

Large Cryogenic above ground LNG Tank

Full Containment

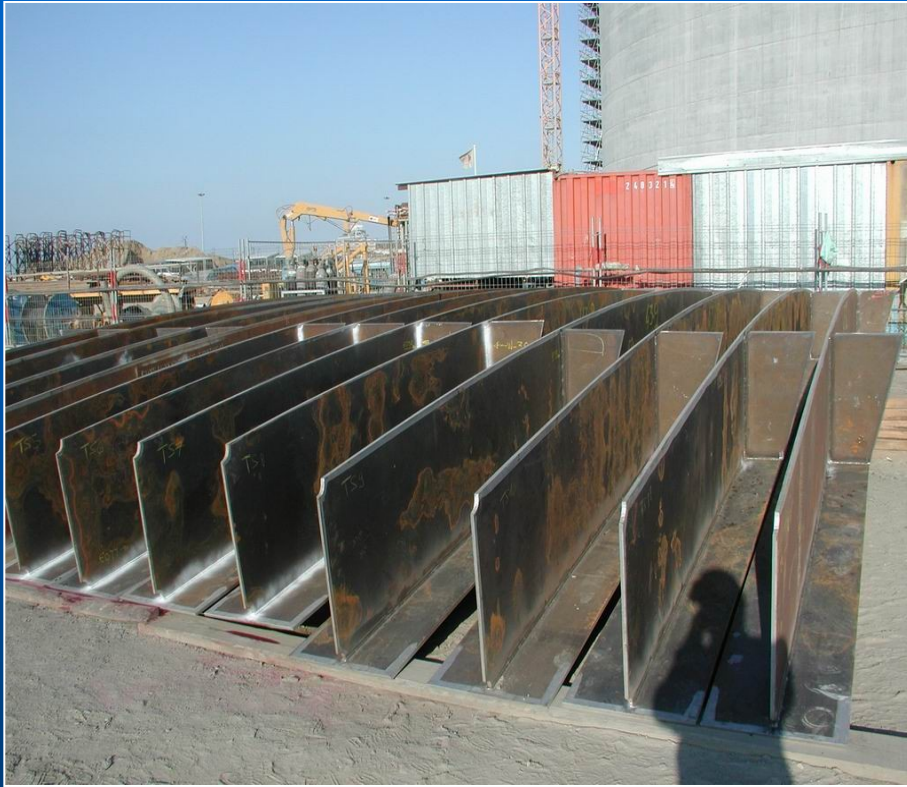
(9% inner wall + Pre-stressed concrete outer wall)

Typical Construction Sequence

March 4th 2011



Storage & loading on site



Storage & loading on site

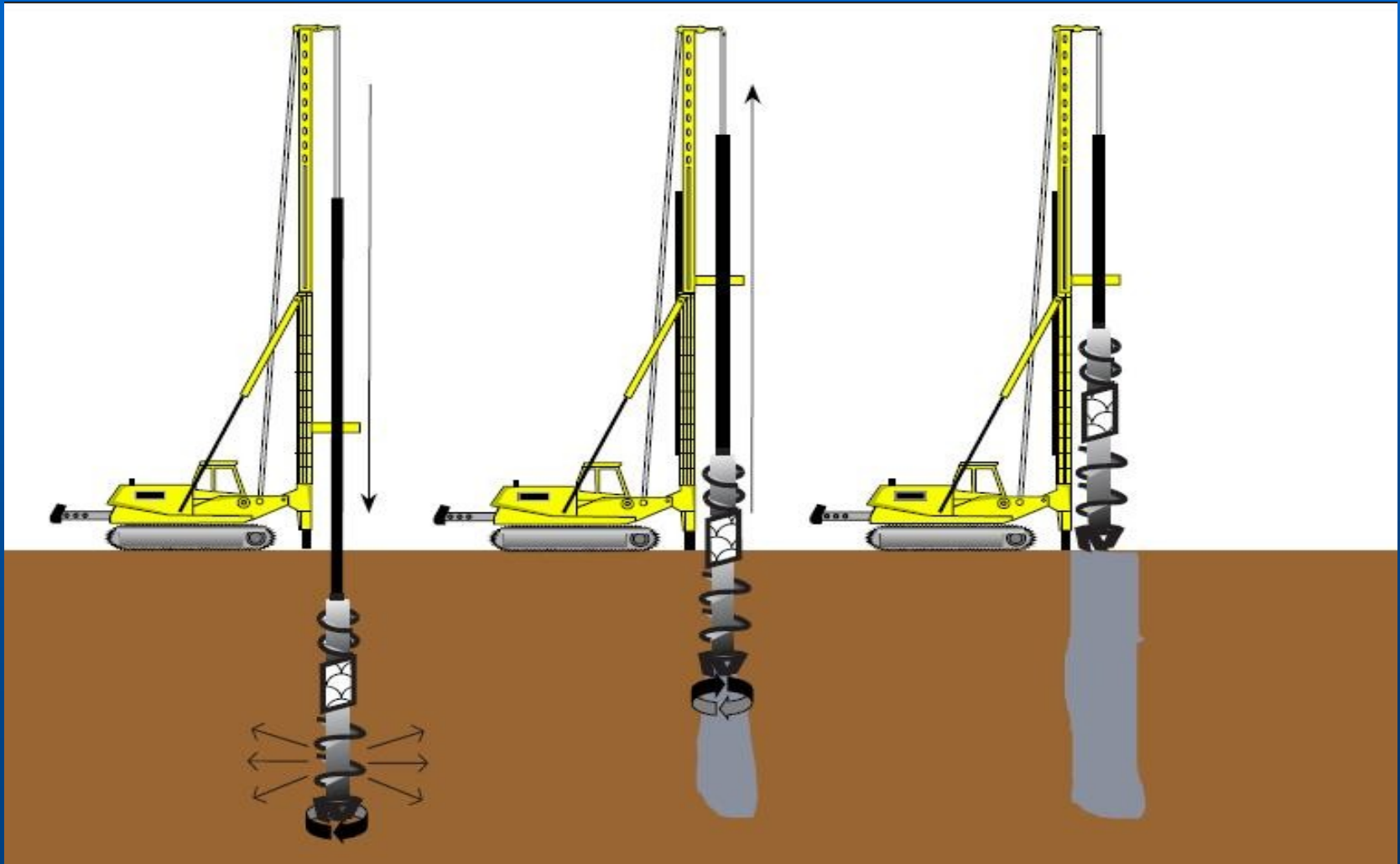


Storage & loading on site



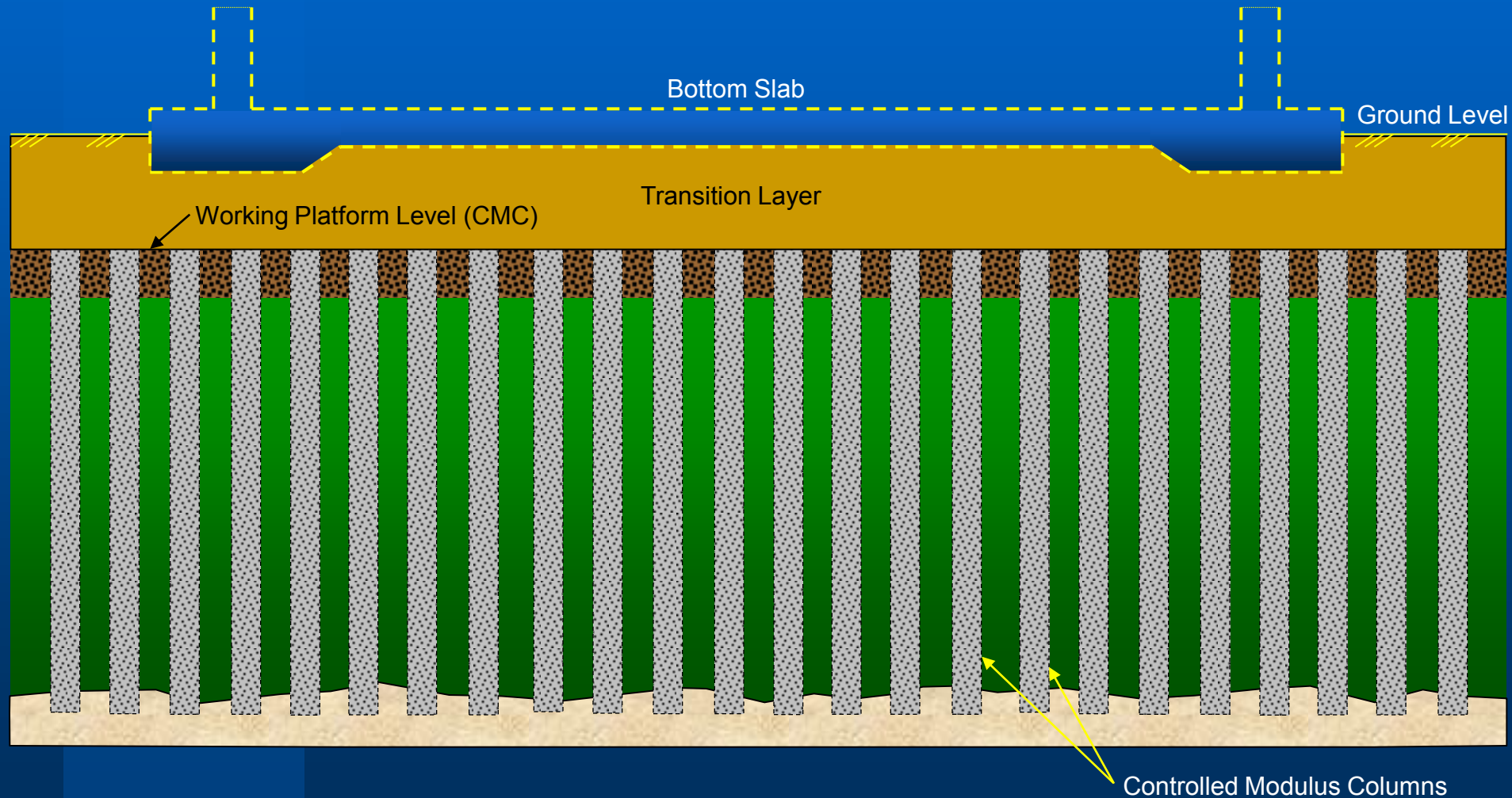
Soil Improvement

STEP 1a – Soil Improvement (CMC)



Soil Improvement

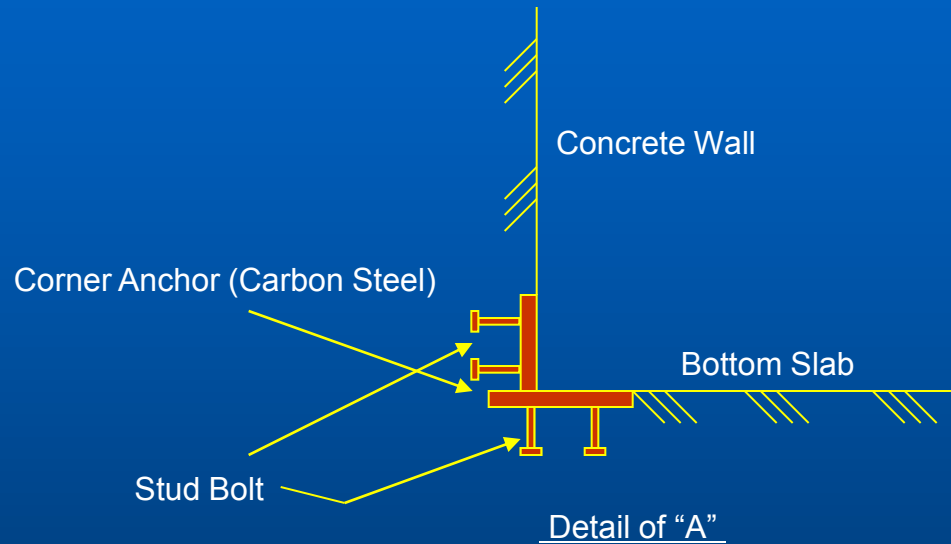
STEP 1b – Controlled Modulus Columns (CMC)



LNG Storage Tanks – erection Concrete slab

STEP 1 - Bottom Slab

Corner Anchor to be installed before bottom slab concreting.



