utilized in a variety of projects including residential, industrial, agricultural and commercial projects.

BARRIERS

The panel covers do not need to be used if a structure does not require an interior finish.

REFERENCES

1. Information on the tilt-up and pre-cast construction methods has been documented on www.tilt-up.org and www.precast.org For more information on Octaform's PVC stay-in-place concrete forming systems visit www.octaform.com

REVIEWERS

Peer reviewed as an emerging construction technology

DISCLAIMER

Purdue University does not endorse this technology or represents that the information presented can be relied upon without further investigation.

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