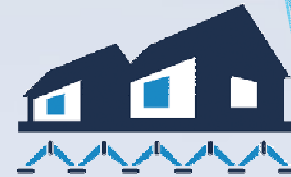




TRIODETIC®



MULTIPOINT
FOUNDATIONS®



60 + Years of Experience

The Triodetic system was invented and developed in Canada and has now worldwide applications.

Engineering office and fabrication plant are located at Arnprior, Ontario, Canadá.

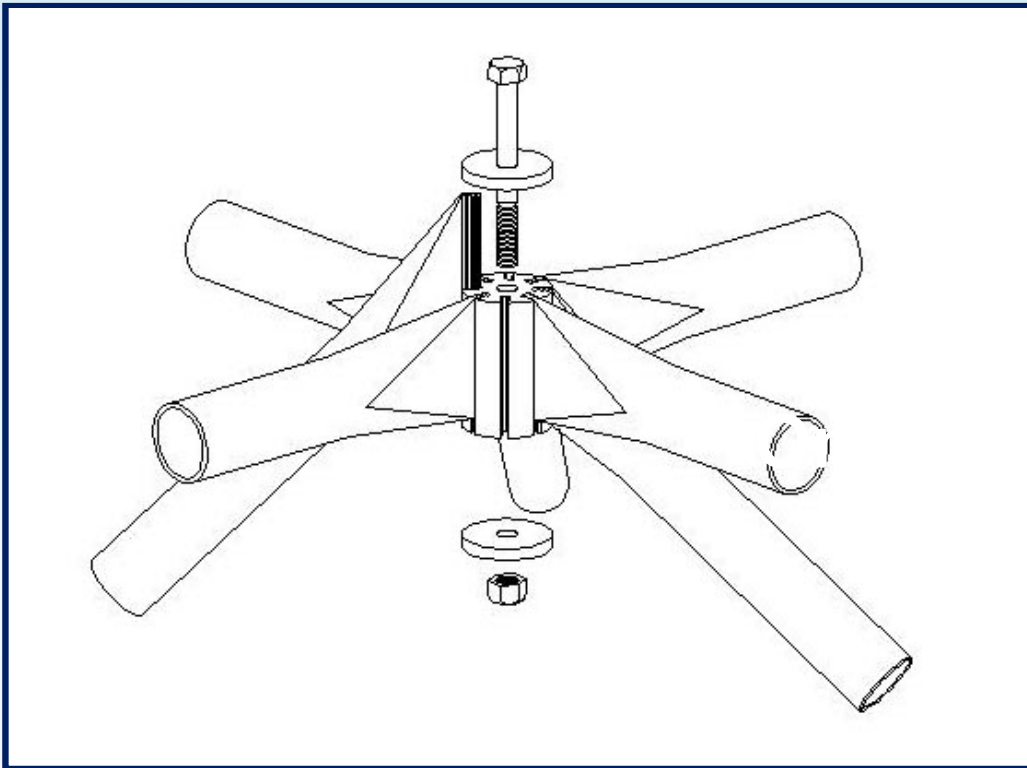
- Architectural Applications
- Triodetic Multipoint Foundations
- Industrial Applications
- Others

Main topics / Industrial applications

- Triodetic typical node and size capabilities /material
- Visit some recent Triodetic domes
- Foundations and cladding options
- Installation comments and advantages
- Engineering process and timelines – Additional engineering Information provided
- Summary of advantages for Triodetic Domes
- Options and recommendations



■ Typical Joint and Size Capabilities / Materials



Material used for Triodetic Domes

- Aluminum connector – Steel pipes – Galvanized cladding (painted)
- Aluminum connector – aluminum pipes – Aluminum cladding
- Stainless steel connector – SS pipes – SS cladding

