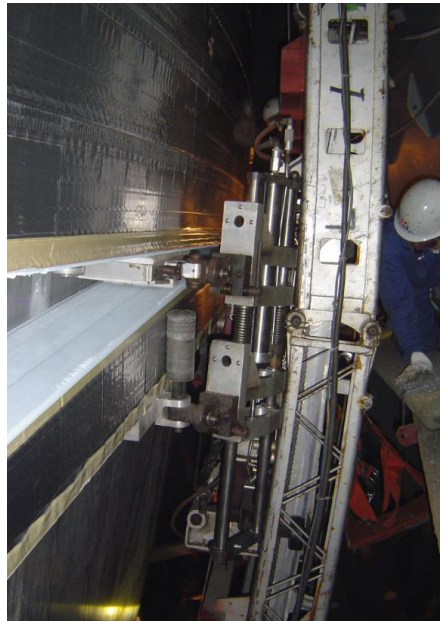


UPGRADE solutions for MOSS tank Panel / SG-Systems

EXPERIENCE FROM ORIGINAL SG- INSULATION APPLICATION



EXPERIENCE FROM REPAIR & UPGRADE



Insulation Upgrade Principles

-Reduced Boil Off %
(from 0.025 to 0.015 or 0.015 – 0.008)

-Renewed Insulation System

-No removal of original insulation layers

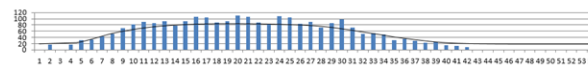
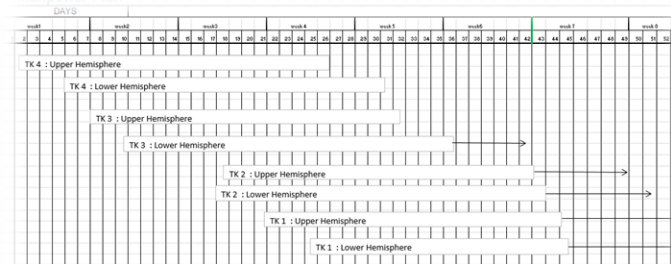
-100% Vapour tight system. Small leak shield rectification