Concrete slab

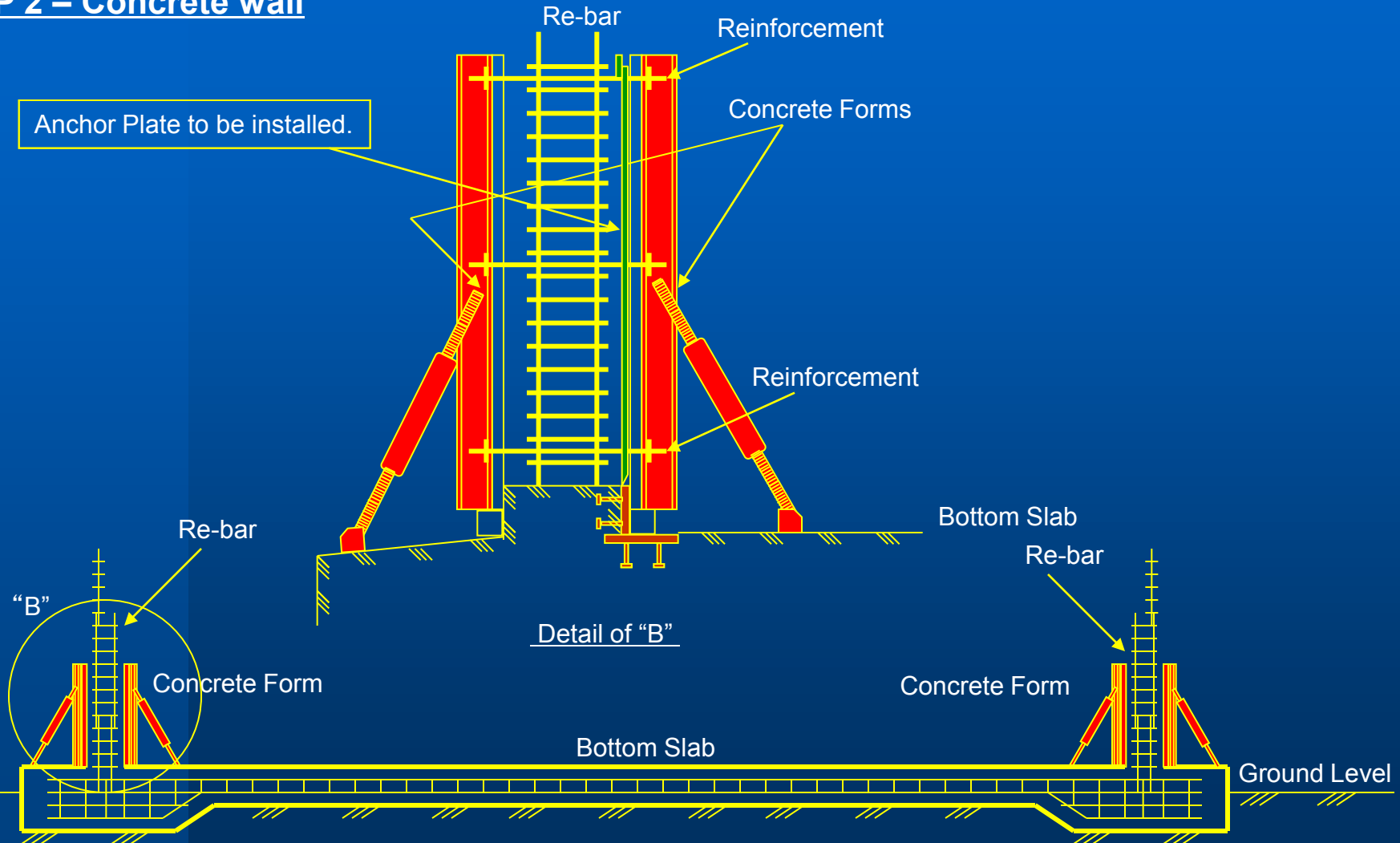


Slab reinforcement & prestressing cables casing



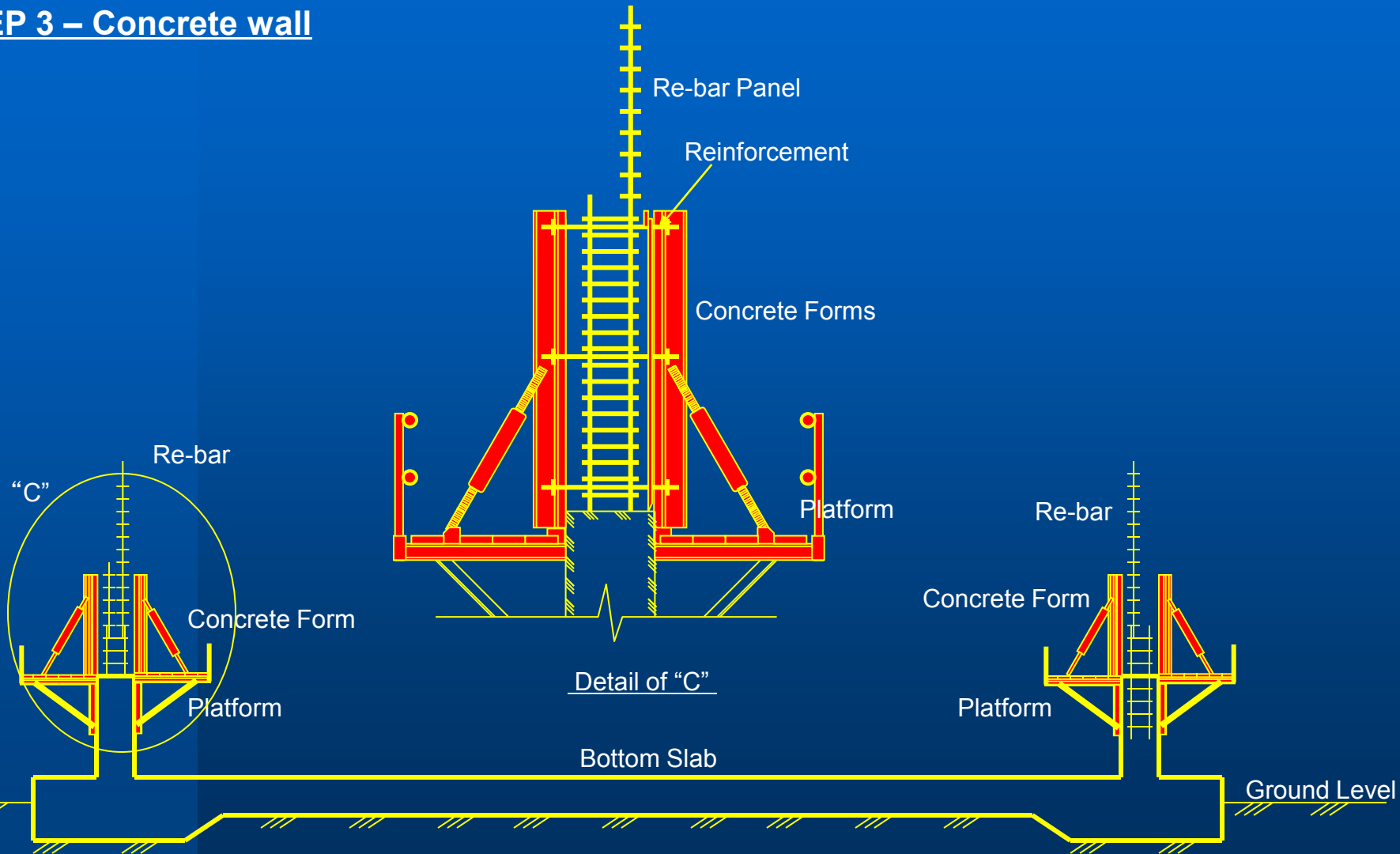
LNG Storage Tanks - erection

STEP 2 – Concrete wall



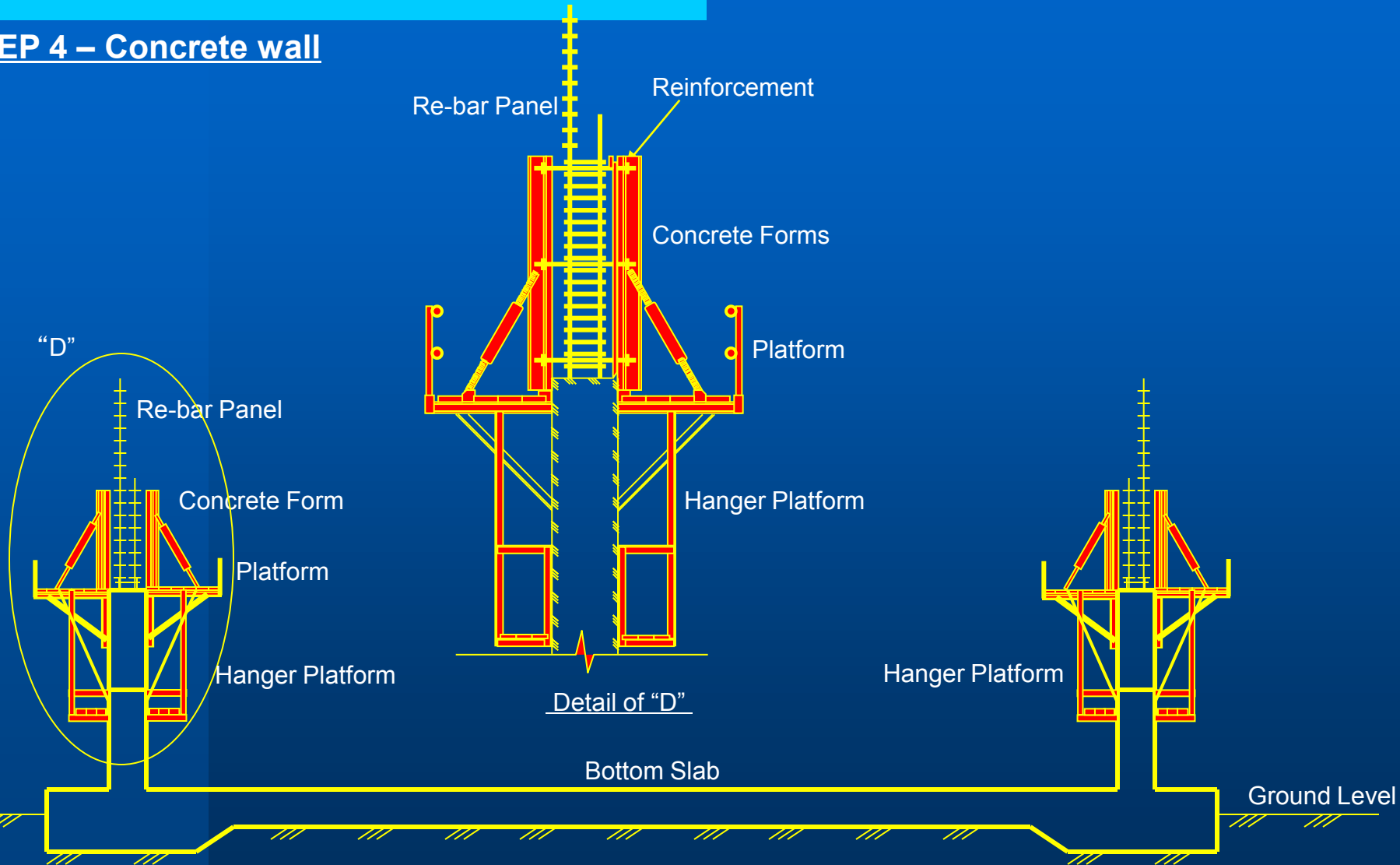
LNG Storage Tanks – erection

STEP 3 – Concrete wall



LNG Storage Tanks – erection

STEP 4 – Concrete wall

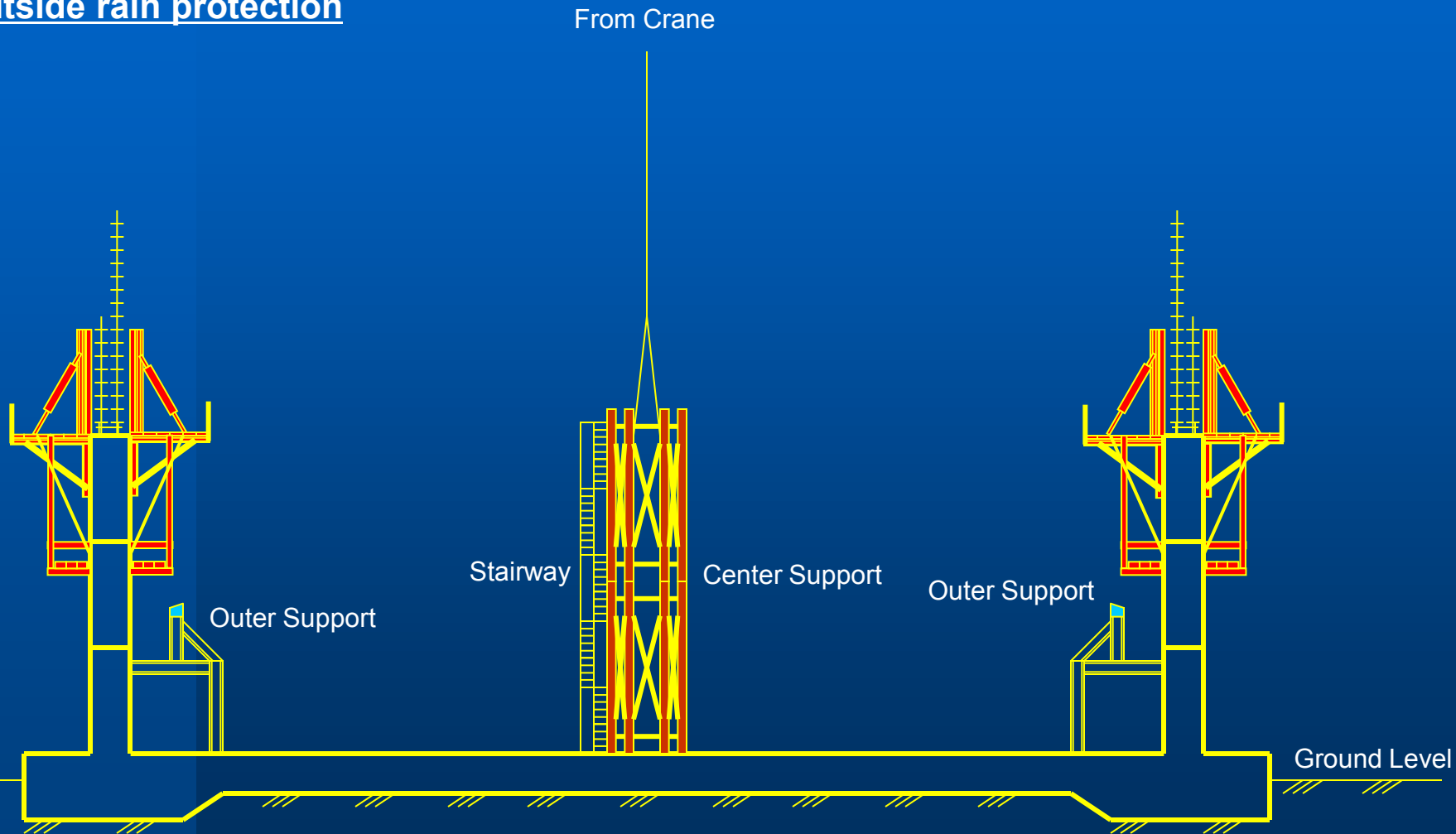


Jumping formwork

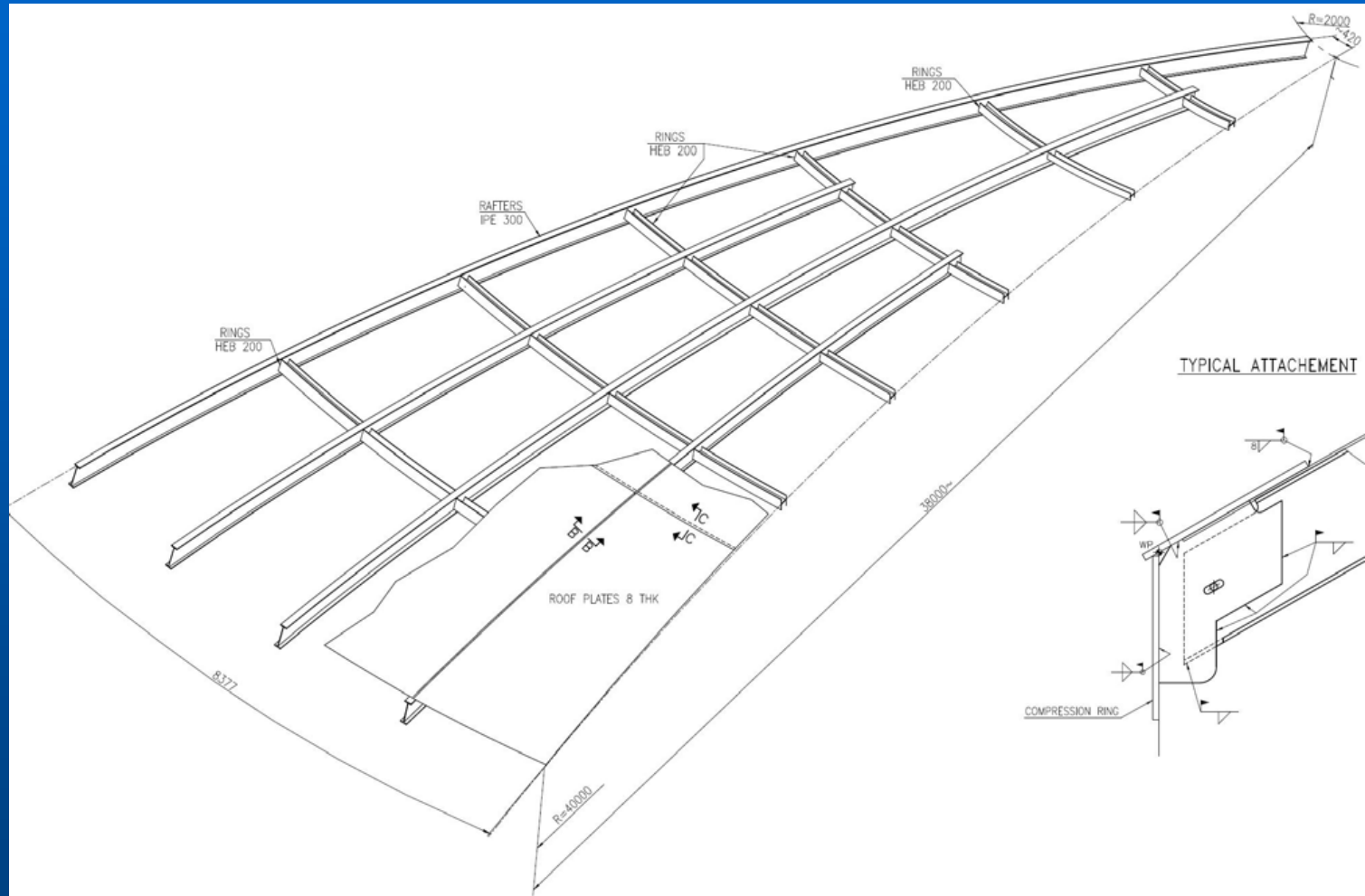


LNG Storage Tanks – erection

STEP 6 – Assembly of roof center, outer supports & outside rain protection



Roof structure details



Central temporary support



Roof section lifting (25t)



