



## ALUMINIUM DOME ROOFS FOR STORAGE TANKS

*In recent decades Temcor® aluminium dome roofs have developed into a frequently used roof system for covering storage tanks. They find their use in covering external floating roofs as well as in replacing heavily corroded steel roofs. Being free-span and light weight, these esthetical all aluminium structures have significant benefits for tank owners. The API committee has also acknowledged the importance and relevance of this development by introducing a standard for aluminium dome roof structures (API 650 Appendix G). Any tank farm will benefit from these aluminium dome roofs by reducing vapour emissions, rainwater ingress and by eliminating future maintenance.*

### Dome Features:

- maintenance free, no need for blasting and painting
- excellent water tightness, resulting in elimination of rainwater ingress to the stored product
- reduces emissions by shielding the floating roof from heat and direct sunlight
- compatible with all stored products, including 100% aromatics
- light weight and free-span structure manufactured from aluminium and stainless steel
- can be fitted on tanks in service with a minimum of modifications
- expected service life in excess of 50 years
- custom designed for each specific tank
- easy installation, full installation manuals and project support available
- designed in accordance with API 650 Appendix G standard
- successfully used globally by many major oil and tank storage companies
- realistic roof option for new storage tanks
- can be designed for high wind- and snow loads

**ALUMINIUM DOMES**



### Relevant standards:

Aluminium domes are generally constructed according to API 650 appendix G, the standard detailing full details for aluminium domes on storage tanks. Load combinations include dead load, live load (25psf), unbalanced live load, wind load (100mph = 160km/h) and if required a seismic load or snow load. The requirements of this rigid set of standards usually exceed any local load or engineering standard.

### Some of our international customers using aluminium domes:

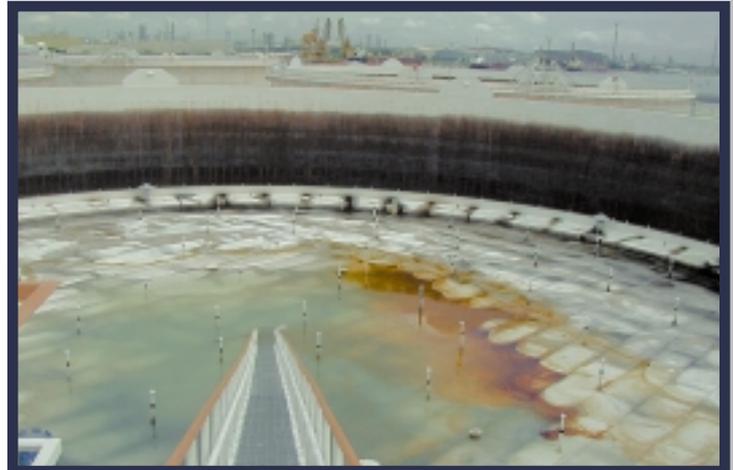
AGIP  
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Colonial Pipeline Company  
Conoco, Inc.  
Venezuela Defense Supply Fuel Centers  
Exxon Mobil  
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Royal Dutch Shell Group  
Tankstore  
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Transmountain Pipeline Company  
Unocal  
Vopak  
Williams Companies

### Sliding bearing:

To reduce radial reaction forces on the top course of the tank shell aluminium domes for storage tanks are typically equipped with a sliding shoe, including a low friction PTFE (Teflon®) pad.

### Water and vapour tightness of an aluminium dome:

Aluminium domes are not only fully water tight, but they can also be built vapour tight where vapour recovery or other operational needs require this. Generally a dome is installed as a free vented roof, resulting in a true atmospheric storage tank. It is, however, possible to deal with Nitrogen blanketing or internal pressures up to 24" (600mm) of water column when fitting an aluminium dome roof.



**Domes eliminate rain water ingress and reduce hazardous and expensive vapour emissions.**



**Corroded steel roofs are economically replaced by aluminium dome roofs, even on tanks in service!**



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