Dome diameters from 25m to 140m



Triodetic Structures and Experience

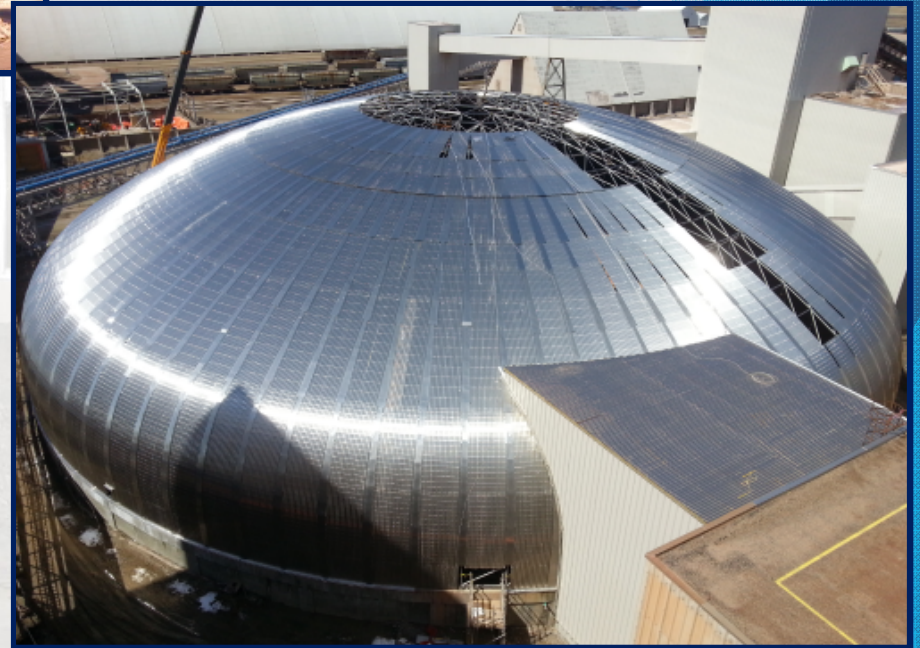
- Visit some recent Triodetic Domes

TRIODETIC Recent Domes

Goldex Dome (Agnico Eagle)
65 m Diameter (Val D 'or,



– Potash Mines Material (SS
316L)
74m diameter

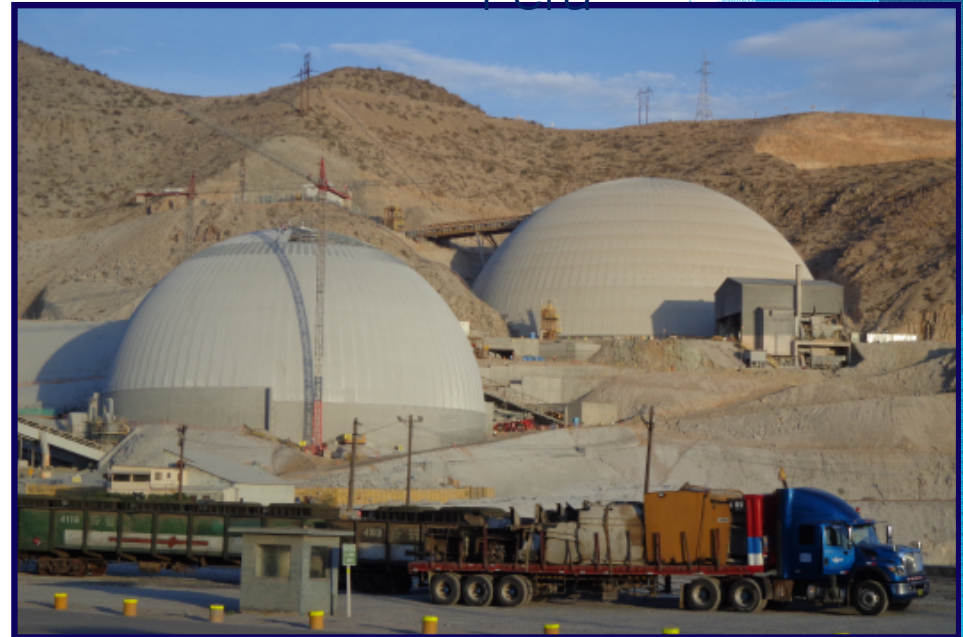


TRIODETIC Recent Domes



Toquepala Mine (SPCC)
2 Domes (115m Y 75m) Tacna,
Peru

Meadowbank Mine, Agnico Eagle
61 m Diameter, Nunavut, Canadá



Side Loaded vs. Top loaded

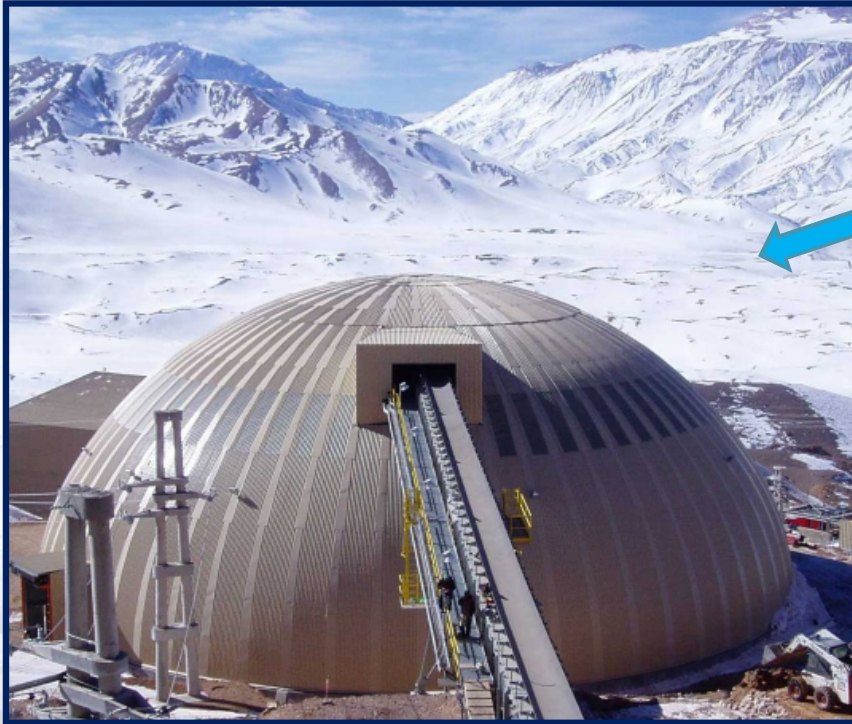


Andacollo Mine
98m Diameter
Top loaded Dome

Toquepala Mine
115m Diameter
Side loaded Dome



Side Loaded vs. Top loaded



Veladero Mine (side loaded)
55m Diameter Dome
San Juan Province of Argentina

Highland Valley Copper mine B.C.
3 Domes 105 m diameter
(top loaded)
(One of the biggest Canadian Flag)