-Reduced Inert Gas Consumption, 100% tight seamless and reinforced outer barrier

-Improved fire retardant

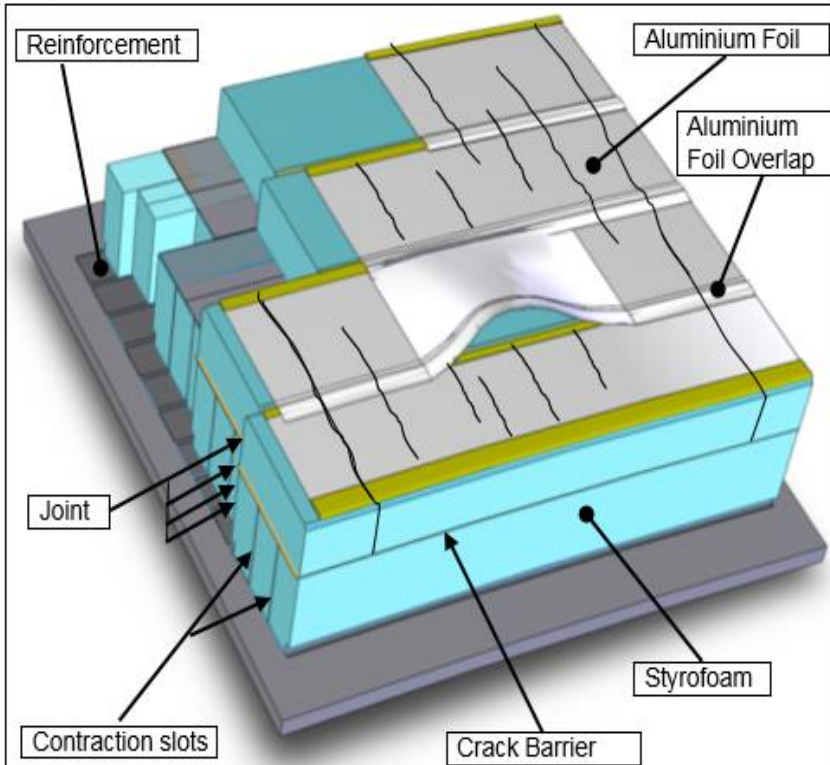
-Efficient Application

-Proven method & materials



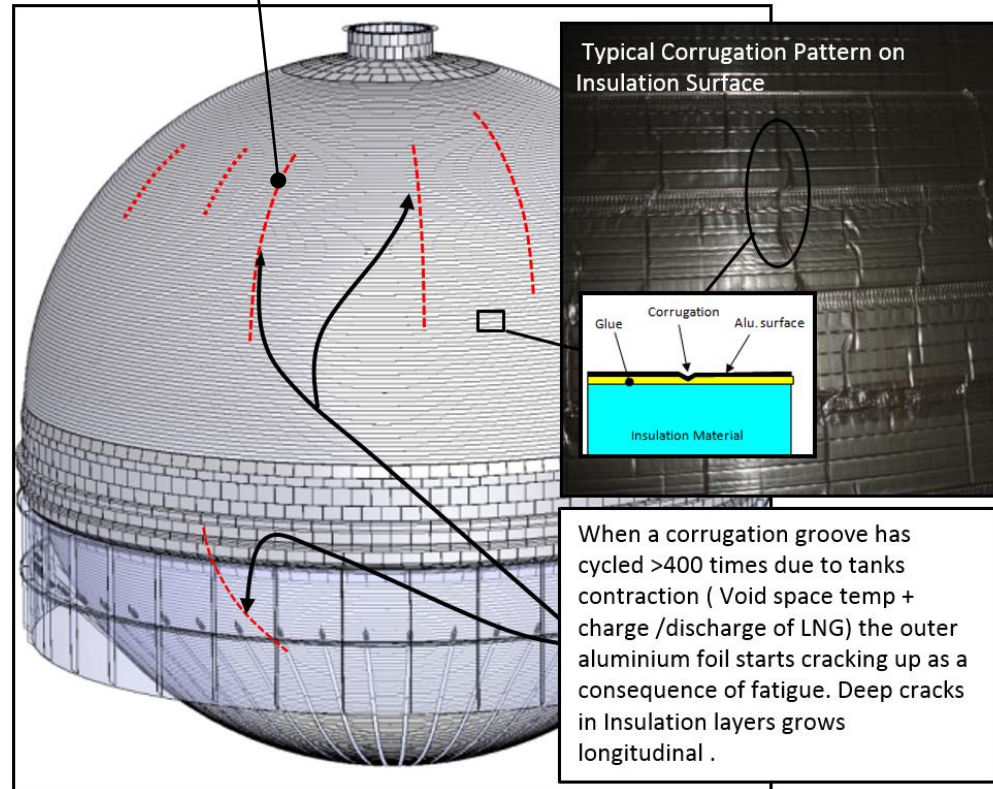
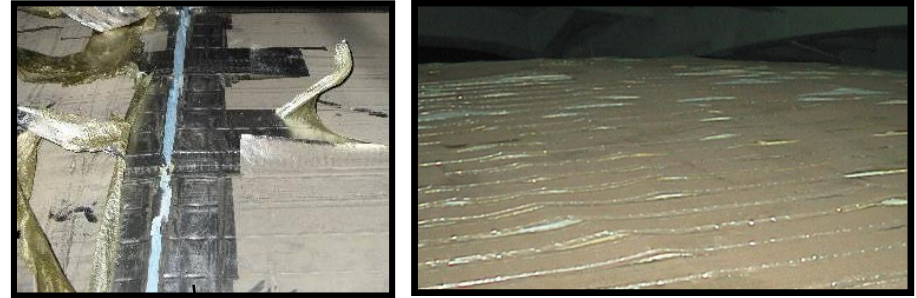
Typical problems with SG- Insulation

Typical insulation arrangement



Aluminum foil is not flexible and its corrugation zones makes cracks in insulation layers after many cycles.