Roof section adjustment



General view



Roof plates welding

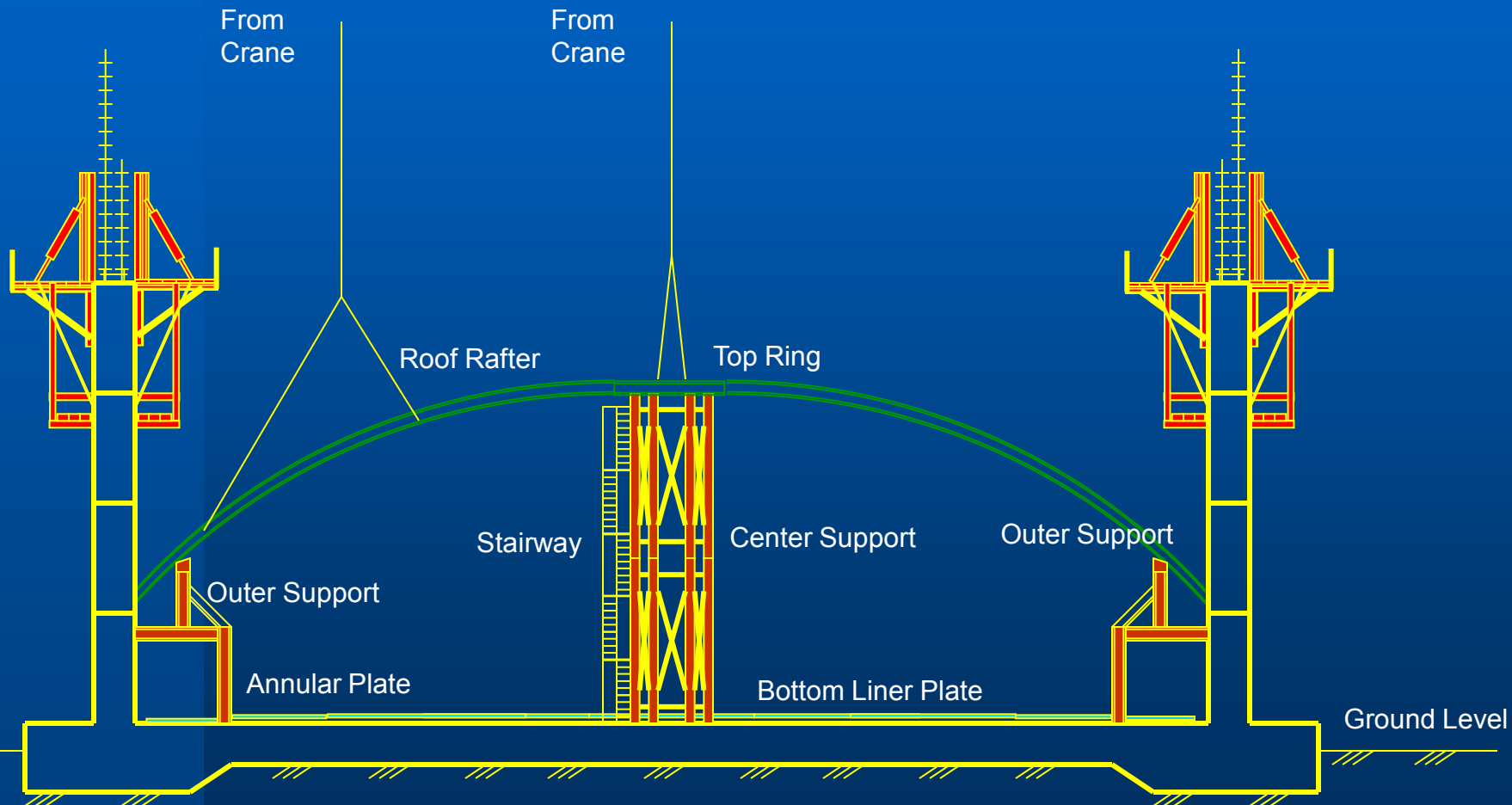


Rainy weather impact

- Taking care of rainy weather conditions on site, bottom liner will be erected & welding as soon as the metallic roof is water tight