Side Loaded vs. Top loaded



Side Loaded vs. Top loaded



Panel damage excessive material accumulation from conveyor

Triodetic Structures and Experience

- Foundations Options

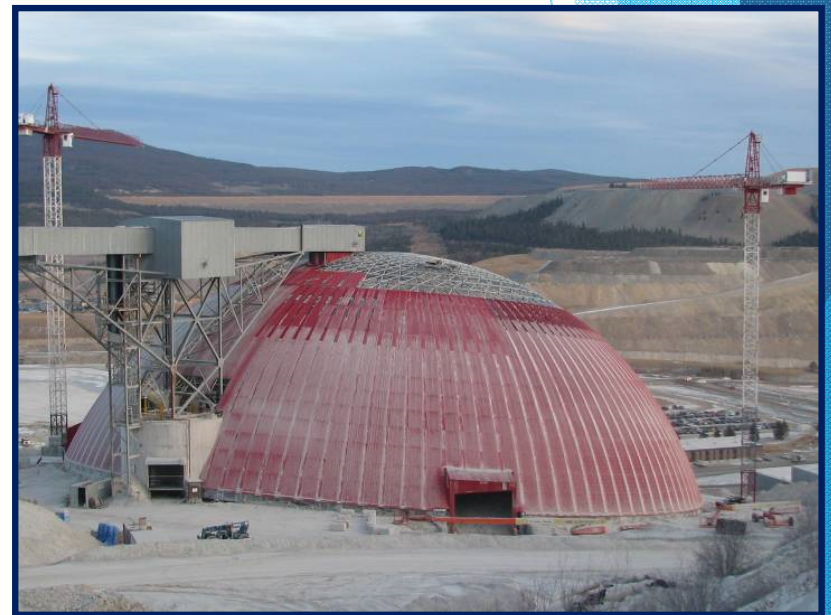
Triodetic Foundation Alternatives



Steel Column Supports



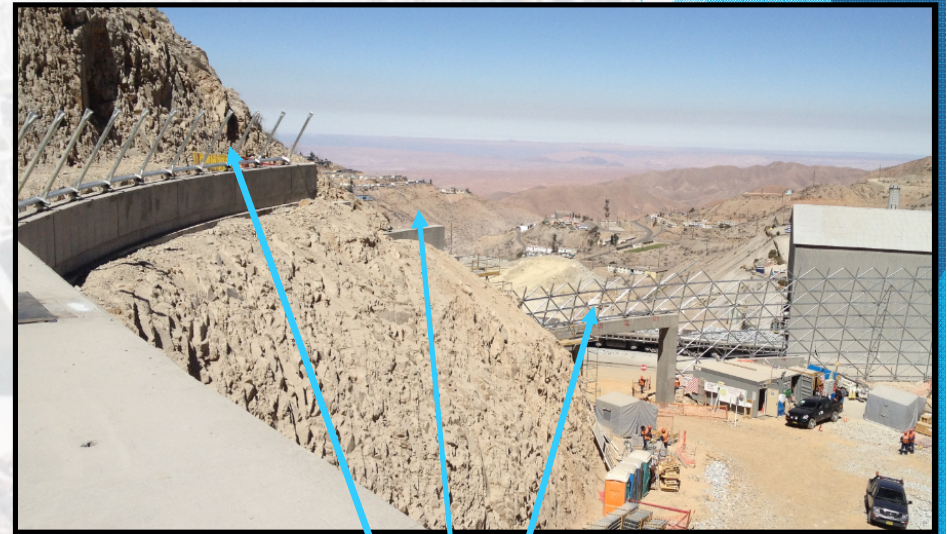
Perimeter Steel Tension Ring



Triodetic Foundation Alternatives



All Dome Supported at Ring # 1
Concrete Foundation Wall



Dome Supports Ring 1 to 11
Concrete Foundation Wall

Triodetic Foundation Alternatives



Dome directly supported on
compacted berm.
(No Concrete Foundation
Required)



Alternative Foundation Systems

(Tall foundation for material storage on Refineries and other applications)



Dome Supporting Conveyor.

