

## ROOF REPORT



Tecta America Carolinas used the RhinoBond system to install a Flex Membrane MFR PVC roof on this 22-story condominium.

### PROJECT SPEC

PROJECT  
**Renaissance Tower**

LOCATION  
**Myrtle Beach,  
South Carolina**

CONTRACTOR  
**Tecta America  
Carolinas**

SIZE  
**15,225 square feet**

OMG PRODUCT  
**RhinoBond Induction  
Fastening System**

## RhinoBond® Goes to New Heights on Myrtle Beach Condos

Being left “high and dry” is not always a good thing – unless you are referring to a roof on top of a 22-story condominium building on the beach. That’s what the Renaissance Tower condominium complex was looking for when it came time to replace its deteriorating roof that was no longer in compliance with codes. A fully adhered single-ply membrane was specified to replace the roof, but the bids to install such a system all came in over budget.

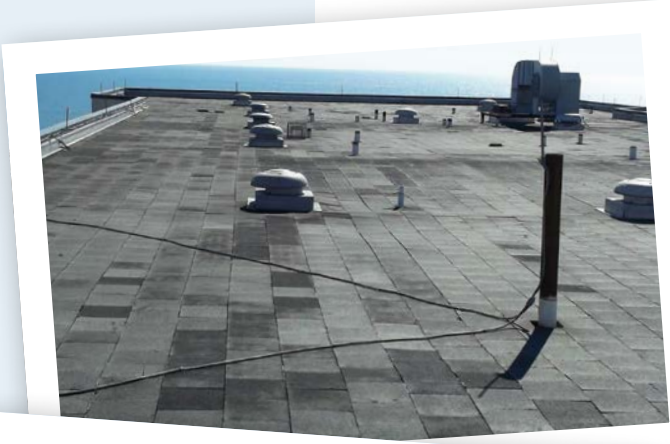
“We decided to reinvestigate our options, and one option we looked at was the RhinoBond system, which we’ve used before with good results,” explained Roger Parker,

vice president at REI Engineers of Charleston, South Carolina, the consultants on the project. “We found that the combination of material and labor savings that the RhinoBond system offered made it affordable.” In the end, the Flex Membrane MFR PVC 60 mil membrane RhinoBond attachment system was chosen as the new roofing system.

The RhinoBond attachment system from OMG Roofing Products of Agawam, Massachusetts, USA, is designed for use with thermoplastic PVC and TPO roofing systems. It uses advanced induction welding technology to bond the membrane directly to specially coated plates that are used

to secure the insulation to the deck, all without penetrating the roofing membrane. The result is a roofing system with improved wind performance that requires 25 to 50 percent fewer fasteners and plates and up to 30% fewer membrane seams to weld on the roof.

In addition, since the fastening points are spread out across the roof deck in a grid-pattern rather than concentrated in the seams of the membrane, the wind uplift load is distributed more evenly. The result is less point loading on each fastener, enabling the system to achieve higher wind ratings with fewer fasteners.



**With RhinoBond, all fasteners are installed in one operation, killing two birds with one stone. No separate insulation and membrane fasteners are needed.**

“The wind uplift resistance of RhinoBond was important because the wind uplift requirement for this area is 130 miles per hour,” Parker said. “There were very few systems that could be specified for a building that tall and right on the beach.”

**INSTALLATION NO DAY AT THE BEACH**

Removing a single-ply system with pavers on it, repairing areas of the metal deck which had deteriorated, and then installing the new roof – all while on a roof more than 200 feet in the air – was not an easy task. Fortunately, Tecta America Carolinas of Indian Trail, SC was up to the task.

“One of the biggest challenges was making sure everyone was safe, especially since the parapet wall was only 15 inches tall,” said Robby Helms, project manager for Tecta America Carolinas. “We used a raptor rail safety system with the rail secured to the parapet wall, and also had the crew use safety harnesses when appropriate. We pride

ourselves on our safety practices at Tecta America.”

A 155 ton crane was set up on the ground to transport the new materials to the roof, and the old materials and debris off the roof.

“Moving this material was very challenging on windy days,” Helms remarked. “We had to move the new materials up first thing every day, because afternoon winds would frequently force us to shut the crane down later in the day.”