LNG Storage Tanks – erection

STEP 7 – Assembly of roof sections and liner plates

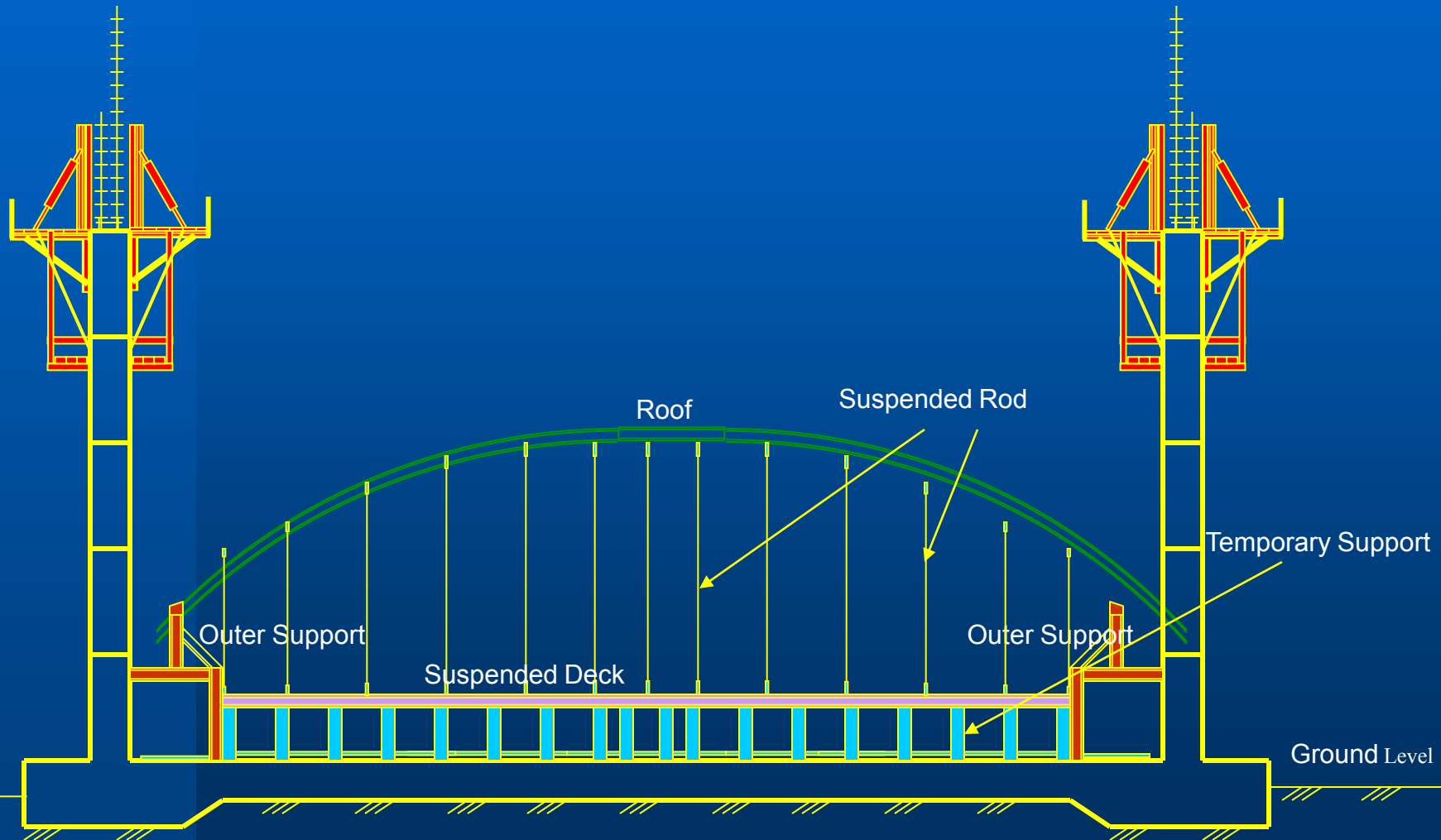


Bottom liner plates welding

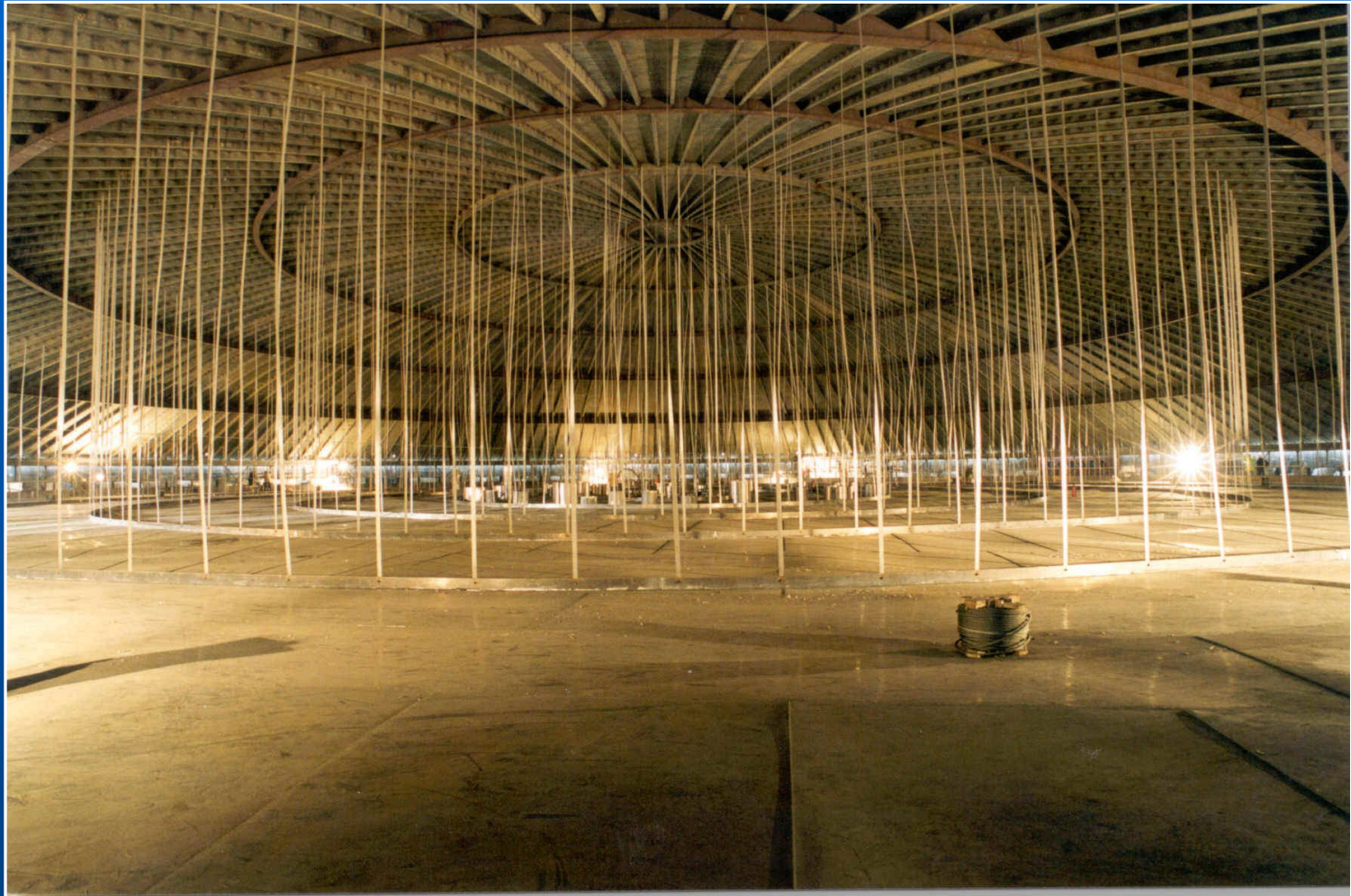


LNG Storage Tanks – erection

STEP 8 – Assembly of Suspended deck



Suspended deck

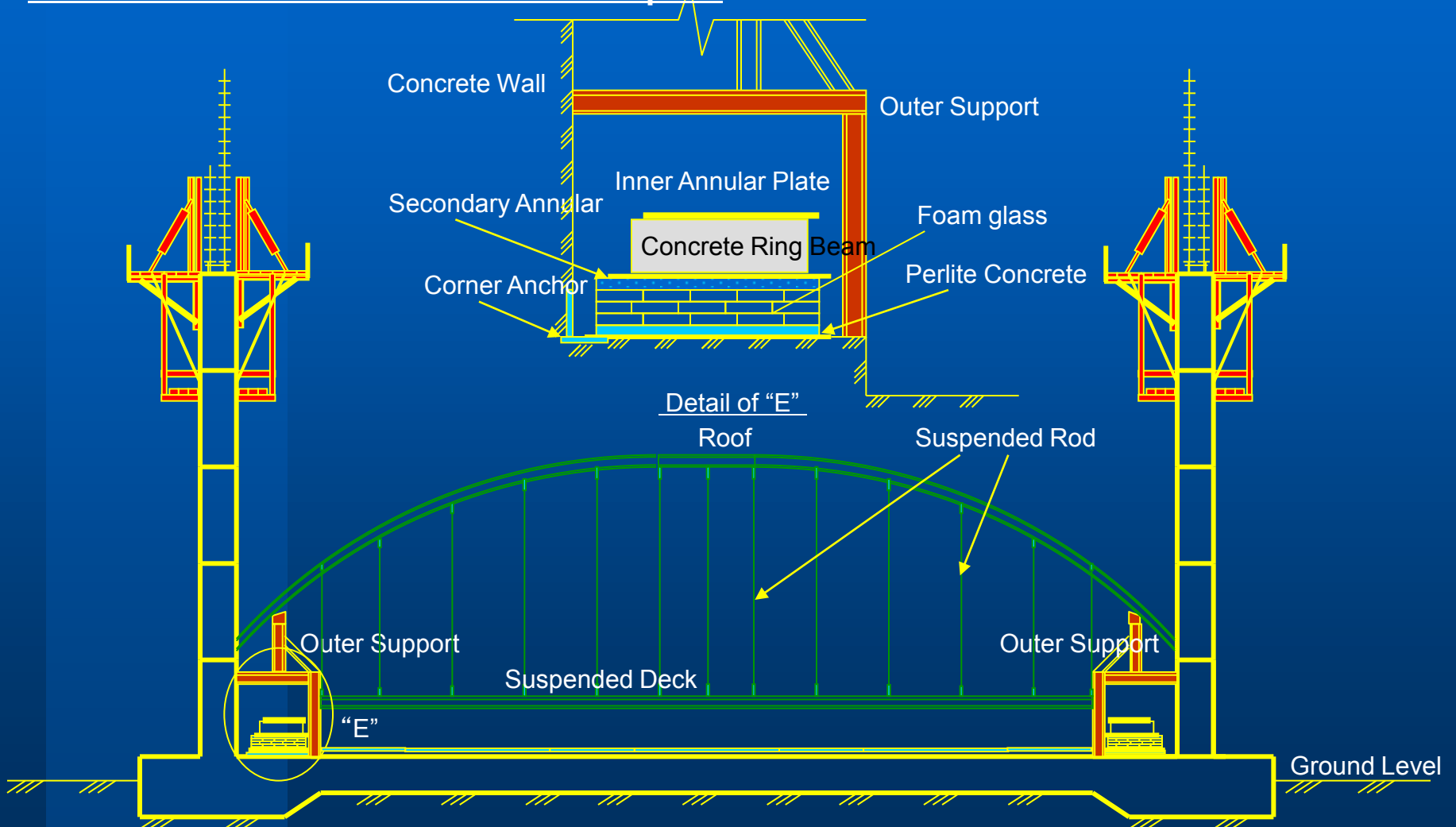


Suspended deck welding



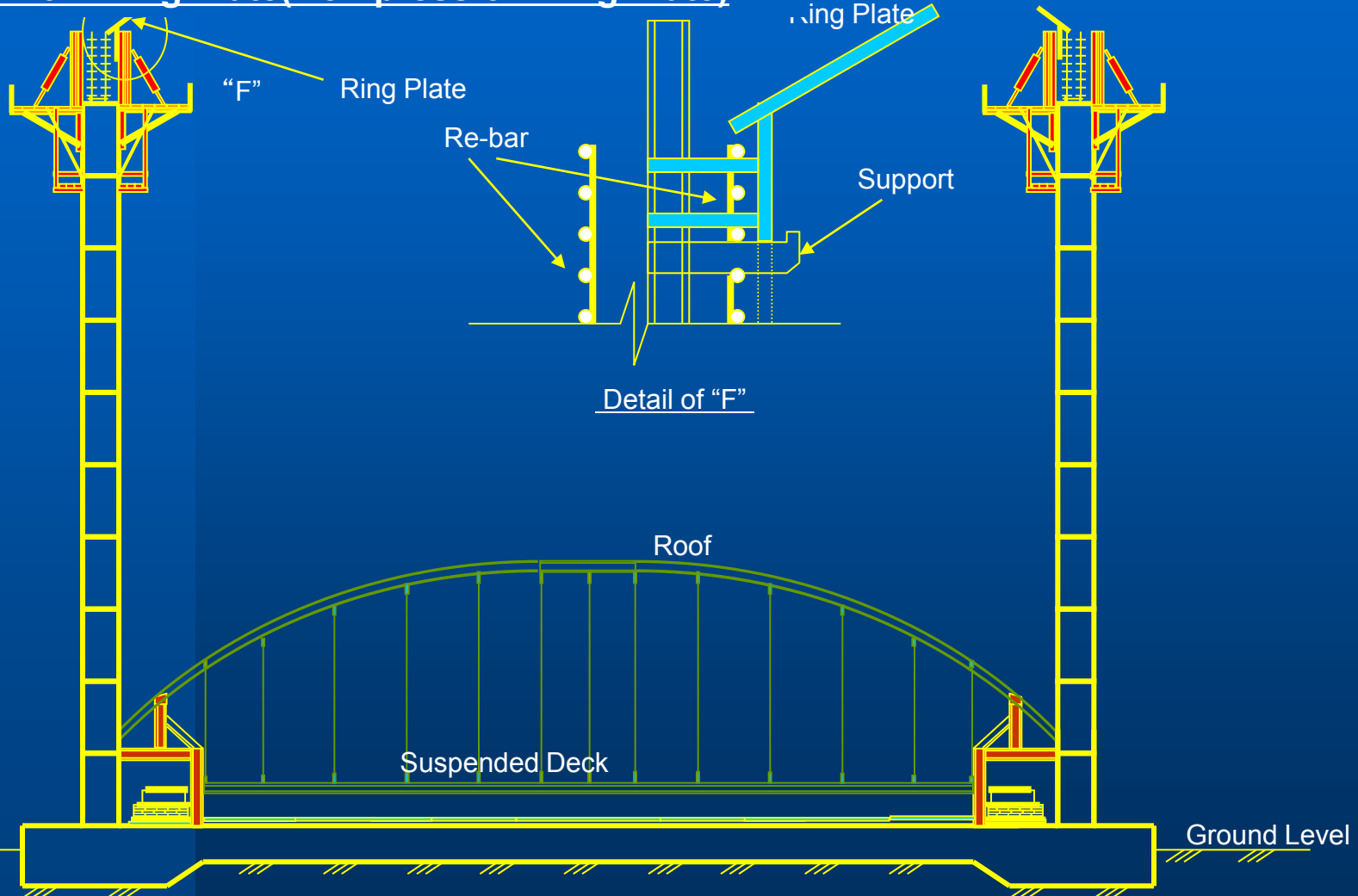
LNG Storage Tanks – erection

STEP 9 – Insulation work on Annular space



LNG Storage Tanks – erection

STEP 10 – Ring Plate(Compression Ring Plate)



Metallic compression ring

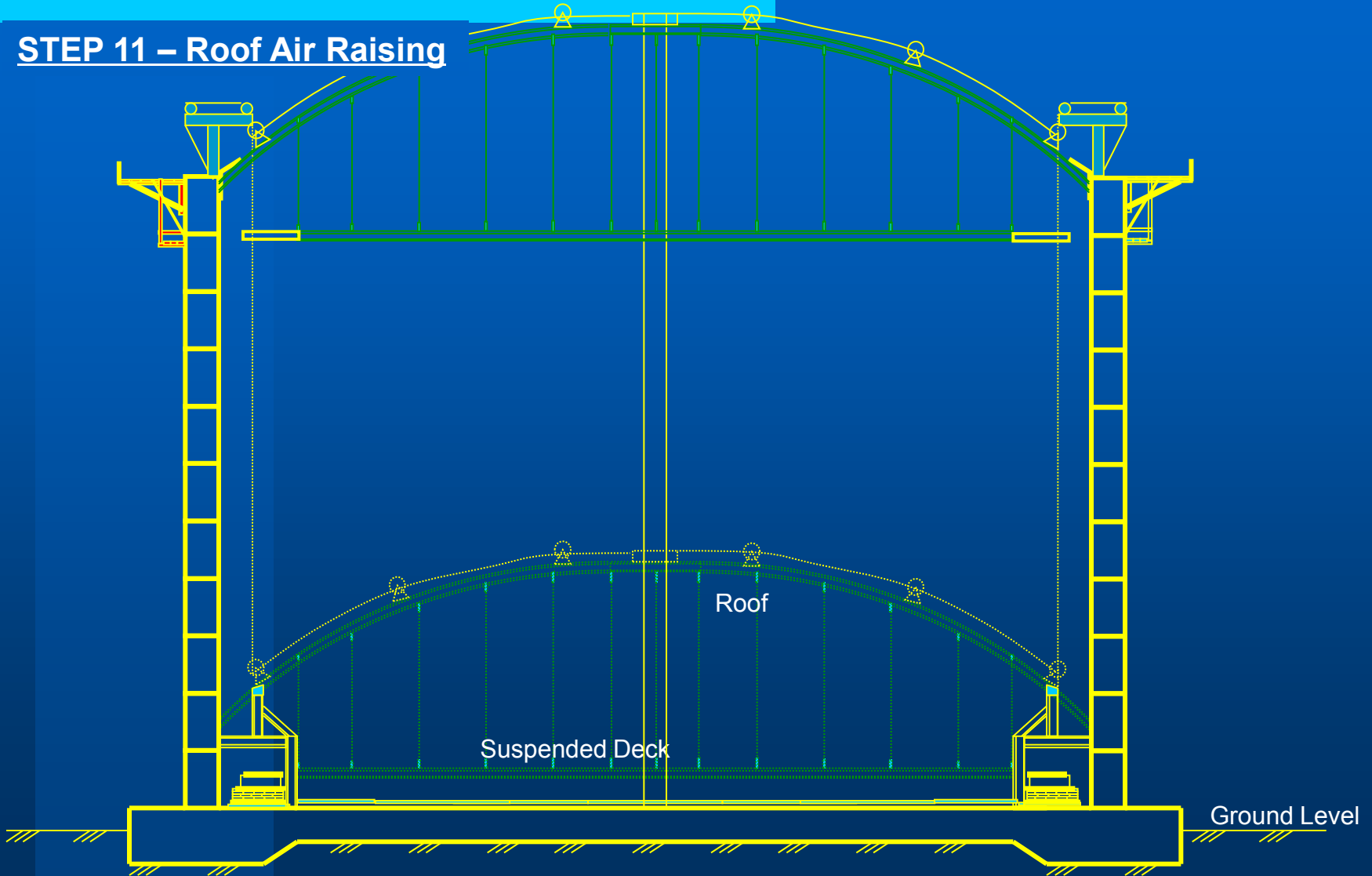


Metallic compression ring



LNG Storage Tanks – erection

STEP 11 – Roof Air Raising



Roof at lowest position



Venting equipment



Air rising



Connection with compression ring



Roof climbing

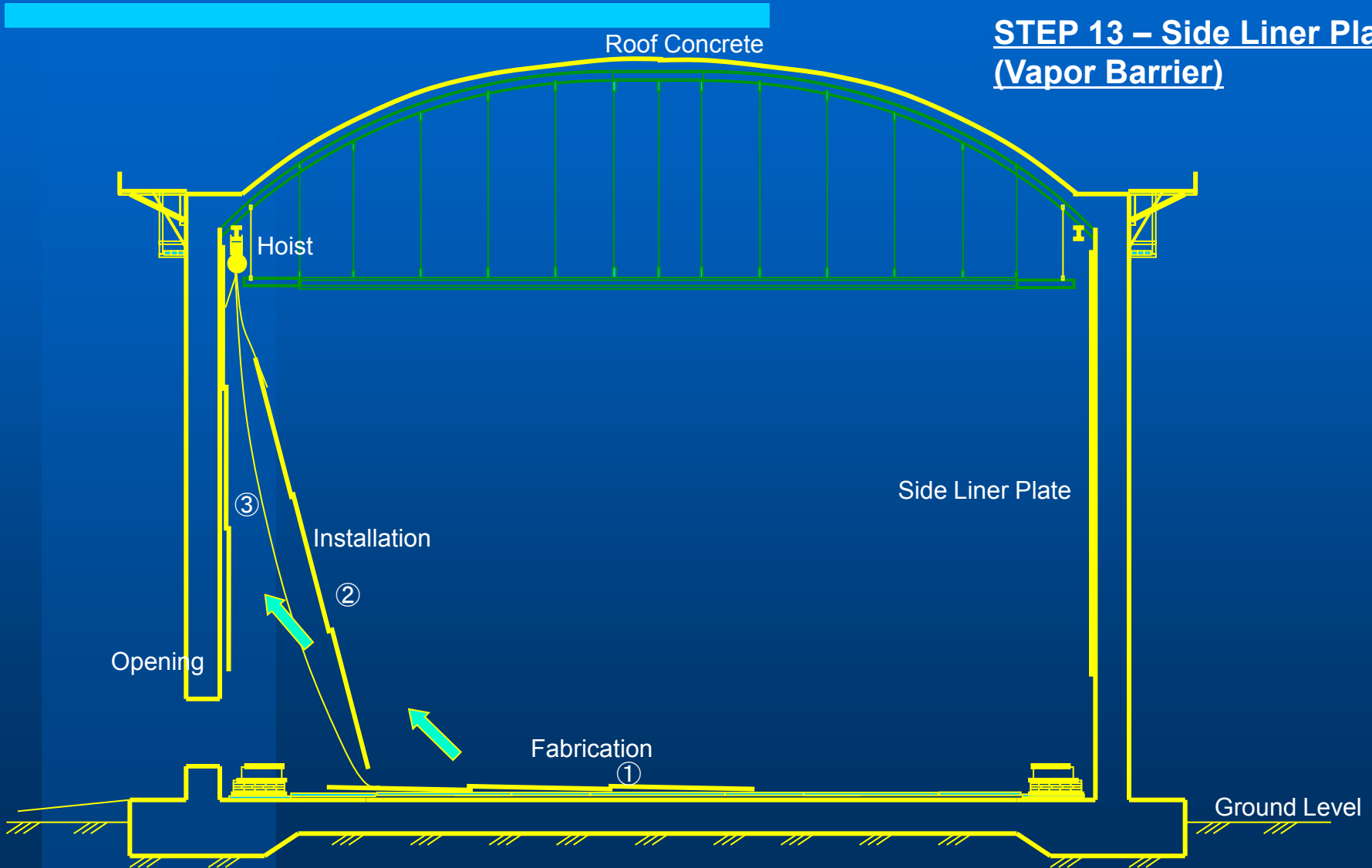


Final position



LNG Storage Tanks – erection

STEP 13 – Side Liner Plate (Vapor Barrier)