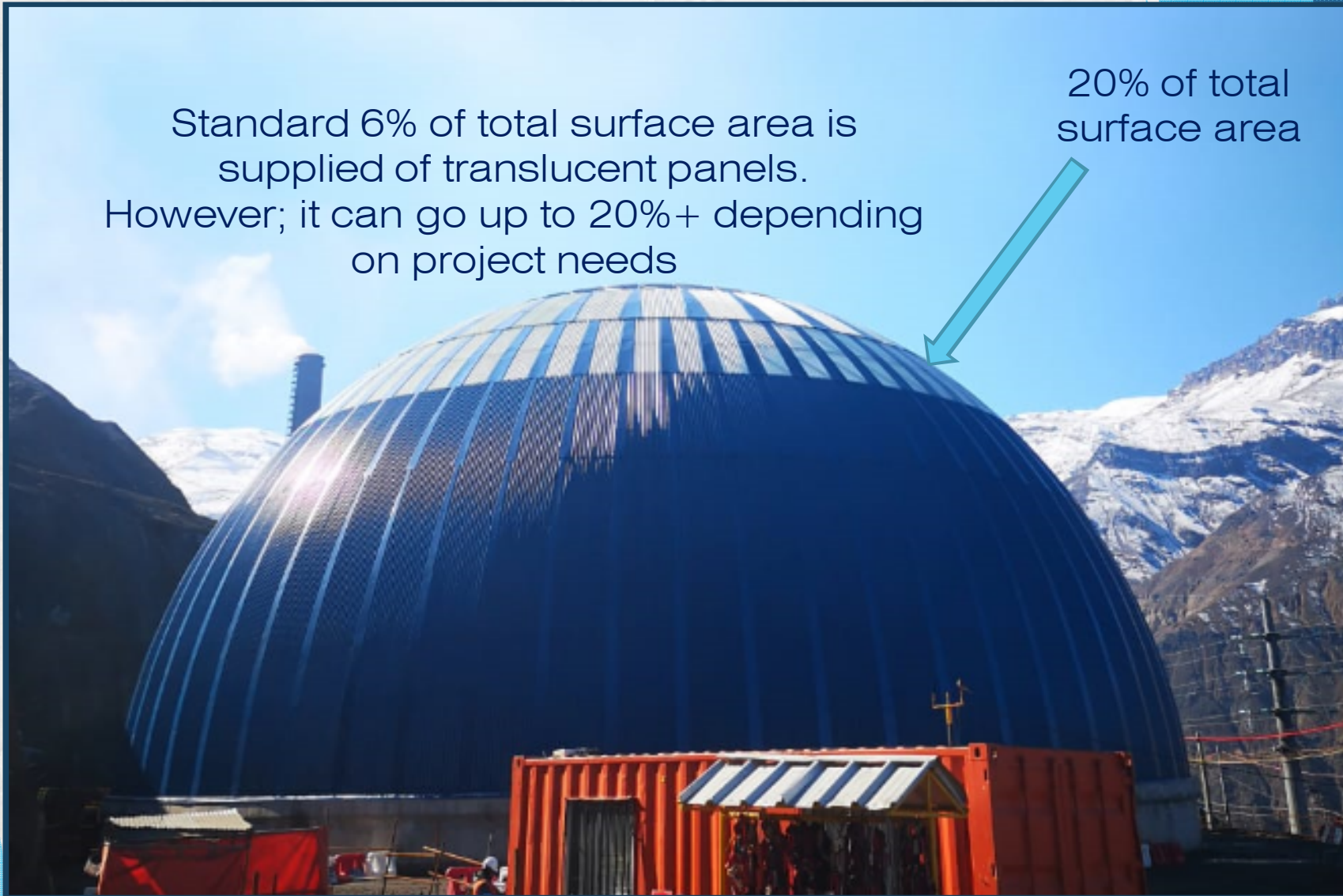


Veladero mine Argentina
55m diameter Dome supporting conveyor gallery
Barrick Gold

Triodetic Dome Translucent panels (Natural light)

Standard 6% of total surface area is supplied of translucent panels.
However; it can go up to 20%+ depending on project needs