**RHINO BOND RISES TO DEADLINE CHALLENGES**

Despite these challenges, the installation was completed in 17 working days and ahead of schedule, thanks in large part to the RhinoBond system. The new roof assembly consisted of one layer of 5/8 inch gypsum board on top of a metal deck, followed by two layers of polyisocyanurate insulation, another layer of gypsum board, and then the Flex Membrane.

Charles Arnold, project engineer at REI Engineers said, “The RhinoBond system goes down very methodically and saves a lot of time. This was important because once the roofing crew did the tear off and repair work for the day there wasn’t a lot of daylight hours left to put down the new roof.”

“The RhinoBond system kills two birds with one stone,” Helms explained. “On a normal installation you would fasten the insulation with a three inch plate first, then lay the membrane and then add traditional fasteners in the seam. But with the RhinoBond system all screws and fasteners are installed in one operation.”



**RHINO BOND SAVINGS**

**FASTENERS/PLATES**  
by quantity

**9,092** Mechanically attached  
**6,370** RhinoBond  
**2,723** Fastener/Plates Saved



**2,723 FASTENERS/PLATES**  
SAVED WITH RhinoBond

**SEAMS**  
by linear feet

**0000734**  
**733 LINEAR FEET**  
SAVED WITH RhinoBond

**2,271** Mechanically attached  
**1,538** RhinoBond  
**733** Linear Feet Saved



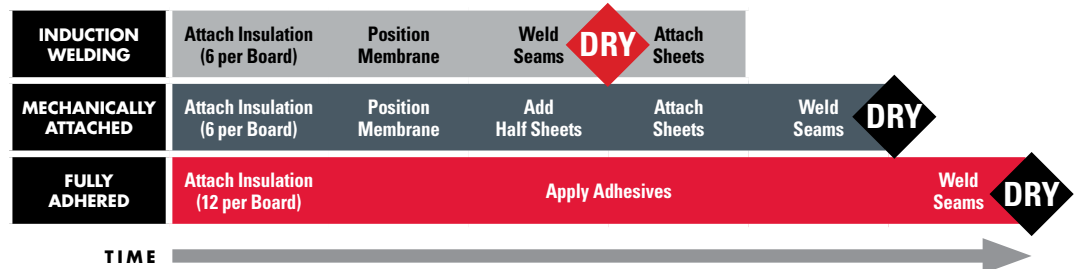


Since the fastening points are spread out across the roof deck in a grid-pattern, the wind uplift load is distributed evenly. This enables the system to achieve higher wind ratings with fewer fasteners.



“It’s a really ingenious system and very easy to operate,” said Robby Helms, project manager for Tecta America Carolinas. “It also takes the guess work out of the process... it is as simple as positioning the welder and pressing a button.”

### THE DRY-IN DIFFERENCE



Helms also raved about the RhinoBond welder. The stand-up induction welder bonds the underside of the membrane to the specially coated plates in typically five seconds. A magnetic cooling clamp is then placed onto the welded plate to assure a strong bond.

“It’s a really ingenious system and very easy to operate,” he remarked. “It also takes the guess work out of the process... it is as simple as positioning the welder and pressing a button.”

Saving money on fasteners was another plus. Helms said he only

used about 6,000 six-inch heavy duty fasteners, which he estimated to be 30 percent fewer fasteners than on a typical mechanically attached roof.

### LIVING UP TO EXPECTATIONS

Julie Watson, community manager at K.A. Diehl, the building manager for the Renaissance Tower, is very pleased with how everything turned out.

“The installation was great!” she said. “It was completed in a timely manner, the workers were

professional and courteous, and we barely knew they were there most of the time.” She added that while the roof is only a few months old, “so far it seems to be performing to spec.”

“I love RhinoBond and would absolutely use it again,” Helms stated. “It worked really well and we plan to install more RhinoBond systems in the future. We see a real benefit to working with RhinoBond because it is easy to install, saves time, and saves on material costs.”

When asked if he would recommend the RhinoBond system again, Parker simply replied, “I already have.”

**OMG**  
ROOFING PRODUCTS  
800-633-3800  
OMGROOFING.COM