Original Insulation



SG-Insulation, renewal phase 1



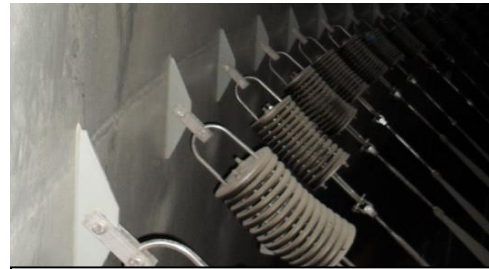
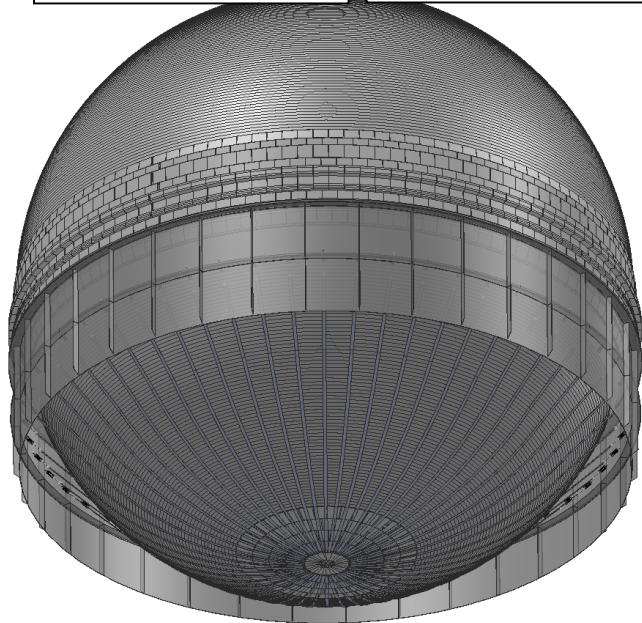
Peel off old outer barrier



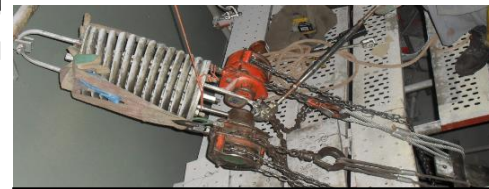
Alu-foil scrap removed from ship



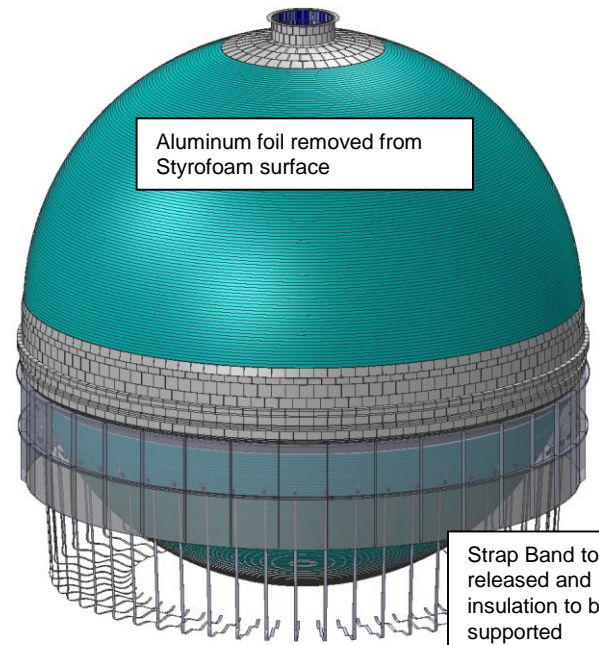
Alu-foil scrap for recycling



Pre-tensioned strap bands ((200t) fixed to inside skirt holding L.H insulation sphere (25t)

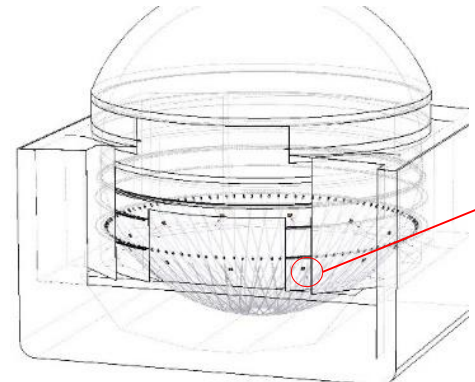


Removal of strap bands to be carried out carefully and replaced with same tension force + added weight of new insulation

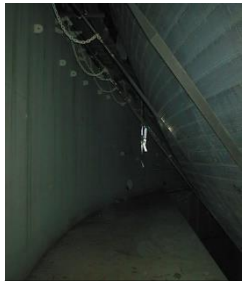


Aluminum foil removed from Styrofoam surface

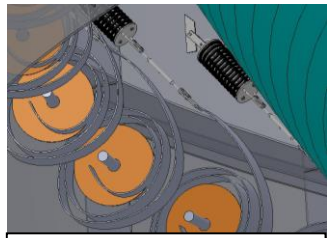
Strap Band to be released and insulation to be supported