20% of total surface area



Triodetic Structures and Experience

- Installation comments and advantages

Andacollo Dome 98m diameter (Installation Mine Operating)



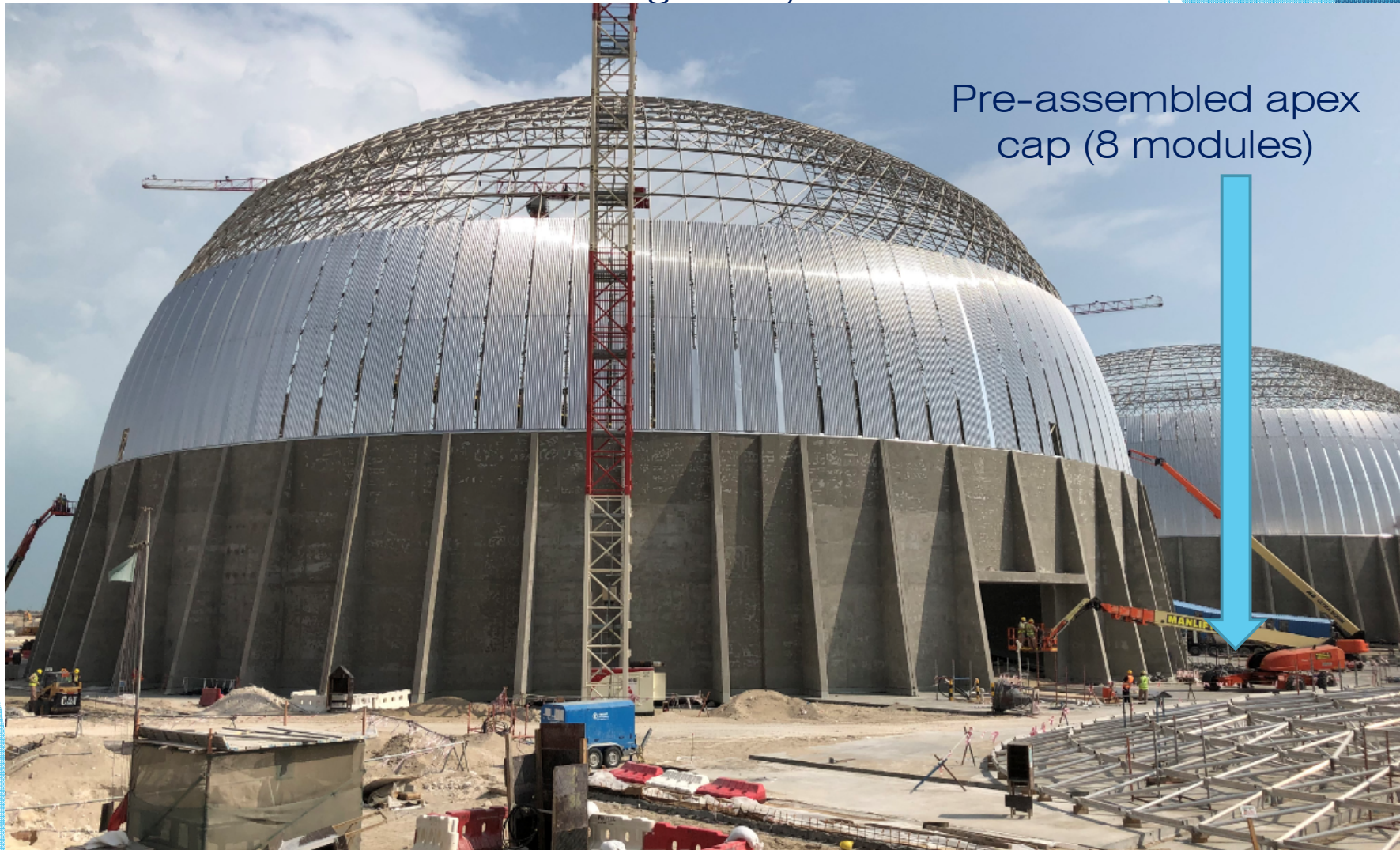
Andacollo Dome 98m diameter (Installation)