Wall liner erection & welding



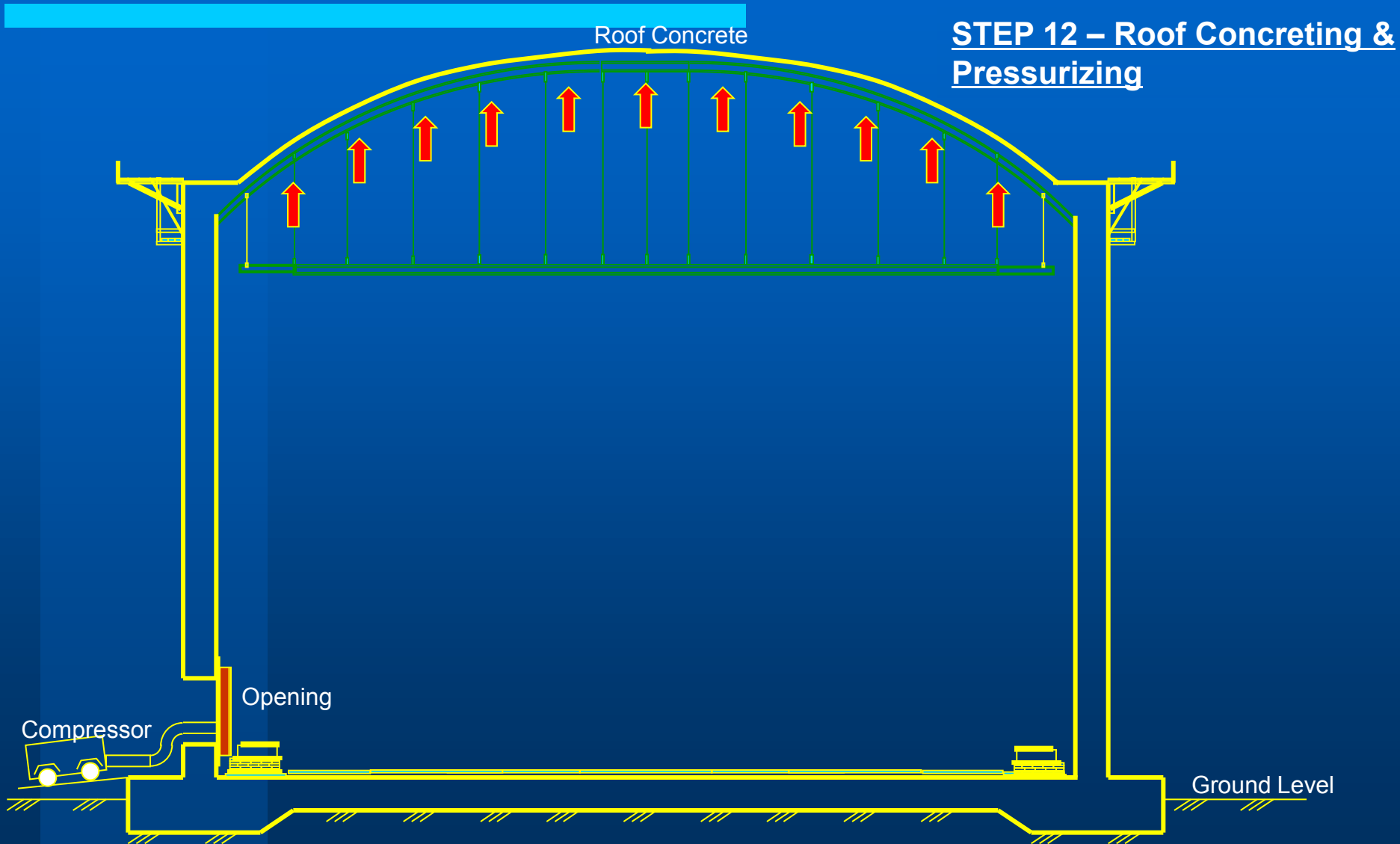
Corner protection insulation



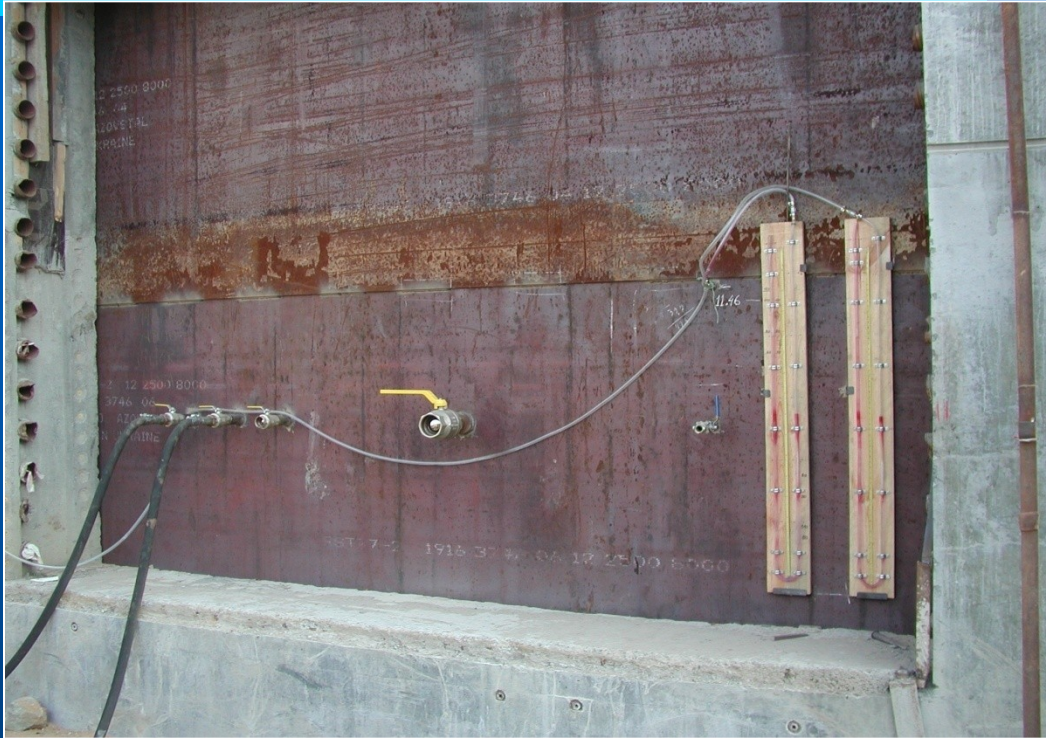
Corner protection plates



LNG Storage Tanks – erection



Pressurization & concreting



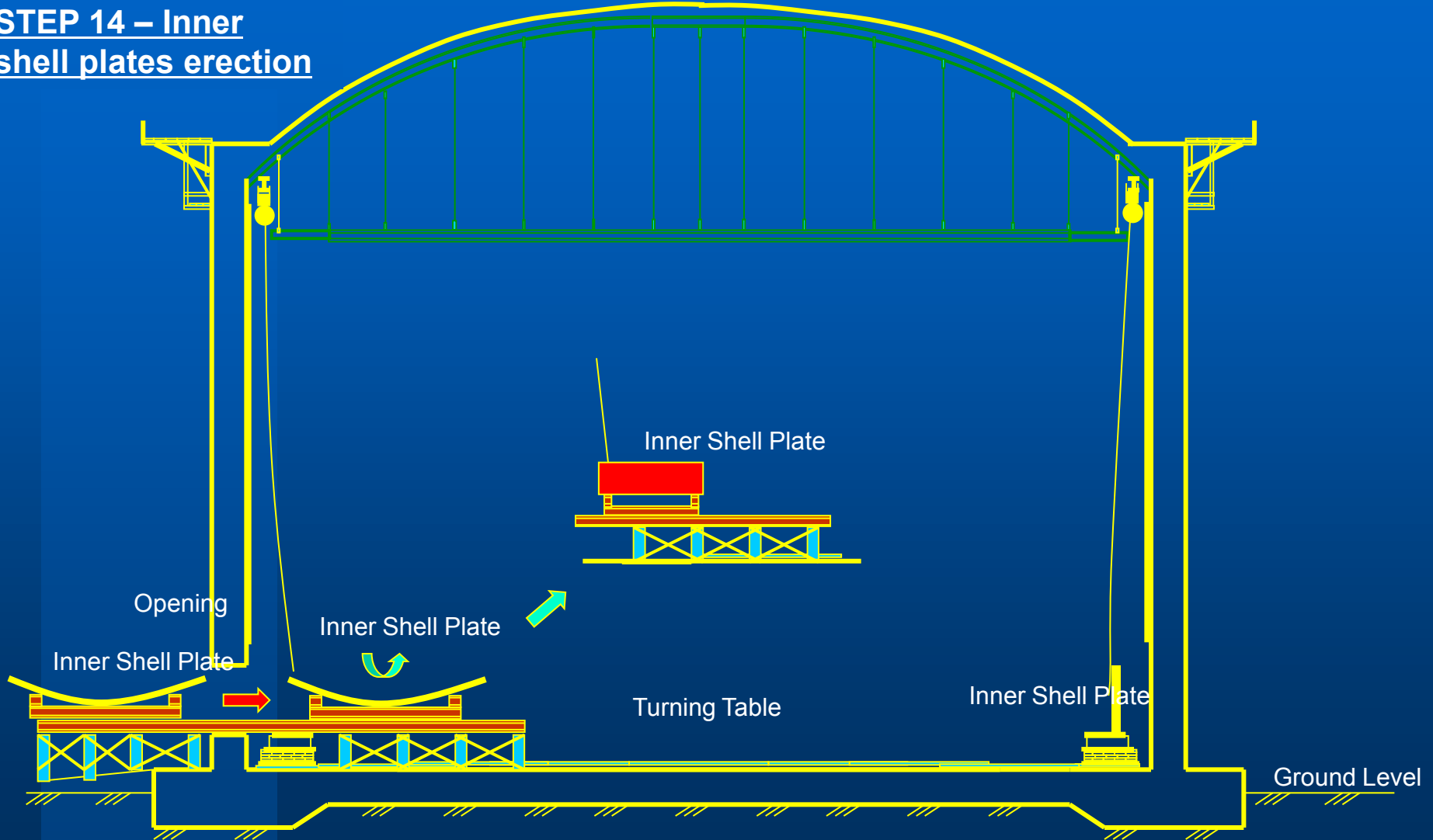
Pressurization & concreting



LNG Storage Tanks – erection

Roof Concrete

STEP 14 – Inner shell plates erection



Inner tank shell erection



Automatic welding machine



Welding machine Operator

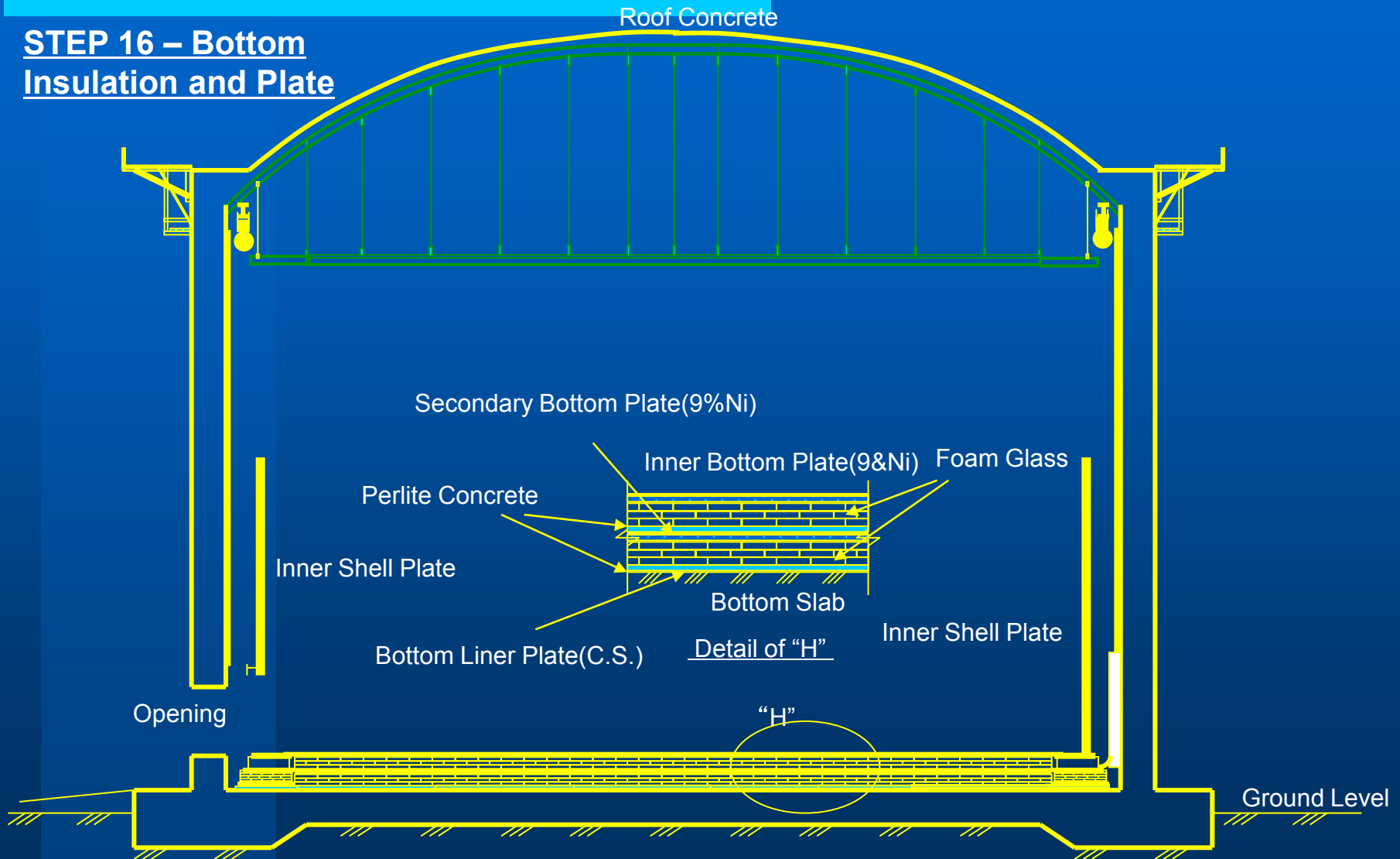


Shell top stiffener



LNG Storage Tanks – erection