Insulation support



Inside skirt view



Full 3d and application handbook for yard scope supply and easy instructions



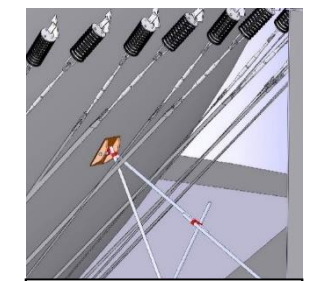
Coils to roll up Strap Band



Coiled up Strap Band

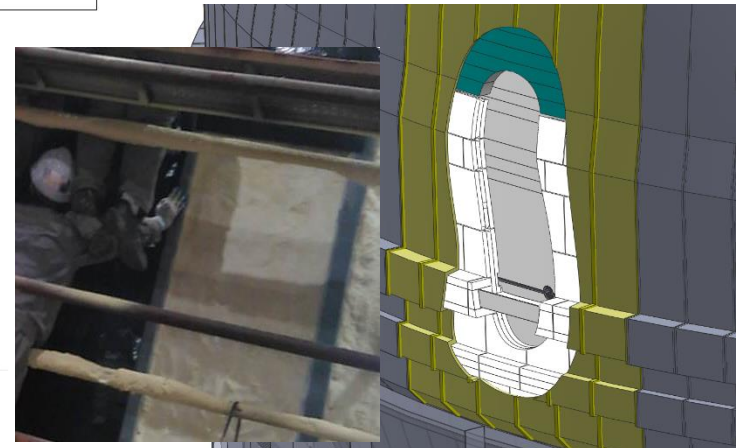