Pre assembly capabilities 87m diameter

KIPIC Project Kuwait Refinery Sulfur Storage (Apex pre-assembled on the ground)

Pre-assembled apex cap (8 modules)



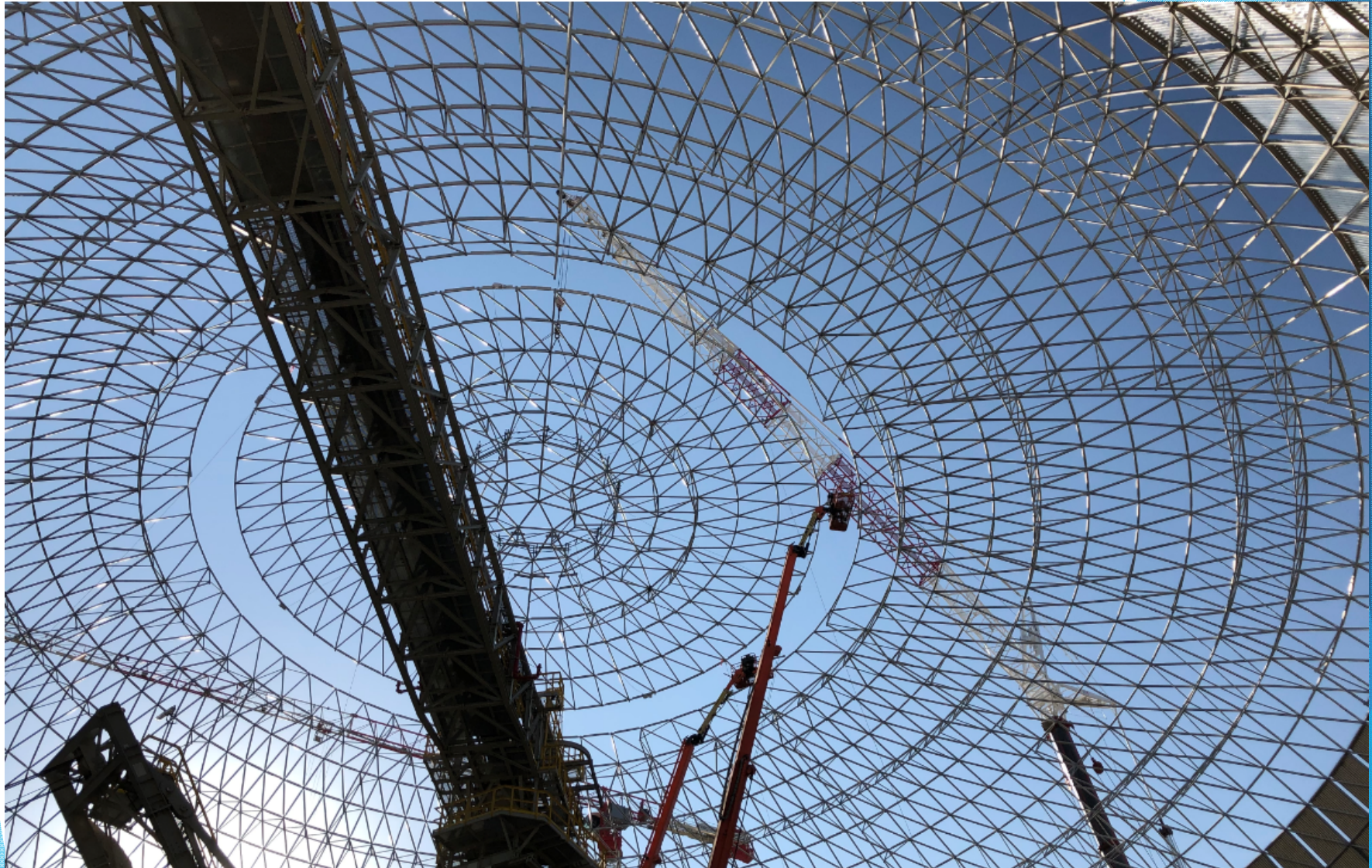
Pre assembly capabilities

KIPIC Project Kuwait Refinery Sulfur Storage (Knitting Dome apex with rest of the structure)



