



W. R. MEADOWS®

SEALTIGHT®

*A Family Company Since 1926*

QUALITY...SERVICE...INTEGRITY

# A WATERPROOFING FIRST IN THE SOUTH

Contractors, distributor and W. R. MEADOWS combine expertise for ambitious project in America's rainiest city.





*The flexibility of MEL-ROL roll-type waterproofing membrane makes it far easier and faster to work with in tight areas like the tunnels the Ram crew encountered.*

## Waterproofing the first U.S. Airbus plant for takeoff

Contrary to popular belief, Seattle is not the soggiest city in the United States, it's Mobile, Alabama with 67 inches of annual rainfall. So when Airbus decided to build its first U.S. manufacturing facility on property next to Mobile Bay, it created an ironic set of circumstances for the contractors: how to contend with the problems of excessive ground water when building a factory designed to put jetliners in the air.

As the September 2015 grand opening of the Airbus plant - which employs 300 local workers to build A319, A320 and A321 model jetliners - proved, the contractors were able to find the right waterproofing solutions. For waterproofing specialist Ram Construction Services and the general contracting firm of Brasfield & Gorrie, many of their solutions relied on W. R. MEADOWS waterproofing and moisture



*Once tunnel floors were waterproofed with concrete poured and cured, walls were then treated with MEL-ROL. For excellent performance, this W. R. MEADOWS waterproofing system bonds a 56 mil thick layer of polymeric membrane on a heavy duty four-mil thick cross-laminated polyethylene carrier film.*



“There were significant challenges related to groundwater every time it rained.” A very big concern considering Ram was tasked with waterproofing a mile’s worth of tunnels 15-feet underground beneath the floor upon which commercial jetliners were going to be assembled.

*Jeremy Dunaway, Regional Manager for Michigan-headquartered Ram Construction*



*As America's rainiest city, even small amounts of precipitation that fell in Mobile required tunnels in the Airbus plant to be pumped out and squeegeed dried before waterproofing work could resume. Water was diverted to a holding pond specifically created for this purpose during construction.*

control products. Assisting the two contracting firms was W. R. MEADOWS' distributor, Service Construction Supply.

### *Combatting water while waterproofing a mile long tunnel*

"There were significant challenges related to groundwater every time it rained," said Jeremy Dunaway, Regional Manager for Michigan-headquartered Ram Construction. A very big concern considering Ram was tasked with waterproofing a mile's worth of tunnels 15-feet underground beneath the floor upon which commercial jetliners were going to be assembled. (The tunnels would be used to provide a conduit for piping, as well as provide a safe walkway around and throughout the 700,000 square-foot building.)

"Despite working under a roof, the groundwater we had to contend with was substantial," said Dunaway. "The facility sits very close to Mobile Bay, so every time we had rain the water table would rise significantly, requiring a lot of pumping and drying out before we could get back to work."

Dunaway went on to describe the work: "There were hundreds and hundreds of piles driven in to support the tunnel floors. Before the concrete trucks would arrive, we needed to first treat around those pilings and then lay down the PRECON®, and then roll it out onto the edge forms for the tunnel foundations."

### *Workability key to W. R. MEADOWS' products used*

PRECON is W. R. MEADOWS' dual functioning underslab and blindside waterproofing membrane. It bonds tenaciously to poured concrete to create solid waterproofing protection. Providing stronger protection than clay-type products, PRECON features a greater seal along with a flexible, rubberized asphalt core.

To relieve hydrostatic pressure buildup, the Ram team also installed MEL-DRAIN®, W. R. MEADOWS' dimple-raised, molded polystyrene sheet bonded to high strength polypropylene fabric to allow the passage of moisture through the fabric while preventing fine soils from entering the drainage channel.



*For Airbus' main assembly building, the general contractor team from Brasfield & Gorrie prepped the foundation floor build out with PERMINATOR, the underslab vapor barrier from W. R. MEADOWS. The puncture resistant resin technology of PERMINATOR makes it ideal for heavy traffic construction areas.*

*"I can't think of a company more relationship oriented. They worked with our sales people, their response time on issues, their engineering help getting us what we need for submittals and approvals, and their ability to work with our contractor customers. It all makes MEADOWS one very good, very sound company."*

*Gil Roberts, President of Service Construction Supply*

"After the concrete was poured on the slab and the walls went up," continued Dunaway, "we treated the walls with MEL-ROL®. It was kind of like working two separate operations. We'd lay down the PRECON, then come back after the concrete had cured and apply the MEL-ROL to the walls and just kind of pace ourselves all the way down the tunnel."

W. R. MEADOWS' MEL-ROL is a 56-mil thick layer of polymeric waterproofing membrane on a heavy duty, four-mil thick, cross-laminated polyethylene carrier film. A handy overlap guideline assures proper overlap coverage and to assist in maintaining a straight application.

