



ALUMINATOR® FC FULL-CONTACT FLOATING ROOF

HMT's ALUMINATOR® FC Full-Contact Floating Roof was introduced to the market in 2007 with one purpose in mind: to provide the best available technology in aluminum full-contact internal floating roofs. This game-changing IFR technology is the only system available that delivers top-tier performance in four key areas: emissions reduction, tank safety, working capacity/heel-reduction capabilities and durability. The ALUMINATOR® FC offers all the advantages of conventional aluminum IFRs with the robustness of steel. The ALUMINATOR® FC was created through superior innovation, utilizing high industry standards and under the guidance of API 650 Appendix H.

Key benefits:

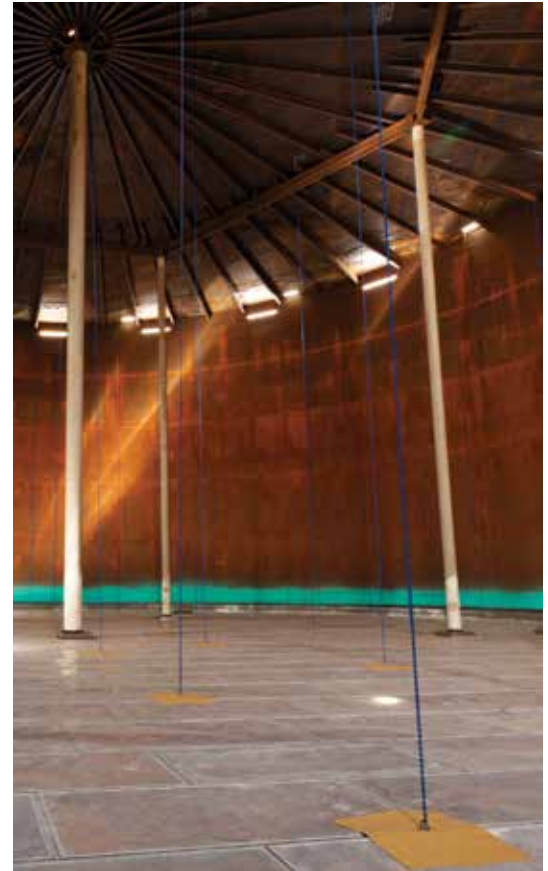
The HMT Aluminator® FC primary benefits include:

Strength and durability — withstands high flow rates and operating loads; longer life span and reduction in maintenance versus existing IFRs

Improved emissions versus existing steel and aluminum IFRs — eliminates all emissions from deck-seams and leg penetrations

Improved safety versus existing IFRs — easily and confidently certify gas-free; suspension system can be adjusted from outside the tank, eliminating the need for confined-space entry

Increase tank working capacity and reduce heel — reduces the total IFR profile to maximize working capacity; low profile, low suspension to reduce heel



Key design features:

- System of buoyant pontoons with no internal fillers; each pontoon is constructed of extruded structural aluminum framing and aluminum panels for excellent strength and rigidity
- Unparalleled buoyancy ratio (5x dead load) and excellent redundancy; more than double the buoyancy required by API 650
- Seal welding between panels qualifies as zero-deck-seam construction
- Heavy duty rim to create excellent strength and durability at the perimeter; can easily be equipped with any seal system
- Open-cavity design to facilitate gas-free certification of panels
- Low profile allows optimized tank working capacity

THE HMT ALUMINATOR® FC DESIGN

HMT's ALUMINATOR® FC is a full-contact aluminum roof that has unparalleled strength and durability; improved emissions and safety versus existing IFRs; and increases tank working capacity and reduces heel. Here's why:

1. Unique system of buoyant panels

The ALUMINATOR® FC is composed of lightweight individual panel modules assembled to form a completely sealed full-contact floating roof. Each individual panel is a self-contained flotation compartment. There are no internal fillers, so you can reliably verify that each compartment as vapor free.

2. Zero deck seam emissions

The ALUMINATOR® FC panels are specifically designed for easy assembly and welding in the field. Proprietary welding techniques are used to



seal weld the seams between the assembled panels. Each factory assembled panel module is tested in the shop to ensure vapor tightness upon completion of the welding. Complete sealing is in accordance with API 19.2.

Utilized with an HMT Geodesic dome, the ALUMINATOR® FC provides maximum emissions reduction coupled with added storage capacity.

3. Unparalleled structural strength

The structural strength of the ALUMINATOR® FC is delivered by extruded structural aluminum frames. The depth of this structural profile is nearly double most of the other systems on the market. This greater profile depth means greater section modulus for best-in-class strength and rigidity.

4. Supports all seal systems

The ALUMINATOR® FC is strong enough to support all seal systems including metallic shoe primary seals and secondary seals.

5. Chain suspension improves safety

The ALUMINATOR® FC utilizes a non-kinking structural chain suspension system. Coated for corrosion resistance, this chain has a tight lay pattern compared to existing cable systems.

Chain suspension allows for multiple setting pinning from the top of fixed roofs which eliminates confined space entry normally required with IFR legs.

6. Shallower rim depth increases working capacity and reduces heel

The ALUMINATOR® FC rim depth is only 9", compared to typical steel IFRs at 24"-30". In addition, utilizing chain suspension, the ALUMINATOR® FC can travel to within 12" of the tank bottom. In large tanks, that can equate to thousands of barrels in improved capacity.

7. HMT supported installation

The ALUMINATOR® FC panels are designed for easy assembly and welding in the field. The main panels are sized for easy handling. HMT provides fully factory trained welding personnel and specialized equipment to perform the field welding for each installation.



ABOUT HMT

HMT is the global leader in aboveground storage tank solutions. HMT's global team of engineers, project managers and field personnel can assist with common challenges including ways to reduce emissions, optimize tank capacity, reduce stranded inventory and engineer a tank system that exceeds safety standards and extends maintenance intervals.

HMT's full suite of tank products includes: External Seal Systems - Internal Seal Systems - Drain and Floating Suction Systems - Geodesic Domes - Skin and Pontoon IFRs - Full Contact IFRs - Emissions Reduction Devices

HMT LLC | 24 Waterway Avenue, Suite 400, The Woodlands, Texas 77380

Ph: +1.281.681.7000 | Fax: +1.281.419.7689 | Locations worldwide

Visit us at www.hmttank.com

