

## SPECIFICATIE

### SPECIFICATIE MEMBRANA SI DOM ALUMINIU

*Beneficiar :* **CONPET S.A.**

*Cod document :* **A614U-Sp**

*Cod proiect :* **A 614**

*Faza :* **DDE**

*Revizie:* **Rev 0**

*Denumire proiect:* **DEZAFECTARE REZERVOR R9 PENTRU ȚIȚEI (V=2.889 m<sup>3</sup>)  
CONSTRUCTIE REZERVOR NOU PENTRU TITEI (V=2.500 m<sup>3</sup>)  
STATIA DE POMPARE CARTOJANI**

*Întocmit:* **Ing.A Zamfir**

*Verificat:* **Ing. B.Stroie**

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## **INTERNAL ALUMINIU FLOATING ROOF DATA SHEET**

**Tank owner :** Conpet S.A. **Tank location :** city: Cartojani-Giurgiu , country: Romania

**Tank number :** R9 **Tank diameter :** 19100mm **Tank height :** 10500mm

**1. Stored product :** Crude Oil , density: 889kg/mc **Design S.G. :** .....(default 0.7)

**2. Stored product temperature :** ambient

**3. COLUMNS**                      **Central**    **1st ring**        **2nd ring**        **3rd ring**  
   **Yes/No**.....radius.....radius.....radius

**Number of roof columns :**        by provider

**Roof column diameter / type:** by provider

**4. Radar gauging system :** 1xDN300; 1xDN200; 2xDN50.

**5. Shell to gauge pole distance :** 1x910mm; 1x910mm; 2 x610mm

**6. Inlet flow rate :** .....mc/h    **Inlet nozzle diameter :** 10 inch

**7. Outlet flow rate :** .....mc/h.

**8. Minimum thickness :** 6 centimeters.

IFR will be equipped:

**9. Two Position Top Adjustable Legs;**

**10. Teflon® Insulating Pads for Each Leg;**

**11. IFR Manway combination Pressure / Vacuum Relief Vent;**

**12. Sampling Well and Funnel;**

**13. Anti-Rotation Systems with stainless steel cable;**

**14. Drains:** by provider

**15. Stainless Steel Grounding Cables;**

**16. Perimeter Seal for Crude Oil** (primary mechanical seal +secondary sealing);

- 17. Internal Ladder Well and Seal;**
- 18. Aluminum Landing Pad for Portable Ladder;**
- 19. Floating Suction Line and / or Floating Suction Track;**
- 20. Steel Internal Ladder;**
- 21. Gauge Pole (aluminum or carbon steel);**
- 22. Tank Roof Mounted Air Scoop / Vent with Hinged Inspection Hatch;**
- 23. Tank Shell Mounted Overflow / Vent;**
- 24. Approval: ATEX ;**
- 25. Circular foam dam .**

## **TYPE CONSTRUCTION**

- a. Floats in full surface contact with the liquid**, eliminating a free liquid surface and formation of hazardous trapped vapors.
- b. The aluminum, non-combustible construction honeycomb floating roof** will not burn and the full surface contact provides outstanding fire safety characteristics.
- c. Minimizes evaporation losses.** Since the roof floats in full surface contact with the liquid, there is no free liquid from which evaporation could occur.
- d. The aluminum honeycomb internal floating roof system** is a self contained panel system, constructed of modular designed aluminum honeycomb panels. Each panel is fabricated to be uniform, durable, strong and buoyant, eliminating the need for structural framing.

## **ALUMINIUM DOME INPUT DATA SHEET**

**Tank owner :** Conpet S.A. **Tank location :** city: Cartojani-Giurgiu , country: Romania

**Tank number :** R9

- 1. Stored product :** Crude Oil
- 2. Stored product temperature:** Ambient
- 3. Tank diameter :** 19100mm
- 4. Tank height :** 10500mm
- 5. Dome Cover Type required? Free vent :** yes
- 6. Wind girder :** yes
- 7. IFR :** yes

### **DESIGN CONDITION**

- 1. Snow load :** 2,5kPa
- 2. Live load :** 1,0 Kpa
- 3. Wind load :** 0.5 kN/mp
- 4. Seismic protection zone :**  $a_g = 0.30g$ ,  $T_c = 1.6s$ .
- 5. Self supporting structure :** Sliding

### **ACCESORIES**

- 1. Required number of Skylights :** 4
- 2. Gravity vent required :** yes
- 3. Suspended cables :** yes
- 4. Walkway to the center :** yes
- 5. Center platform required :** yes

- 6. Manhole with dip hatch : yes**
- 7. Number of penetration pipes : 4**
- 8. Available location for assembly : by provider.**
- 9. Anchorage points on the dome for maintenance : yes**
- 10. Dome acces ladder : yes**
- 11. Side platform acces ladder: yes**
- 12. Inspection hatch assembly : min.4**

#### **NOTE**

- API Standard 650 Welded Steel Tanks for Oil Storage, Appendix H ;
- API Standard 653 Tank Inspection, Repair, Alteration, and Reconstruction;
- API Standard 2000 Venting Atmospheric and Low-Pressure Storage Tanks;
- NFPA 11 Low Expansion Foam;
- NFPA 30 Flammable and Combustible Liquids Code;
- CCME Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks;
- P118/2-2013 Normativ privind securitatea la incendiu a construcțiilor;
- SR-EN-14015 Proiectarea si fabricarea rezervoarelor de otel sudate supraterane cilindrice verticale
- EEMUA 159;
- ATEX standards;
- CR1-1-4/2012 Cod de proiectare evaluarea actiunii vantului asupra constructiilor;
- P 100/3-2008 Cod de proiectare seismică- Partea III-Prevederi de proiectare pentru evaluarea seismică a clădirilor existente.