Pre assembly capabilities 87m diameter

KIPIC Project Kuwait Refinery (Knitting Dome apex with rest of the structure)



Pre assembly capabilities Filter Plant 80m x 60m

(Spence Project – – Fluor Chile - Center section
completed)



Pre assembly capabilities 80m x 60m
(Spence Project – Fluor Chile – Center section completed)



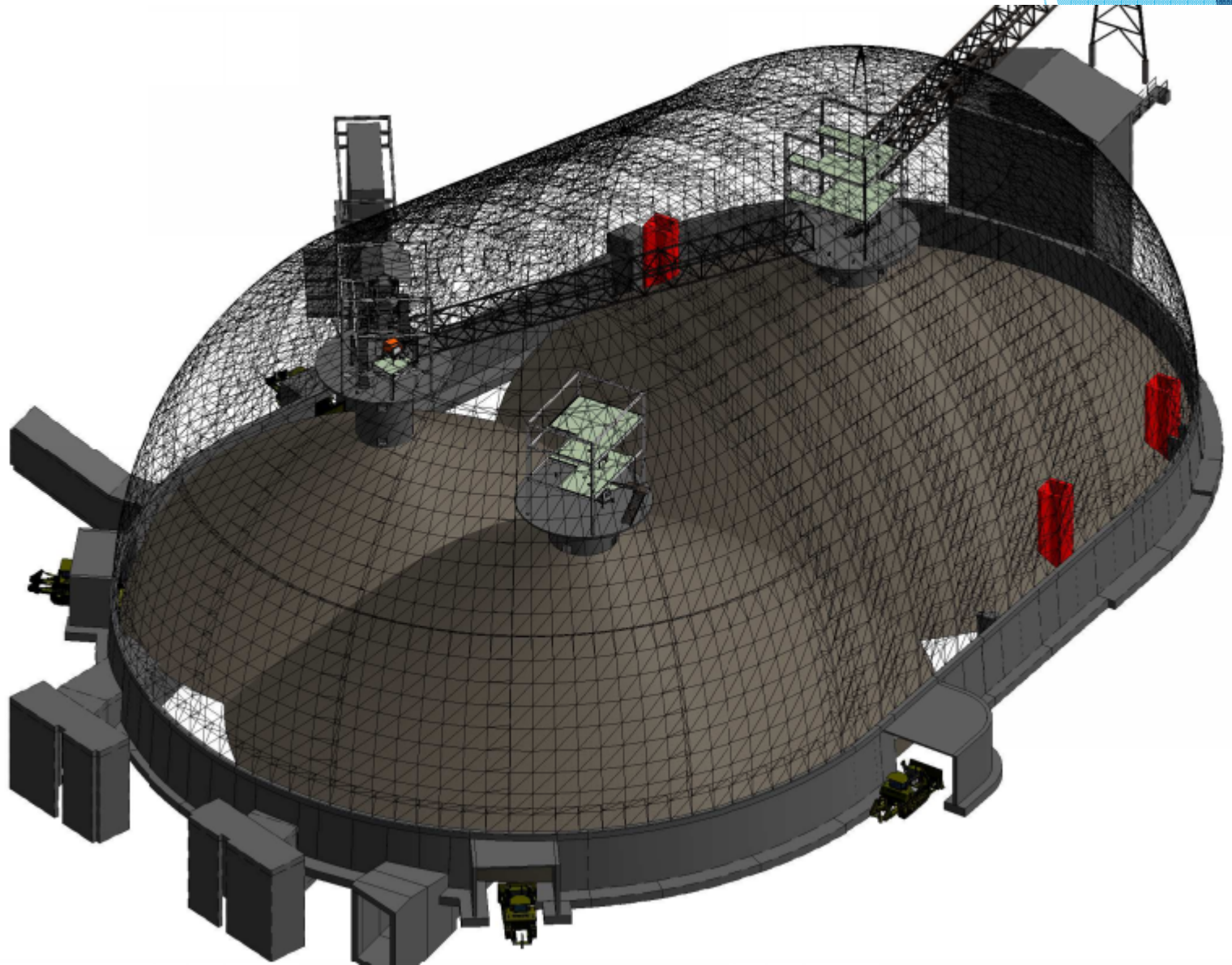
Pre assembly capabilities 80m x 60m



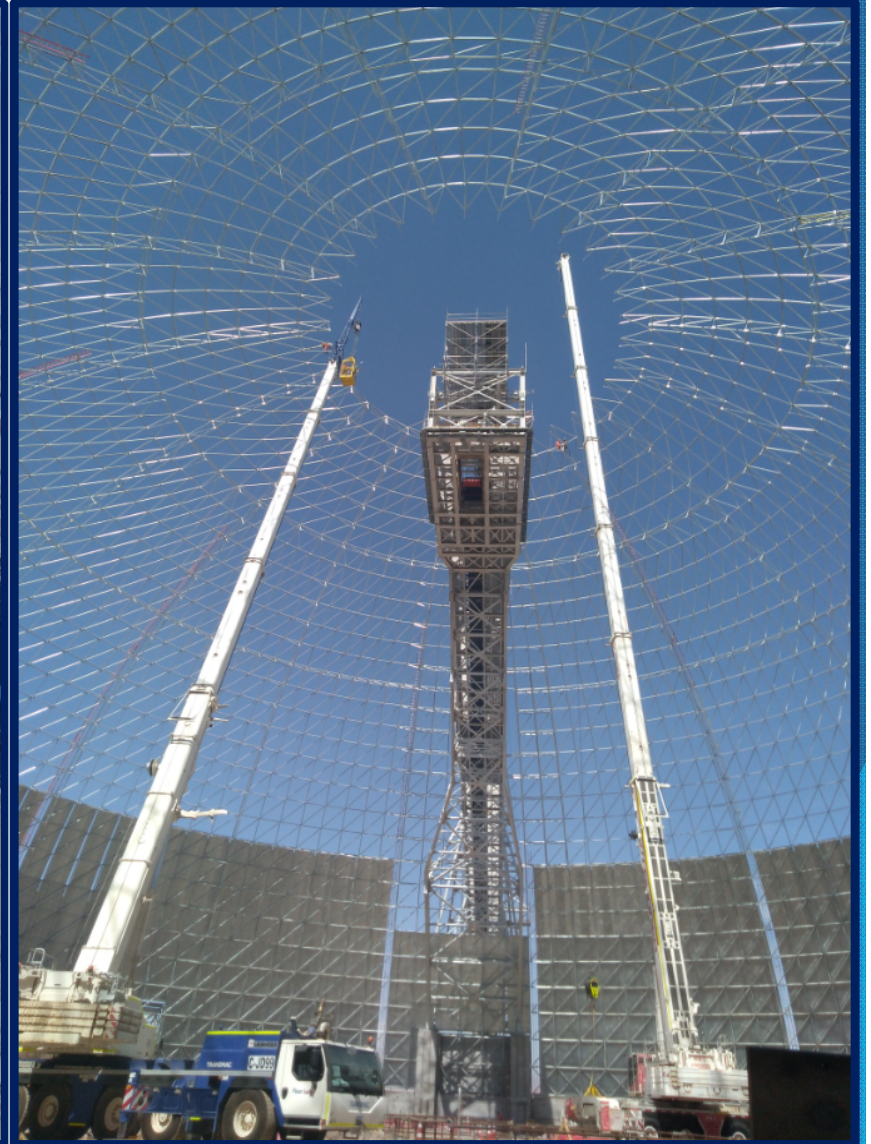
Pre assembly capabilities 80m x 60m
(Spence Project – Fluor Chile – Filter Plant 100% completed)