STEP 16 – Bottom Insulation and Plate

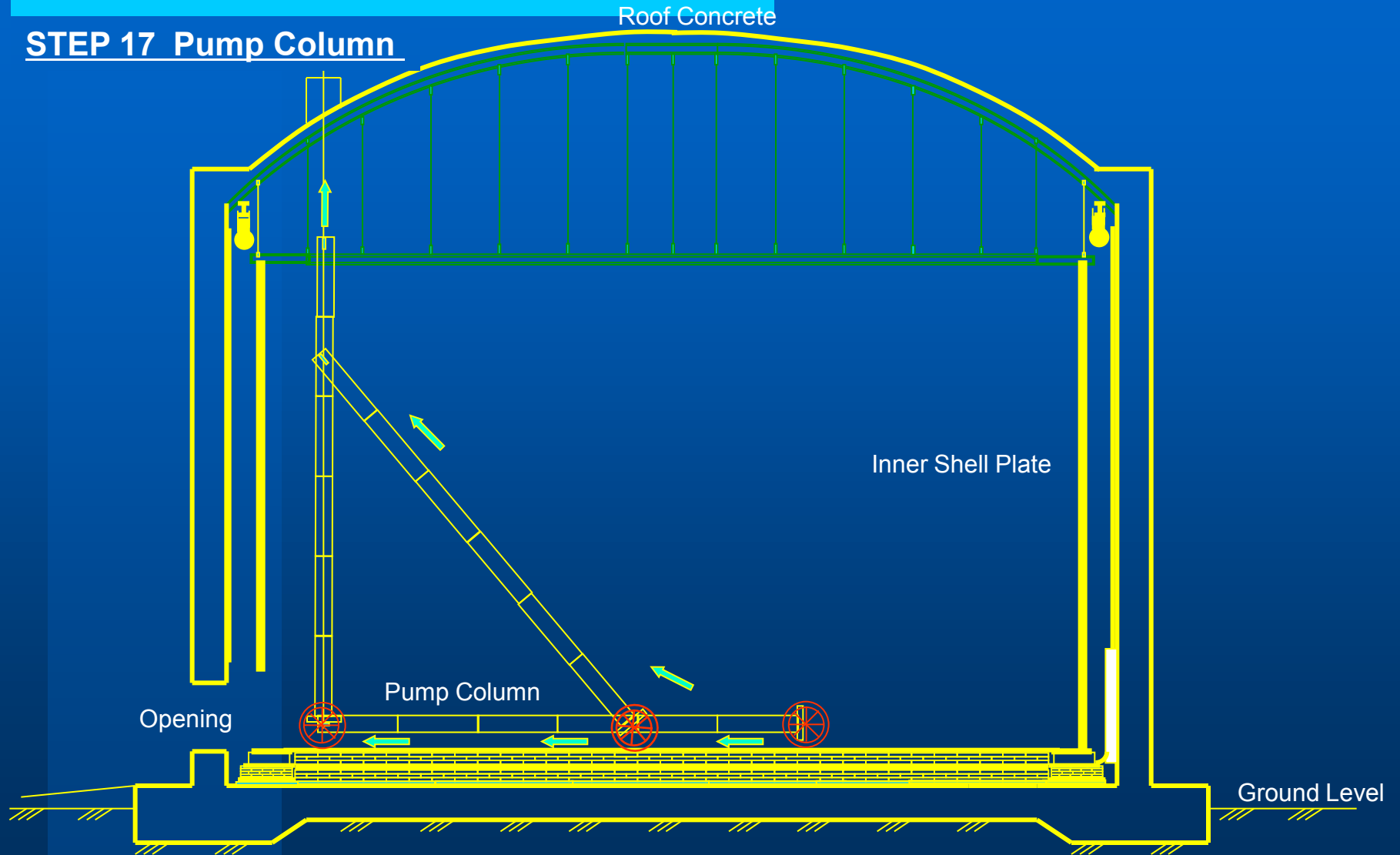


Foam Glass layers installation



LNG Storage Tanks – erection

STEP 17 Pump Column



Bottom inlet stand pipe



Inlet top nozzle with splash plate



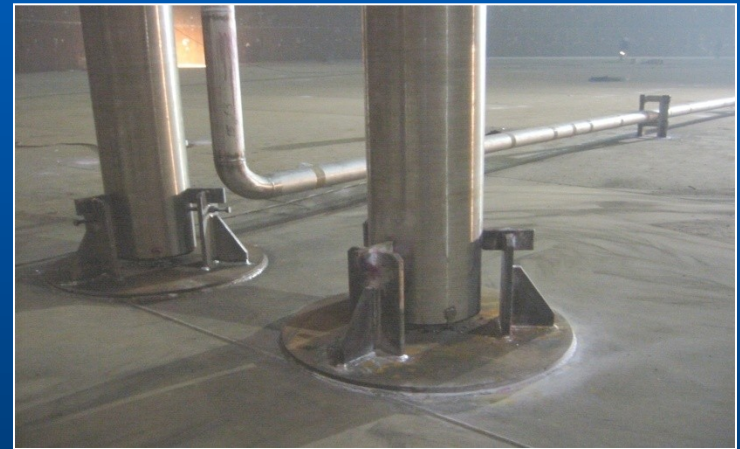
Pump column prefabrication



Pump column erection



Stilling well and bottom connection



Cool down ring



Purge piping





NDE

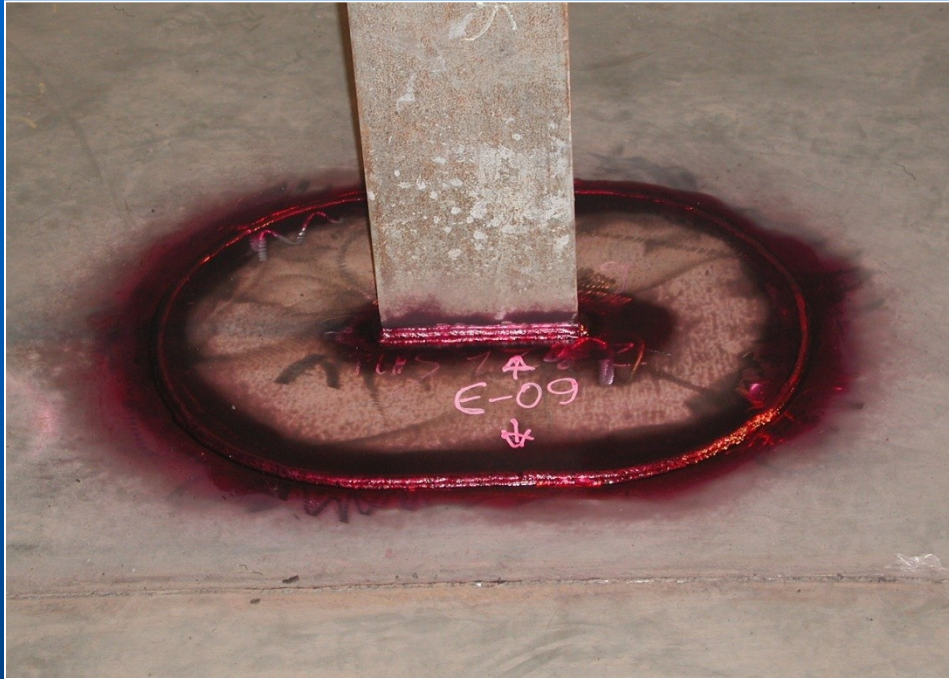
DIMENSIONAL



VACUUM BOX



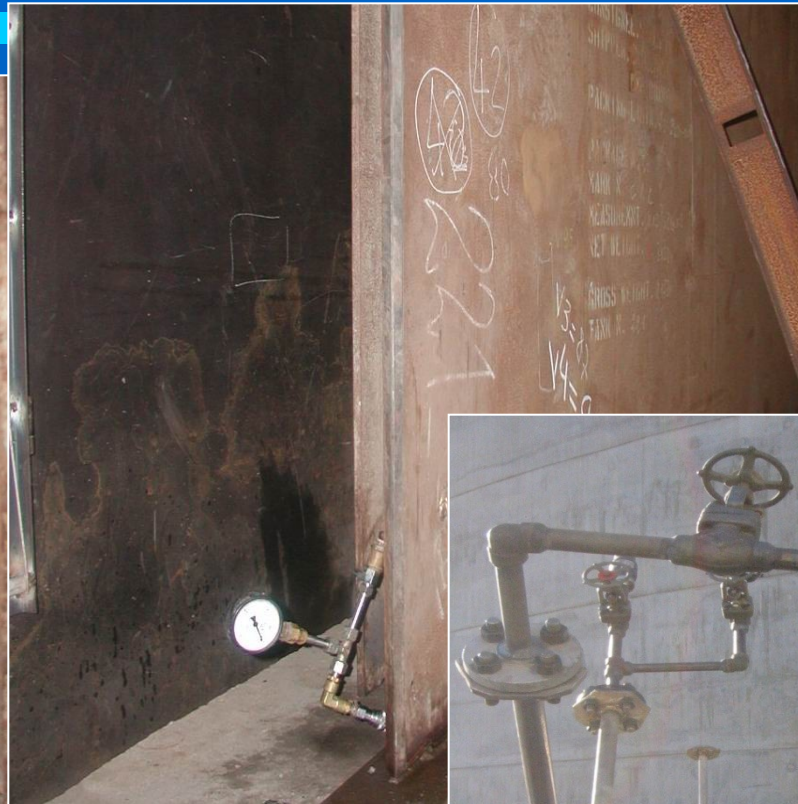
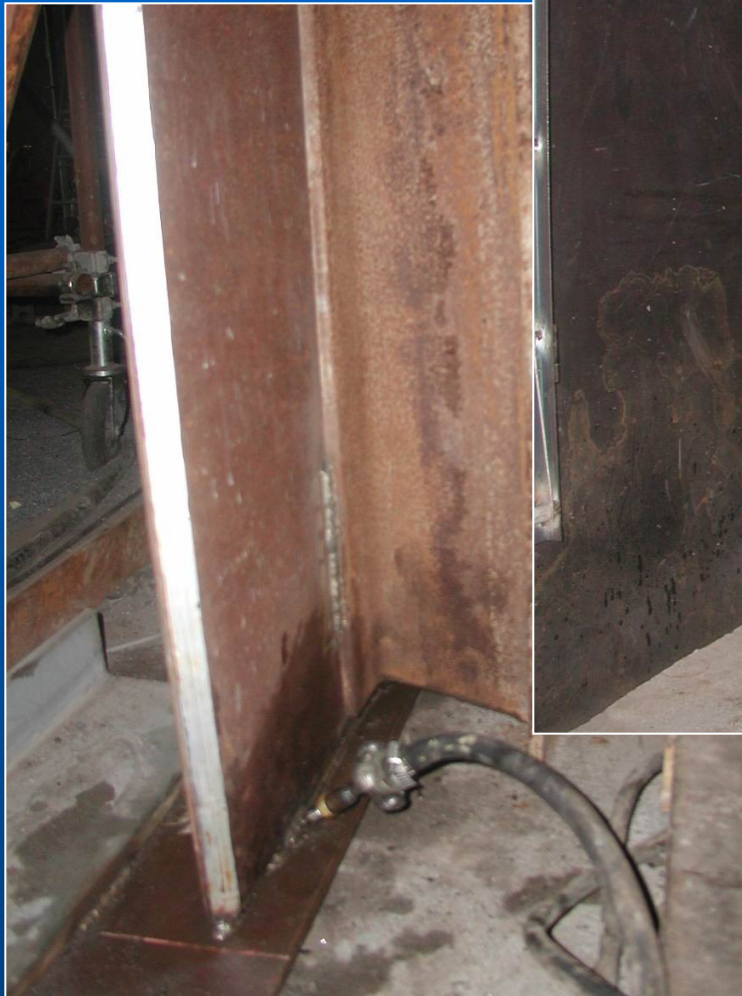
LIQUID PENETRANT TEST