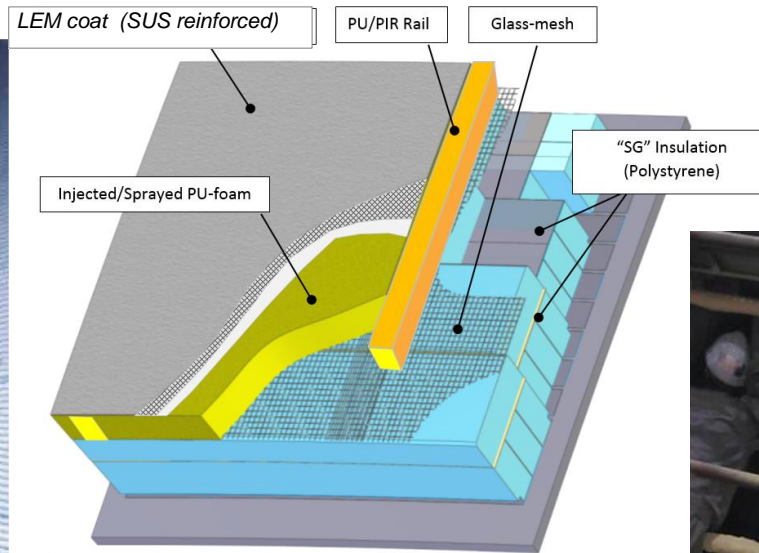
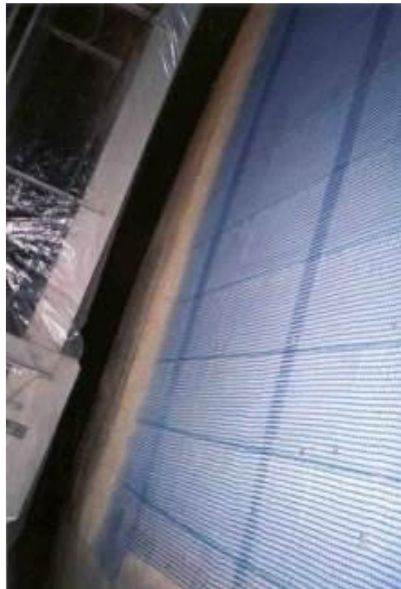
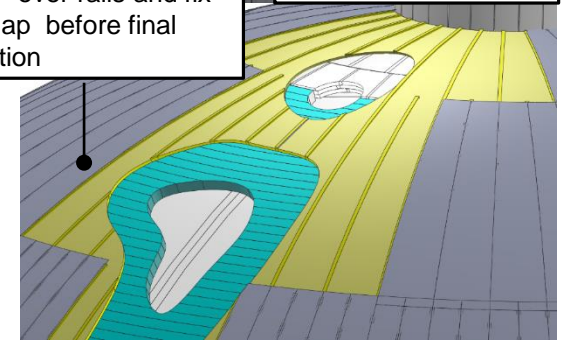
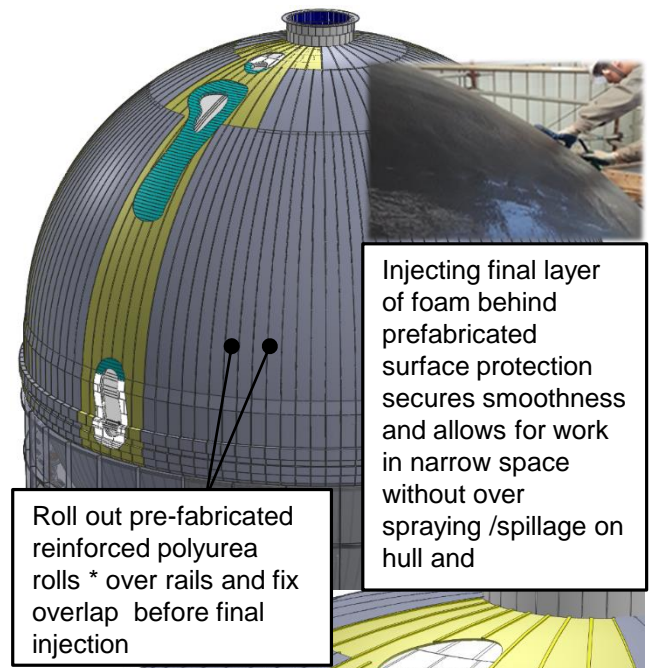
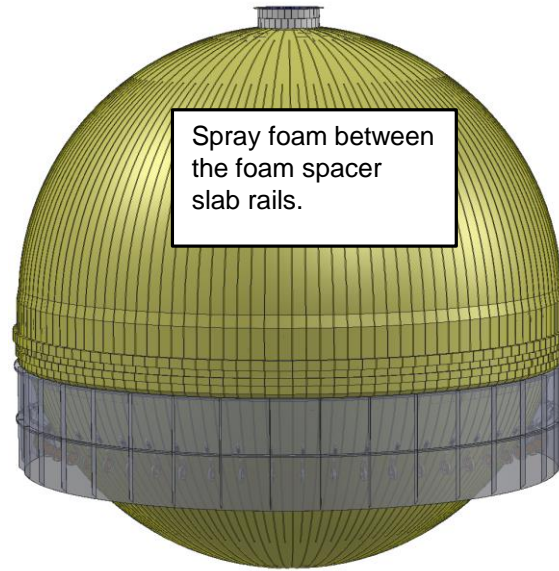
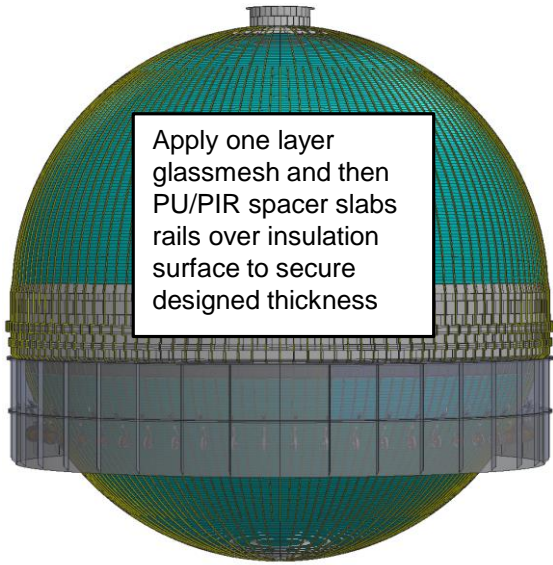