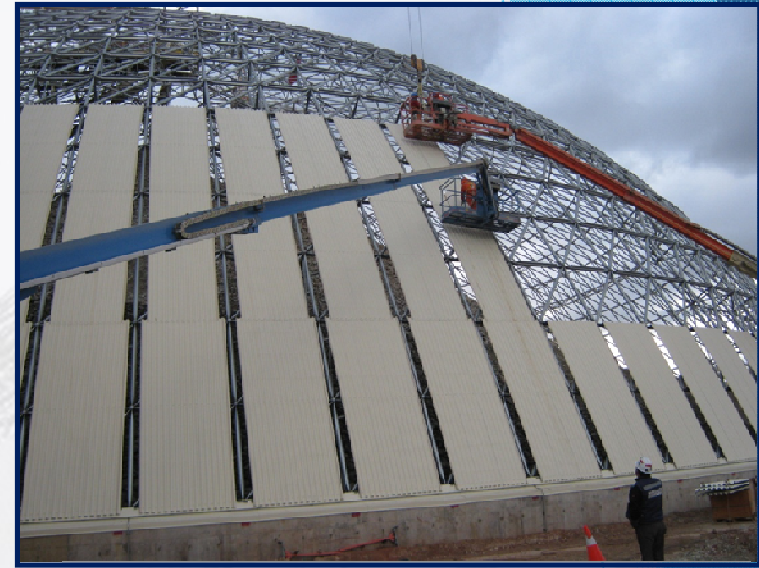
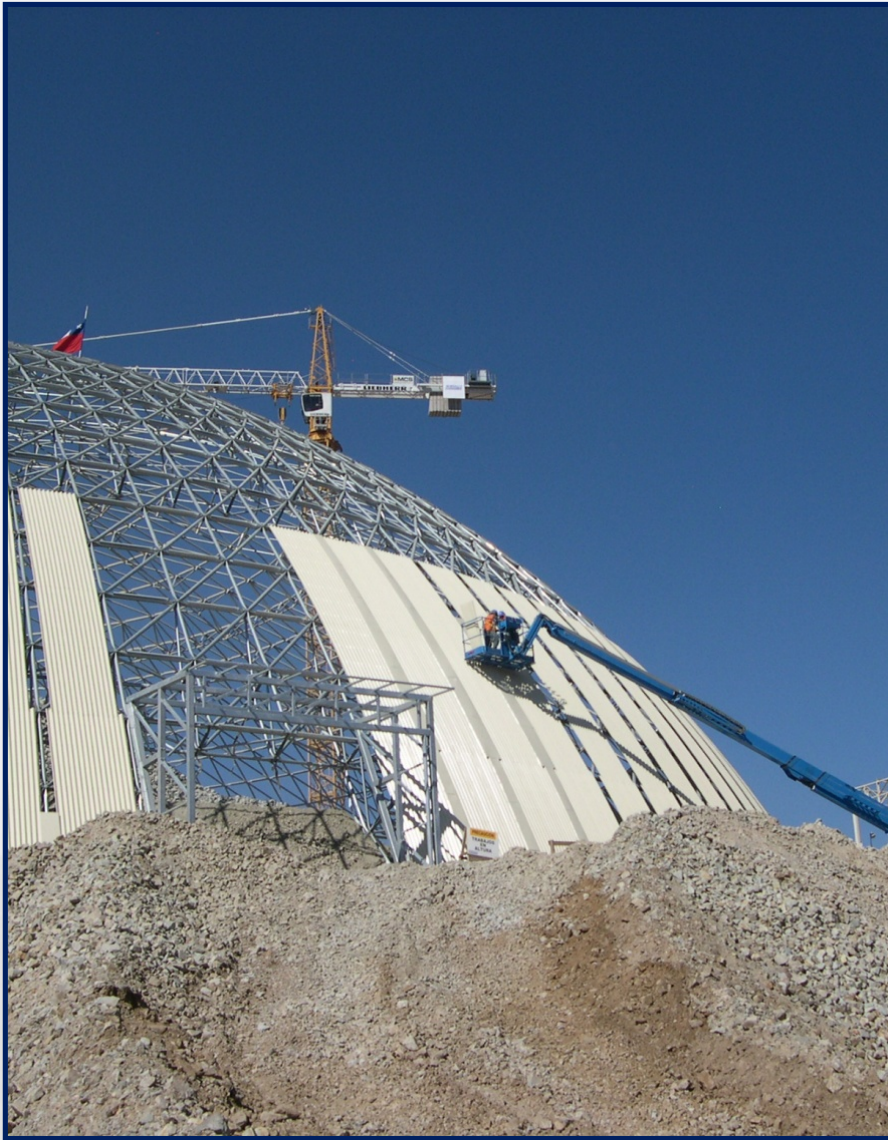
Triodetic capabilities to adapt to existing plant layout (Clinker storage - tapered barrel section and two different



Standard installation procedure hemispherical Dome 110.5m diameter (Spence Project – Fluor Chile – Stockpile Dome)



Triodetic Cladding System (Installation)



Customized, prefab cladding system, becomes on high savings on labor and equipment, as well as shorter installation schedule



Triodetic Structures and Experience

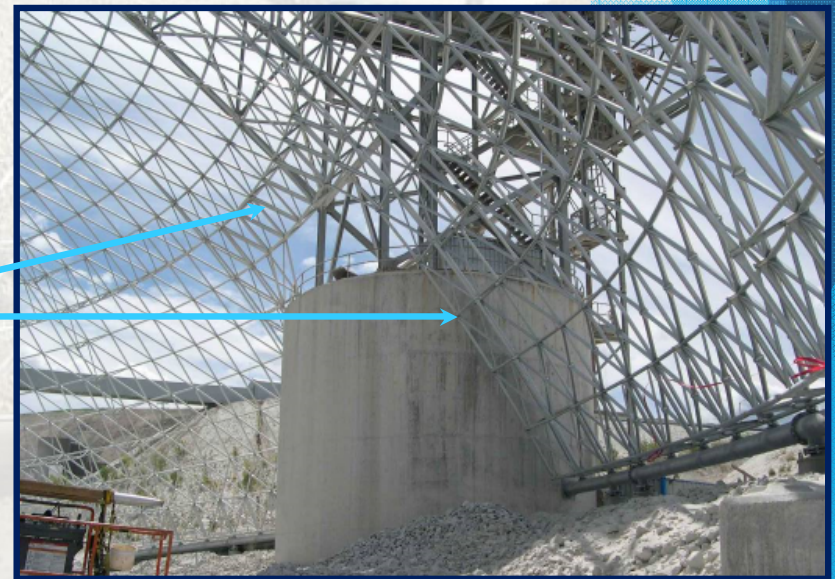
- Summary of Advantages
- 

TRIODETTIC DOMES (ADVANTAGES)



- Low complexity (simple joint)
- Installation performed while mine is operating
- Lighter structures / more economical Foundations
- Least components to be installed (1/2 – 2/3 vs competition)
- Easier to Installed (single layer)
- Customized and pre-fab cladding panels (no site work required)
- Shorter Installation Schedule
- Very low maintenance (negligible)

- Non or few reinforcing trusses, single layer of components
- Reinforcing around openings
- Easier to adapt to interferences
 - foundation pillars
 - door openings
 - conveyor penetration
- Superior material quality and overall superior quality on engineering and supply





A TRIODETIC DOME IS THE BEST CHOICE FOR YOUR PROJECT