ALLOY MATERIAL IDENTIFICATION



PRESSURE TEST

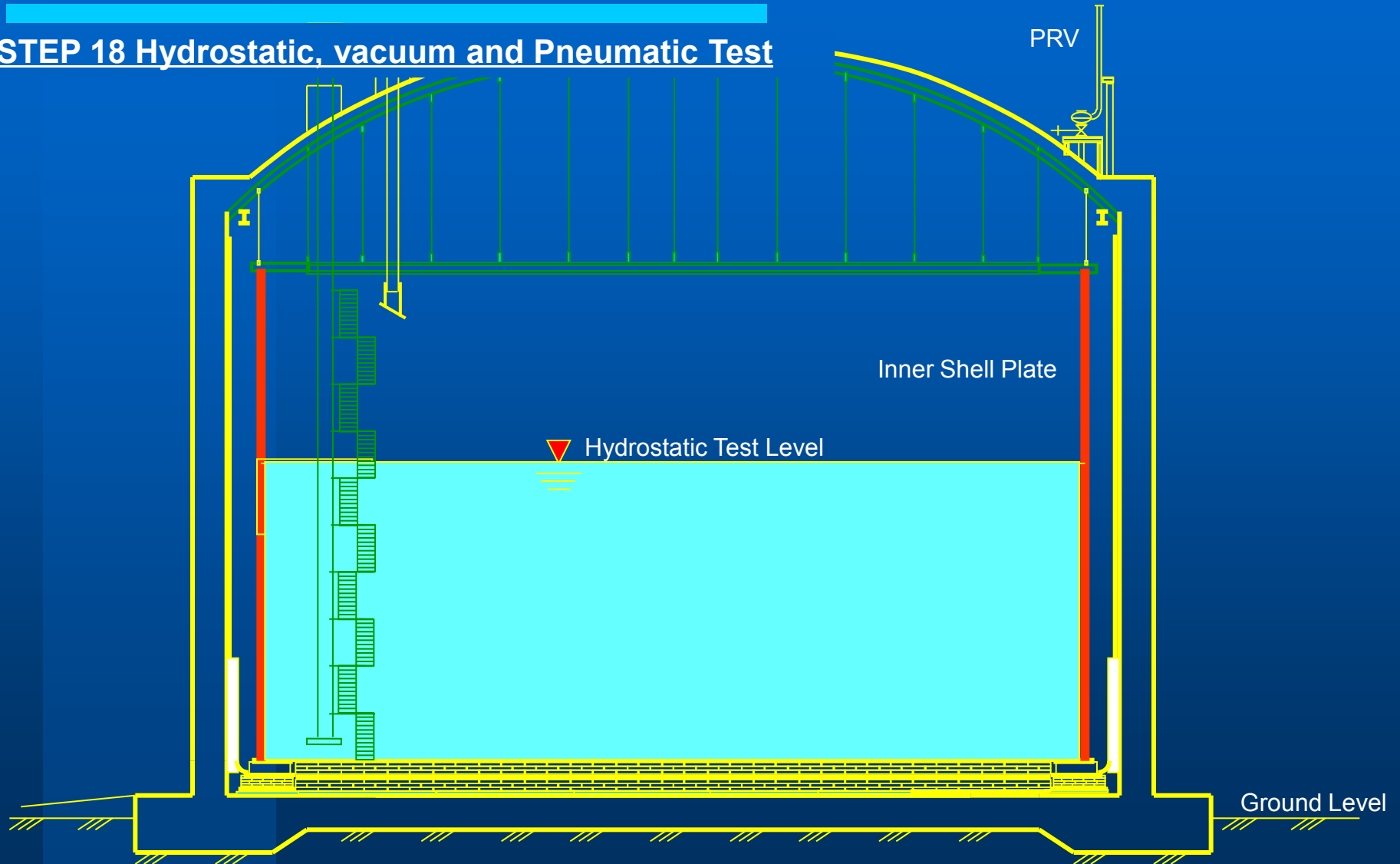


AUTOMATIC US TEST



LNG Storage Tanks – erection

STEP 18 Hydrostatic, vacuum and Pneumatic Test



SEA WATER TEST



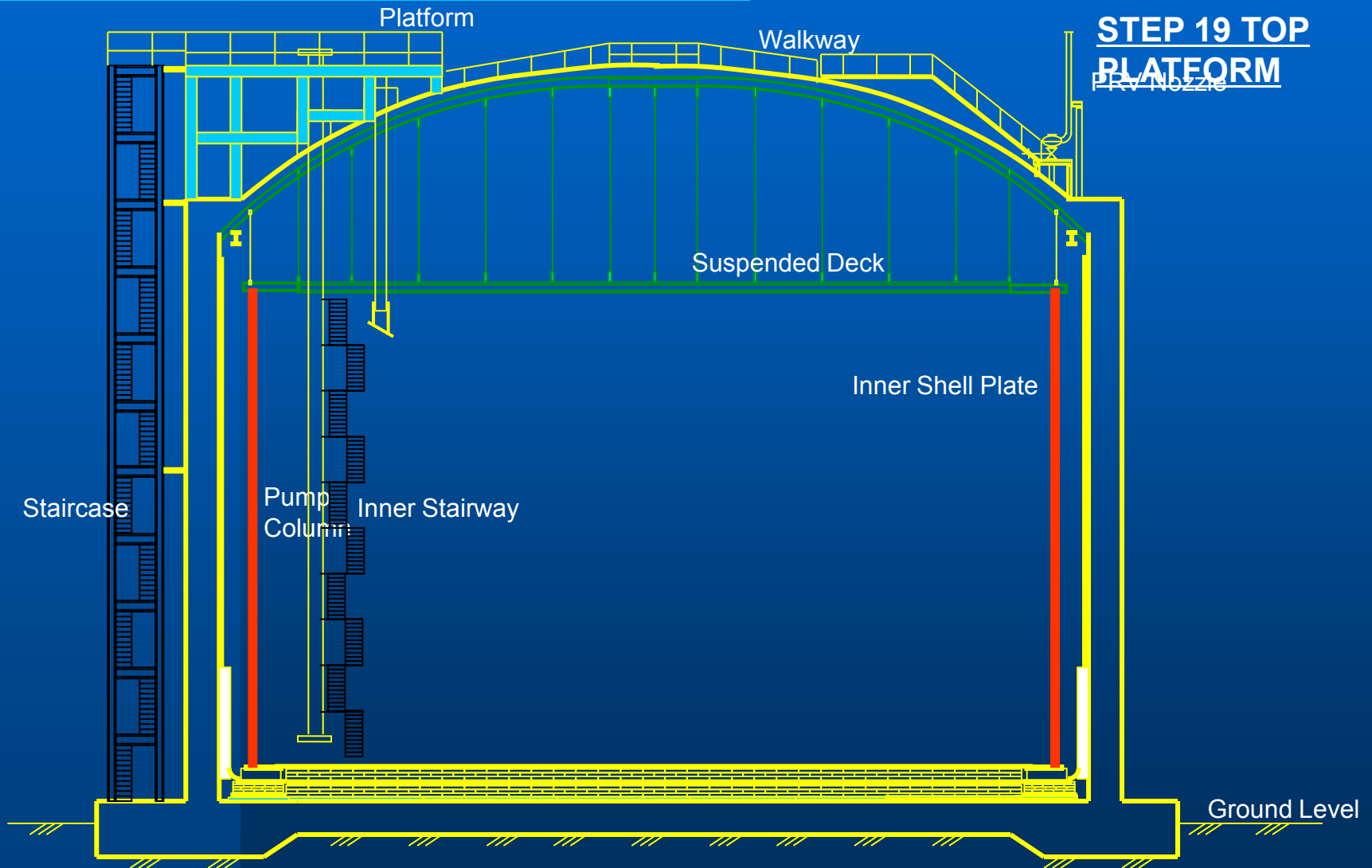
Pumping station



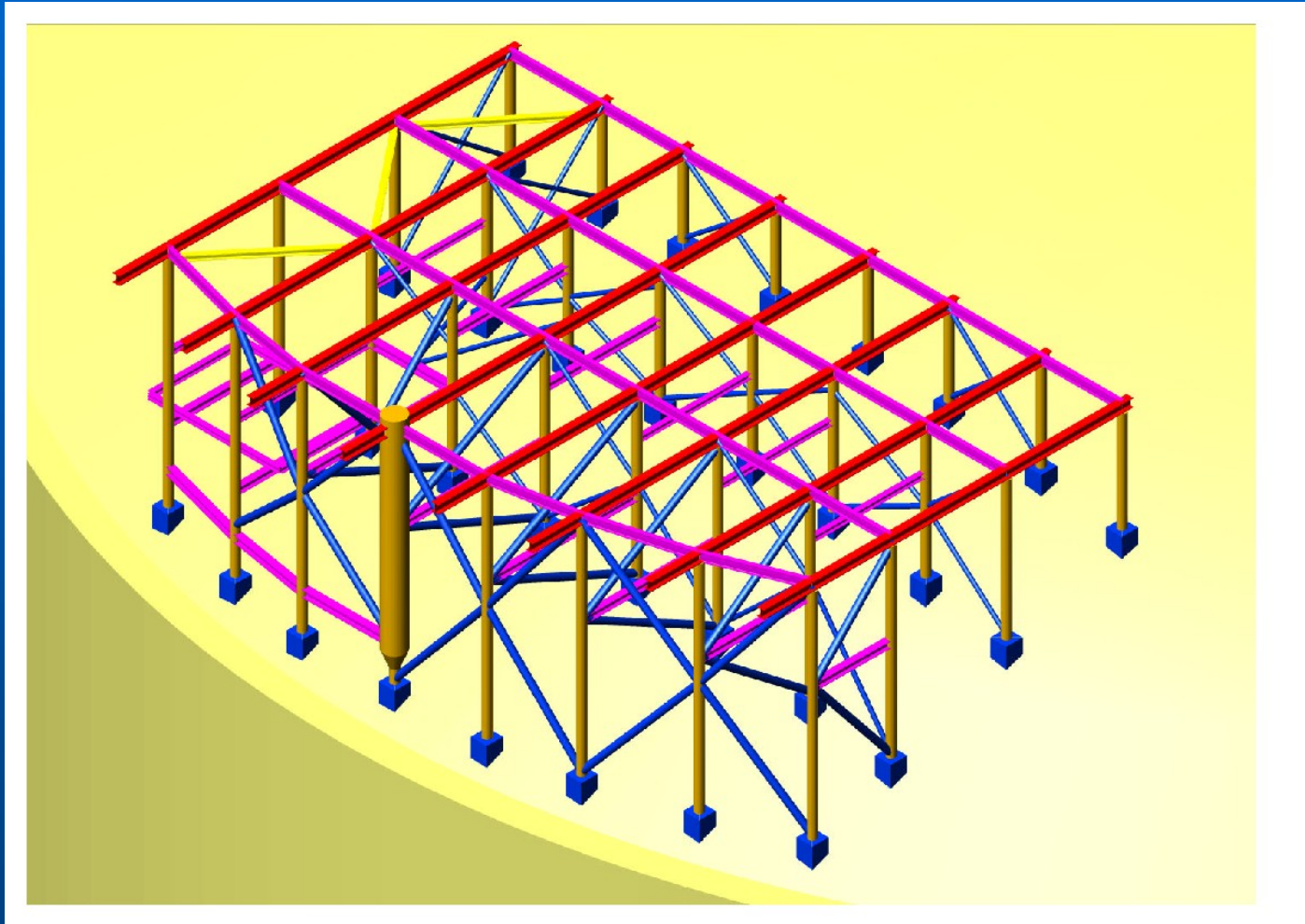
PRESSURE & VACUUM TEST

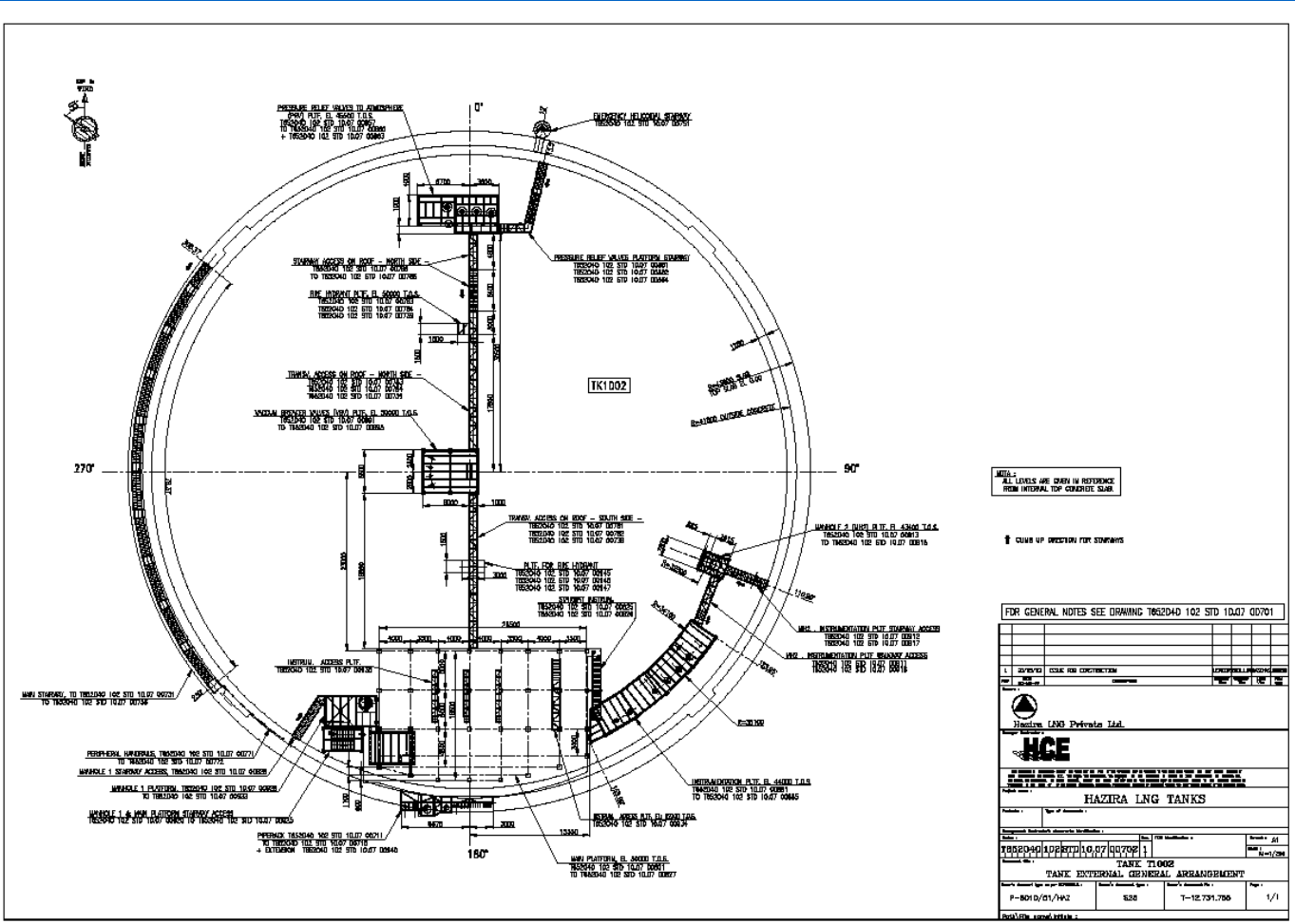


LNG Storage Tanks – erection



Metallic top platform





NOTE:
ALL LEVELS ARE GIVEN IN REFERENCE
FROM INTERNAL TOP EXHAUSTE SLAB

↑ CLEAR UP SECTION FOR STAIRWAYS

FOR GENERAL NOTES SEE DRAWING 7802D40 102 STD 10.07 02/01

NO.	REVISION	DATE	BY	CHECKED

HAZIRA LNG Platform Ltd.

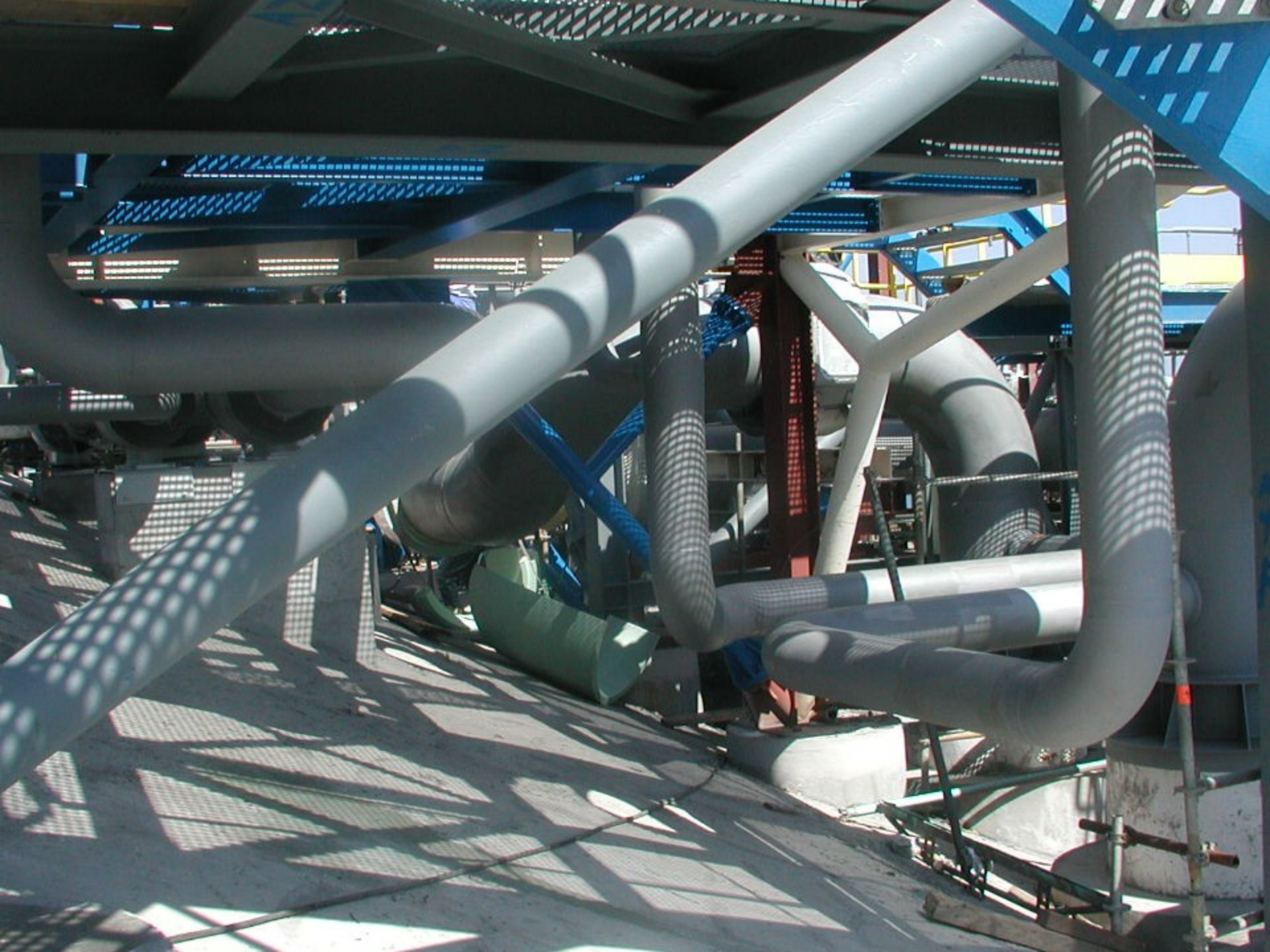


HAZIRA LNG TANKS

Project No.	7802D40	Revision No.	02
Project Name	HAZIRA LNG TANKS	Revision Description	
Client	HAZIRA LNG Platform Ltd.	Scale	1:100
Design No.	7802D40	Sheet No.	02
Design Title	TANK INTERNAL GENERAL ARRANGEMENT	Sheet Total	02/02
Project Manager		Design Date	1-12-2011
Project Engineer		Scale	1:100
Project Designer		Scale	1:100
Project Checker		Scale	1:100
Project Approver		Scale	1:100