Insulation support

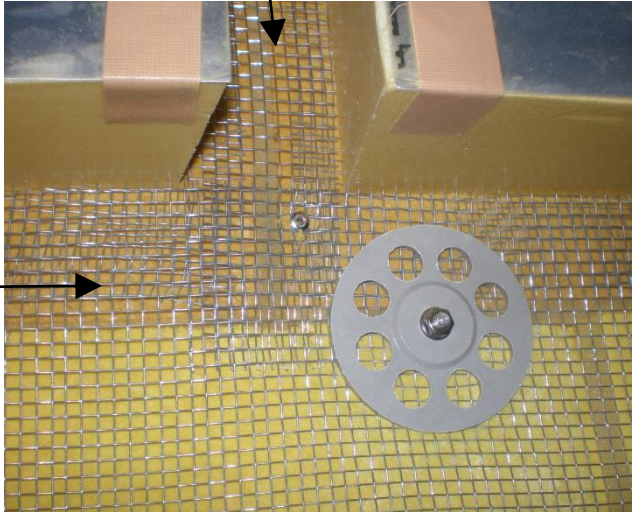
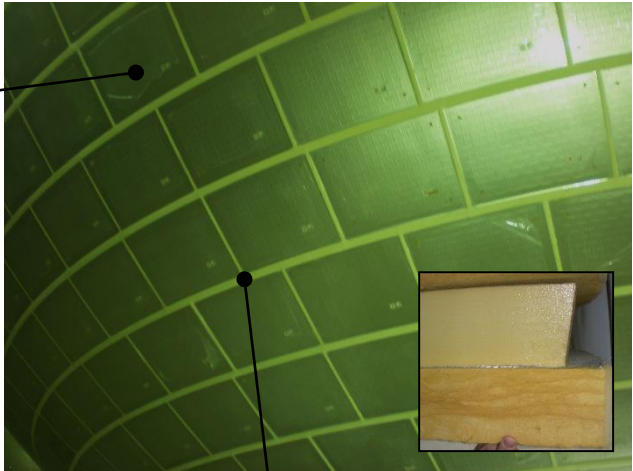
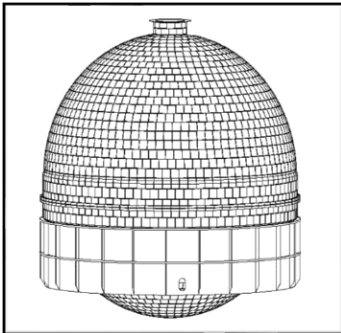
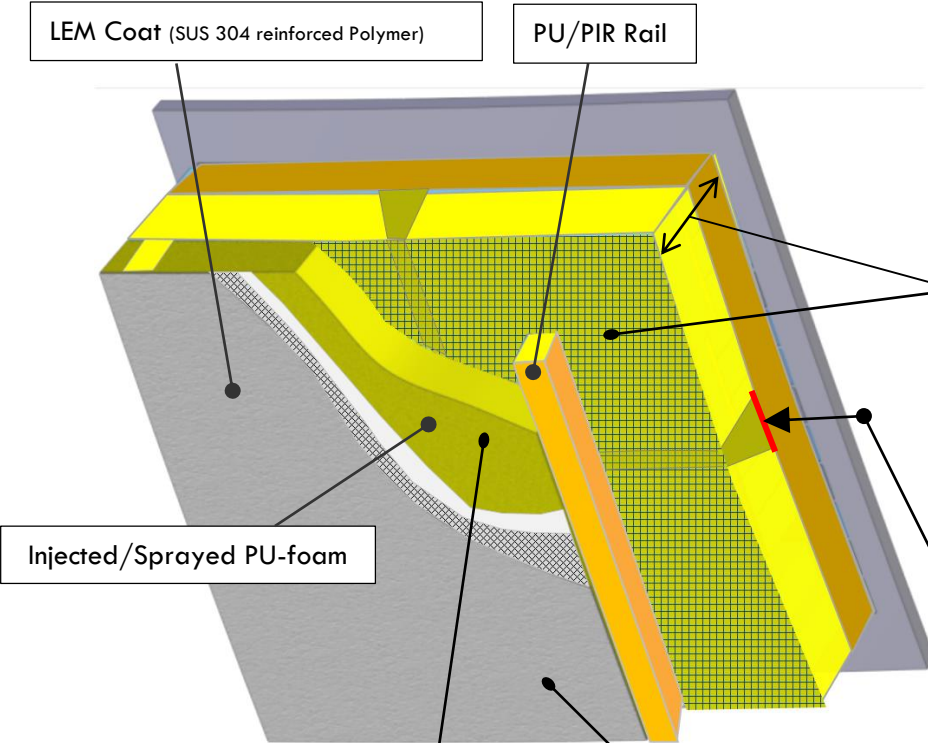


