



Meeting the Demands of

Architectural Excellence



New Doha International Airport (NDIA) Doha, Qatar



Many challenges presented themselves when looking for the right roofing product on The New Doha International Airport (NDIA) Project. The NDIA Project is built on land that was reclaimed from the Arabian Gulf. Considering the region has a highly corrosive environment (surrounded by salt water; high humidity climate, cannot rely on fresh water rinse in the form of rain, and extreme temperatures regularly exceeding 122F (50C)) the material selection for this airport was a very real challenge.

Bemo USA in concert with the experts at Contrarian Metal Resources, studied the atmospheric, geographic and aesthetic conditions and after extensive metallurgical testing concluded that a duplex stainless steel material (originally designed for North Sea Oil Platforms), was the right substrate for this hostile environment. Once the alloy was determined the stainless steel then had to be provided with a specialty low gloss architectural finish as well as the task of tackling the challenge of roll forming a Bemo roof panel profile from a material that is 20% harder than type 304 stainless steel.

Bemo engineered and built specialized hardened tooling, specialized curving dies and high tensile seaming equipment to meet the demanding contours of the design. The end result is a low gloss, high performance; highly corrosion resistance panel system that is smooth curved and will provide at least 50 years of service life for this facility.

Bemo USA is a full systems company that combines years of high performance metal roof and wall experience with an unparalleled understanding of applications utilizing Stainless Steel, Zinc, Copper, Aluminum and Steel materials.

Engineering the physical characteristics of the various metals, such as thermal expansion, into wall and roof applications is critical to the long term, low life cycle cost of the weather area.

Construction by:

Construction Manager - Overseas Bechtel Inc.

Materials:

Bemo 400mm Panels - 22ga. Type 2003 Duplex Stainless Steel with an InvariMatte Finish

Installation:

by Bemo USA Middle Eastern Division, Qatar

Features:

- Over 3,300,00 sf (310,000m²) of convex, concave smooth curved roofing panels
- Over 700 individually welded skylight curbs. No wet sealants on this project!
- Field Curved 16ga. (1.6mm) deep deck
- Panel lengths exceeding 400ft (122 meters)

All of the underlayment is Bemo USA's Xtreme HT 40 mil self adhering membrane. This membrane is specifically designed for high temperature metal roof and wall applications.

The complex roofing assembly consists of a heavy gauge curved deck, welded 14ga (2.0mm) structural zees, two layers (7.9" total) of Rockwool insulation (200mm), 5/8" (15.8mm) cover board, Bemo 40mil HT and 22ga. Bemo 400mm Stainless Steel Panels. All gutters, curbs and penetrations are fully welded and all accessory items are clamped into place without penetrating the panels.



BEMO·USA

shaping the way for architectural excellence

While the Bemo Mills are mobile, they are light years beyond being “portable” roll formers. The German Engineered mills are comprised of state-of-the-art roll forming technology utilizing a minimum of twelve (12) rolling stations for the forming process. These 20 ton mills utilize an ocean going container as their platform for operation and would be equally at home on any manufacturing floor.

Since the Bemo Mills are at the very highest end of the quality spectrum being a “factory” mill, they bring the added benefit of being mobile to provide superior panel quality that is custom fit to a project’s exact field conditions. The curving mills take the very latest in stretch forming techniques and apply them to the smooth curve applications of today’s most demanding designs.



Bemo USA is the leader in providing innovative cladding solutions that are also environmentally responsive. Using low emissivity finishes, high recycled content materials and 100% recyclable materials, Bemo USA can help owners and architects with energy efficiency and credits towards LEED’s certifications.



BEMO USA CORPORATION
Corporate Headquarters

3062 N. Maple St. • Mesa, AZ 85215 • 480-545-7900 • 800-926-BEMO (2366) • fax: 480-545-4999
www.bemousa.com