MAIN TOP PLATFORM









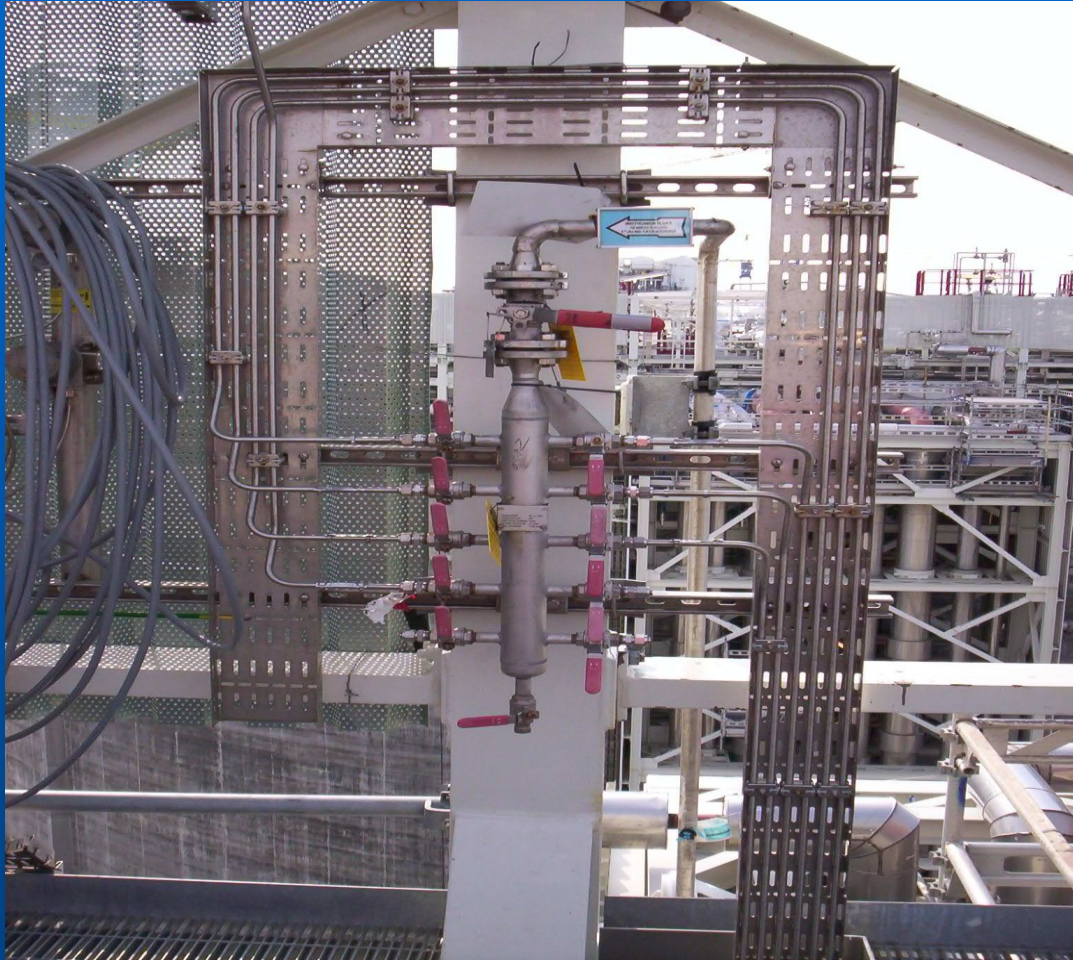






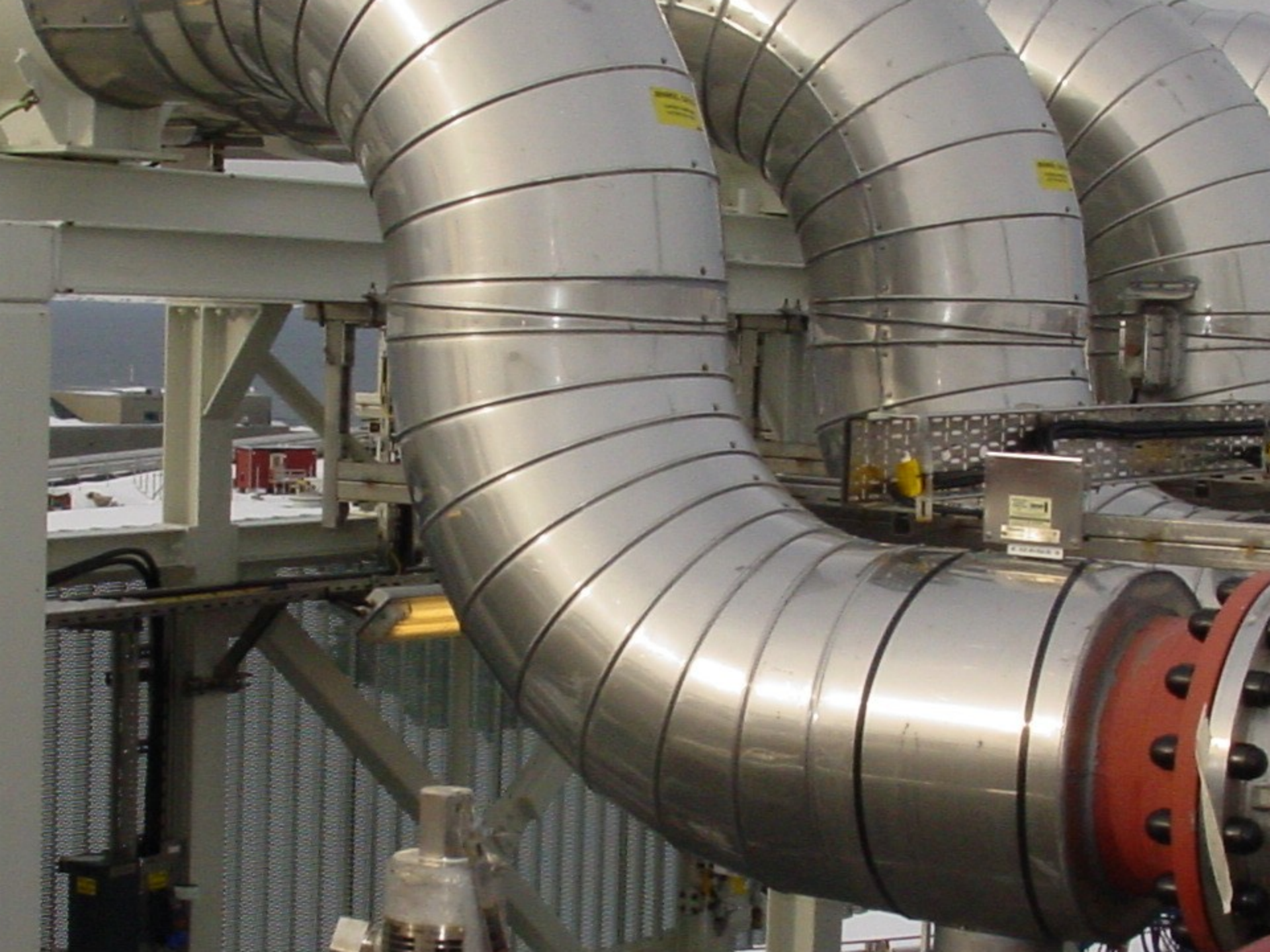
SOFREGAZ

INSTRUMENTATION

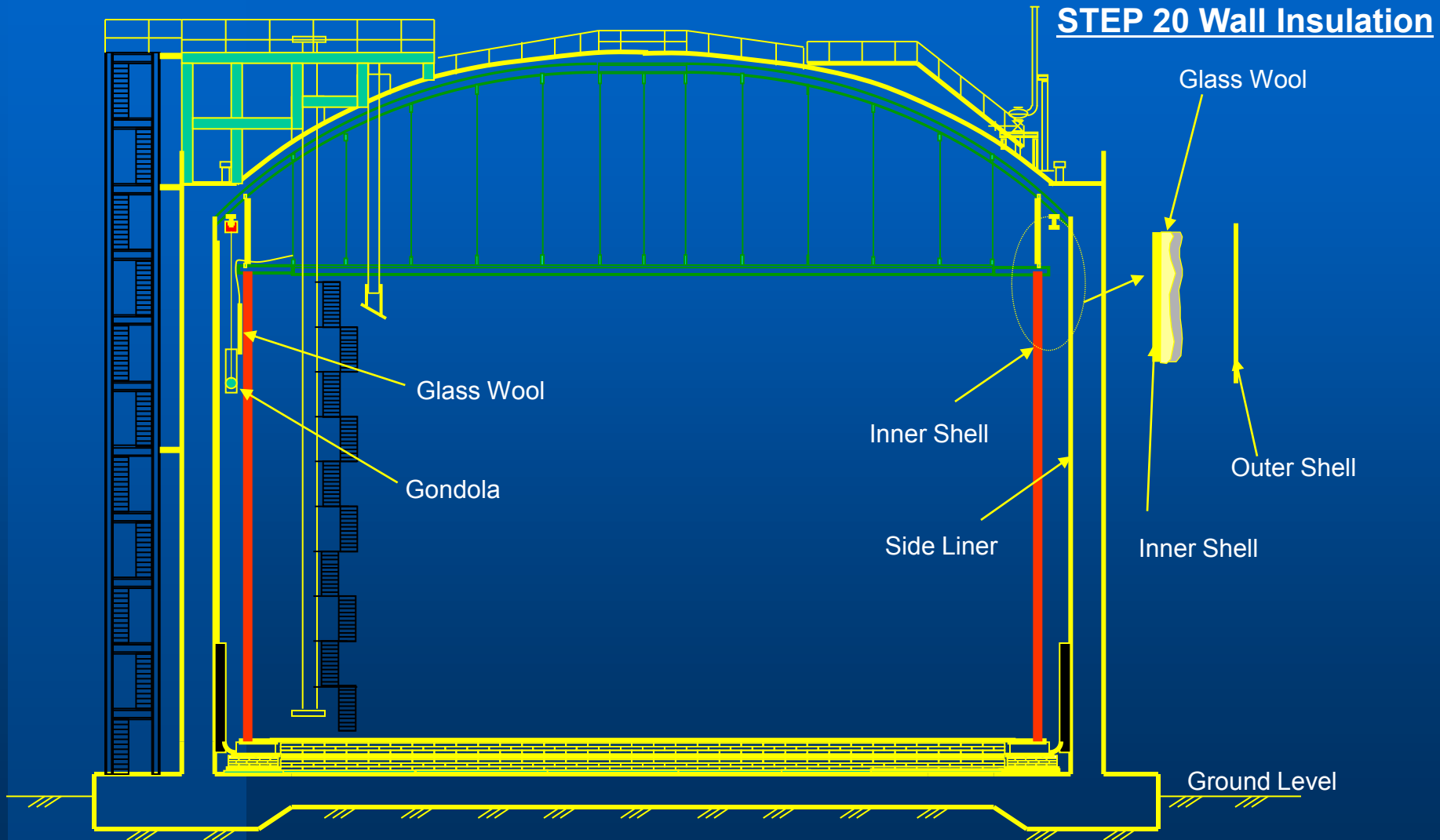


VACUUM VALVES





LNG Storage Tanks – erection



RESILIENT BLANKET

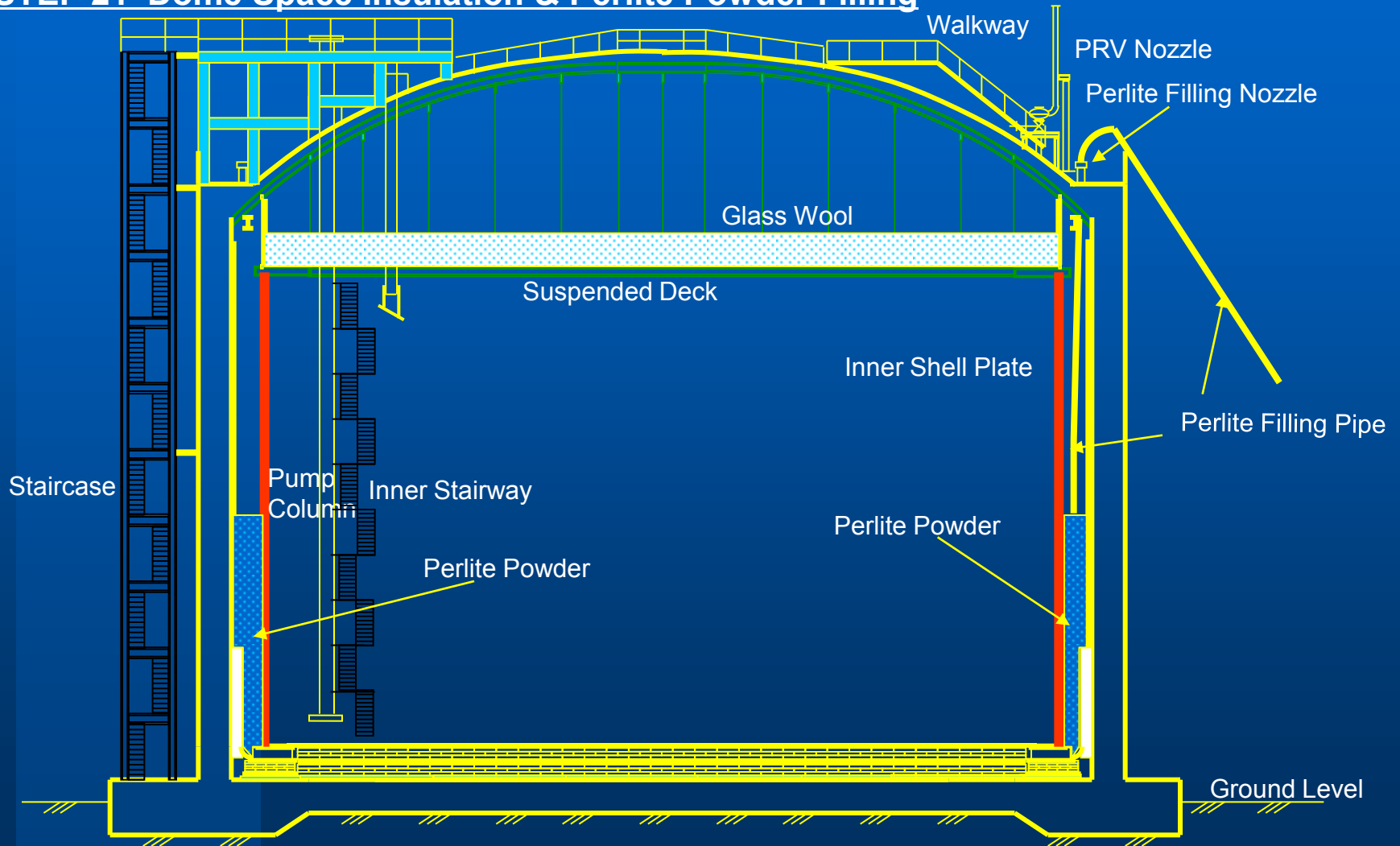


RESILIENT BLANKET

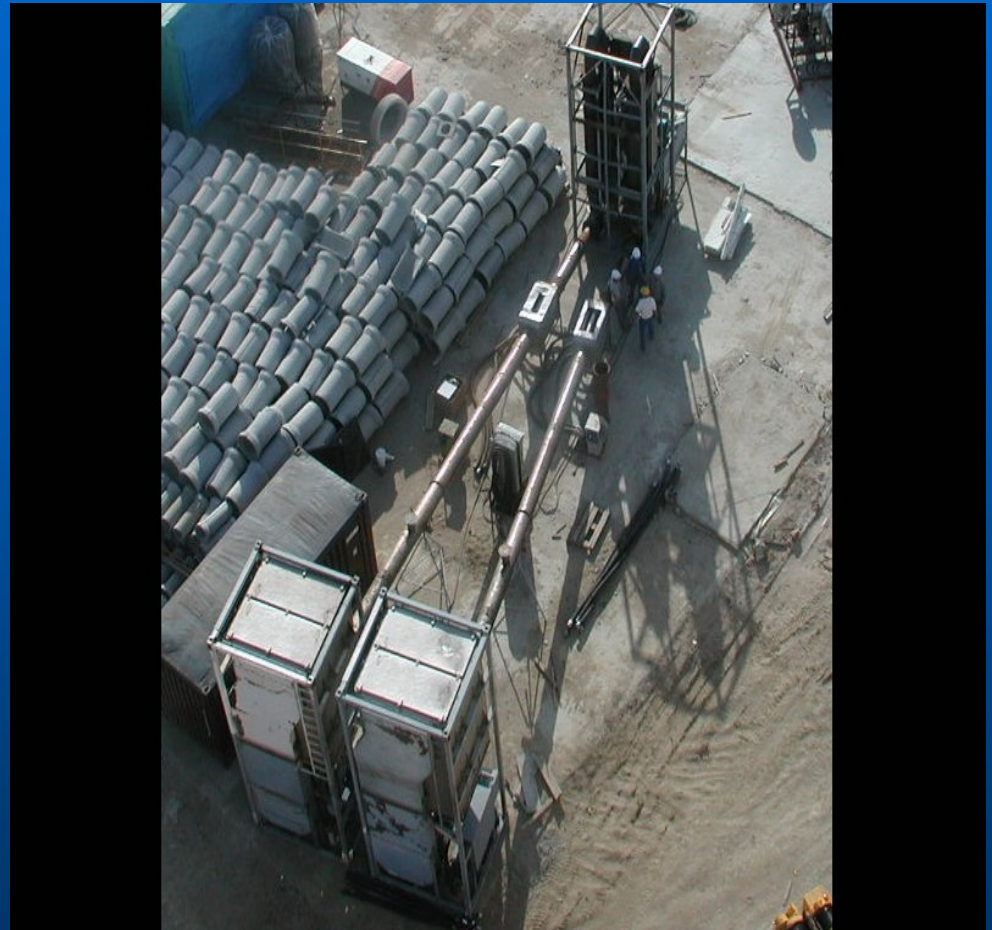


LNG Storage Tanks – erection

STEP 21 Dome Space Insulation & Perlite Powder Filling



PERLITE FURNACE



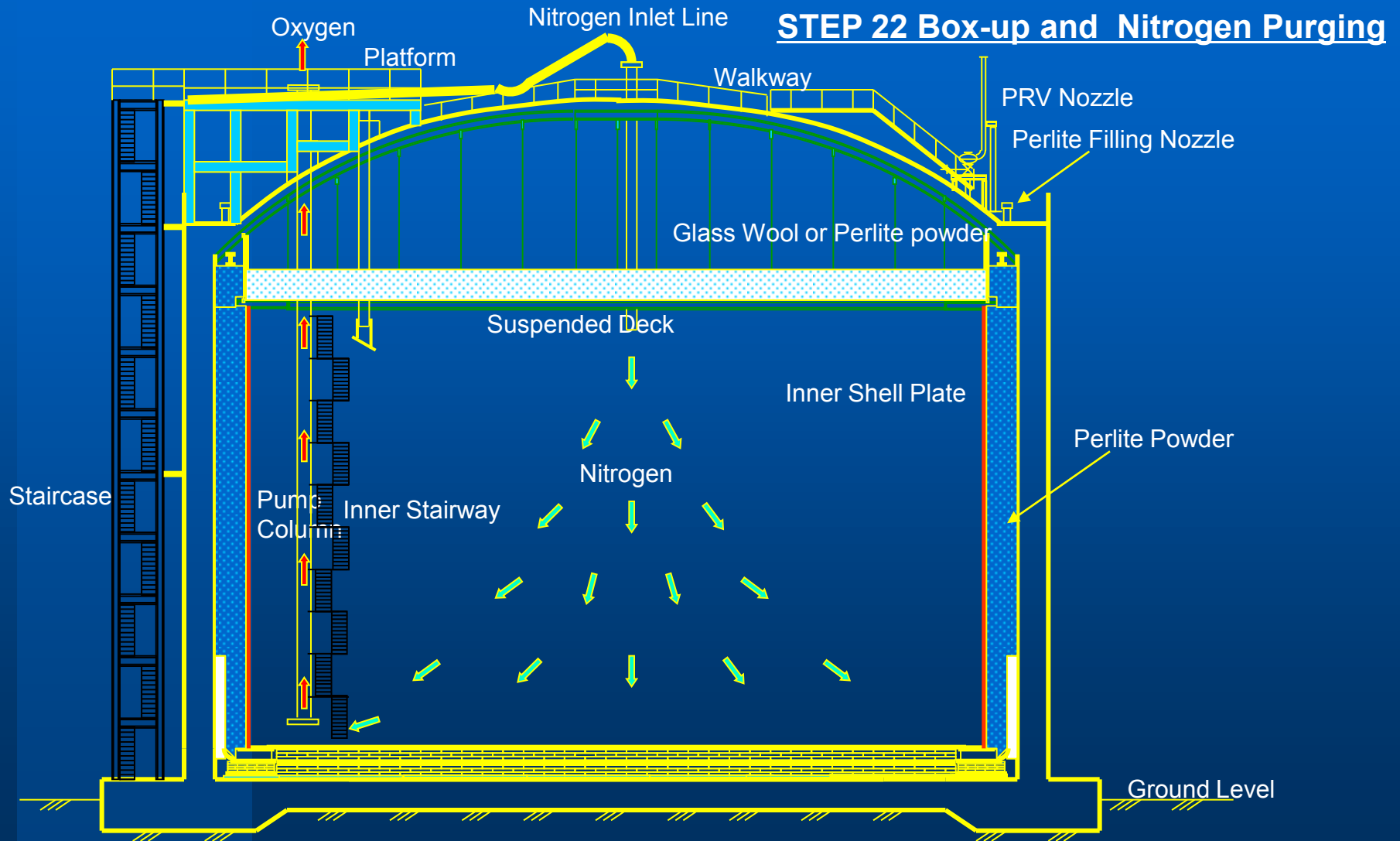
PERLITE VIBRATION & RESERVE



SUSPENDED DECK INSULATION



LNG Storage Tanks – erection



DRYING EQUIPMENT



N2 REGASIFICATION UNIT



O2 ANALYSER & DEW POINT