"I'm a big fan of MEADOWS products," said Dunaway. "They're easier to maneuver and easier to install. Other products are more rigid and bulky, making them difficult to work with, especially when you have to get them in a tunnel. They saved us time on the Airbus project and helped us move quickly."

In the five months it took to complete the job, Ram used 40,000 sq. ft. of PRECON and 65,000 sq. ft. of MEL-ROL.

#### *General Contractor vapor proofs foundation with PERMINATOR.*

Also depending on W. R. MEADOWS products for waterproofing on the Airbus construction site was general contracting firm Brasfield & Gorrie based in Birmingham, Alabama. Keith Underwood was Superintendent of their 65-man crew.

"We spent nearly two years working on that job," recalled Underwood. "We did the foundation piling, then the foundation and when that was done, we worked on the build out." Like the Ram crew, Underwood's team employed pumps "pretty much 24/7 to keep things dry so we could work."

For the foundation slab Brasfield & Gorrie relied on PERMINATOR, the vapor barrier that can also be used as a protection course for waterproofing membranes. With new resin technology, PERMINATOR provides dramatically greater puncture resistance while maintaining one of the lowest perm ratings in the market, making it ideal for jobsite conditions and traffic. MEL-ROL was used on the foundation walls.



*In an early phase of tunnel construction, the crew from Ram Construction laid down W. R. MEADOWS PRECON. Superior to traditional clay-type products, PRECON bonds tenaciously with poured concrete to create solid waterproofing protection.*

"We've used MEADOWS' products on other jobs and have had good luck with them," said Underwood. "We had real good luck with them on this job, too."

#### *Local distributor plays a key role*

A common denominator for both contracting firms was their W. R. MEADOWS' distributor, Service Construction Supply, conveniently located across the road from the Airbus construction site in Mobile.

"Gil Roberts (President of Service Construction Supply) and his company played an integral role for us on the Airbus project," said Ram's Jeremy Dunaway. "We were not allowed



to store material in bulk on the site, and through a pretty good working relationship with them (Service Construction Supply), they were able to provide us with a steady stream of the MEADOWS' materials we needed. They really helped us in other ways, too."

"I knew the general contractor Ram was working with," said Roberts, "so I was able to feed back information to Jeremy about scheduling and other job issues that were going to cause problems. "It helped Ram get off to a good start. The concrete pours were coming in so fast that we had to make sure Ram was getting the materials needed to keep up with the fast-paced scheduling."

#### *W. R. MEADOWS field team brings added support*

Another source proving to be invaluable to all parties was W. R. MEADOWS Sales Manager Michael Cripps. For initial planning, Cripps worked with Ram engineers in Michigan on specifying the right W. R. MEADOWS' waterproofing products for the job. Once the job began, local W. R. MEADOWS sales personnel made periodic inspection visits for both Ram and Brasfield & Gorrie. W. R. MEADOWS personnel also helped Ram resolve an uncommon problem.

"There was a small area that was waterproofed with another product by another contractor," explained Dunaway. "Since we had to tie-in MEL-ROL to this other product, we had to be sure that these two different materials would be able to work together. W. R. MEADOWS' input and expertise were invaluable. We did on-site adhesion testing for the peel and sticks and felt there wouldn't be an issue. But the real issue was determining, for warranty purposes, who would be responsible for that junction. With MEADOWS' support, we were able to take that on. That flexibility is one of the things I personally appreciate about MEADOWS' approach to doing business. They know that there's often more than one right way to get a job done."

Service Construction Supply's President Gil Roberts summed up his view: "I can't think of a company more relationship oriented. They worked with our sales people, their response time on issues, their engineering help getting us what we



*The massive assembly building gives Airbus the capacity to build and roll-out up to 50 jetliners a year. It opened for operation in September 2015.*

*That flexibility is one of the things I personally appreciate about MEADOWS' approach to doing business. They know that there's often more than one right way to get a job done."*

*Jeremy Dunaway, Regional Manager Ram Construction*

need for submittals and approvals, and their ability to work with our contractor customers. It all makes MEADOWS one very good, very sound company."



*Photo courtesy of Airbus*

*Following the start-up of aircraft assembly operations, the company's Mobile, Alabama-based A320 Family final assembly line is scheduled to deliver its first aircraft in 2016.*



*Photo courtesy of Airbus*

*Airbus' U.S. Manufacturing Facility received a big "thumbs up" from those in attendance at its inauguration ceremony held September 14, 2015 in Mobile, Alabama.*

## About W. R. MEADOWS

Since 1926, W. R. MEADOWS has been a leader in developing products that protect structures from moisture infiltration. From below-grade installations to rooftops and in-between, issue-specific products target and prevent potential, costly problems. Today, patented technologies enable more environmentally effective, efficient designs, and many of our products contribute LEED-certification “green” credits. With nine manufacturing facilities throughout the U.S. and Canada, the materials you need are within easy reach. For additional information, call 800.342.5976 or visit [www.wrmeadows.com](http://www.wrmeadows.com).