Insulation support 3d

SG-Insulation, renewal phase 2



Panel -Insulation, renewal principles



LEM (Light engineering material)coat by prefabricated rolls Seamless spray foam solution with final foam injection

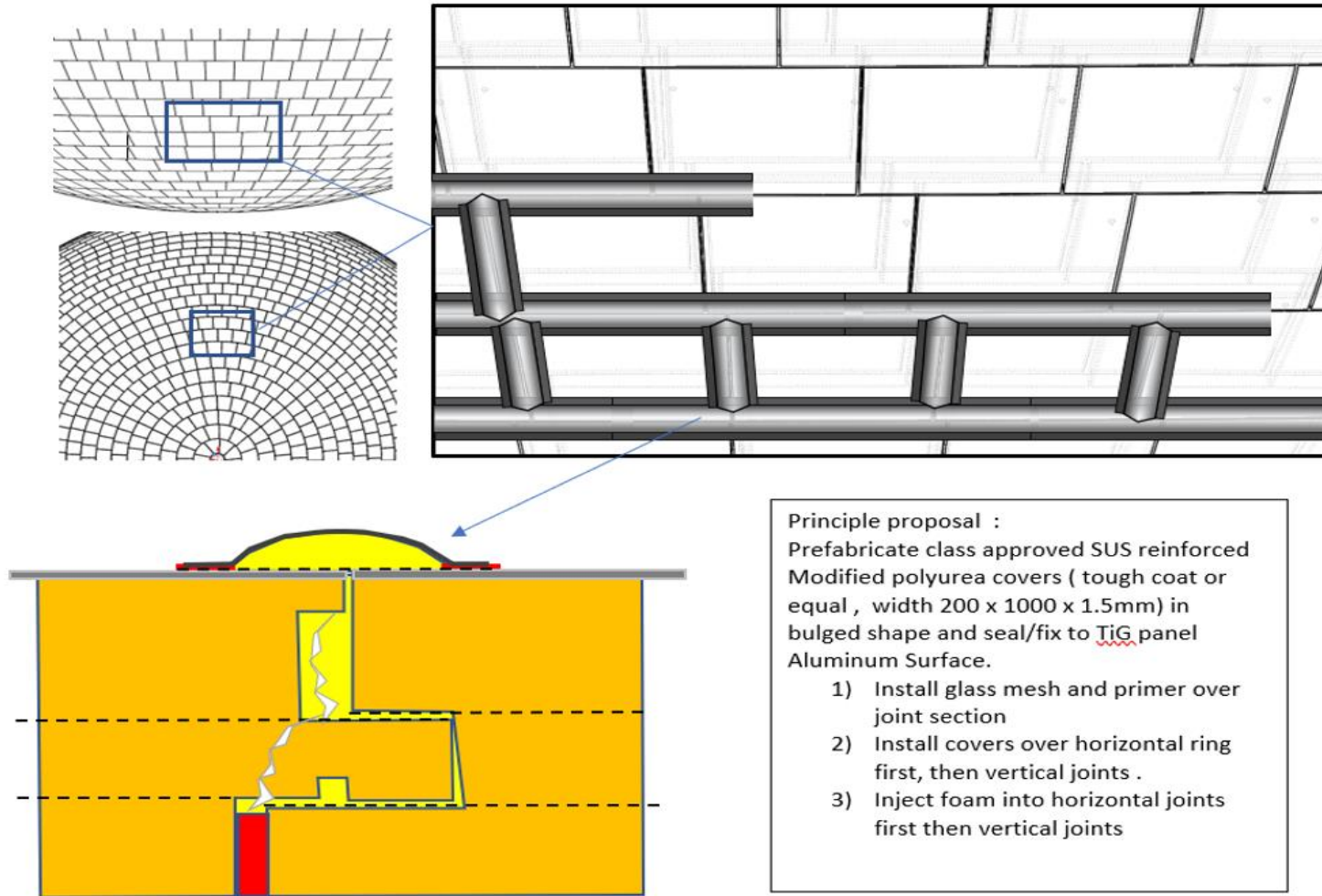
- Factory made LEM rolls with no pinholes sprayed in one layer
- Use's prefabricated foam belt rails as reference plane for fixation Fully bonded / Flexible/ No water accumulation
- Injection foam pretensions and smoothens the system ideal for tanks contraction.
- Optional integtrated Al-Pet foil as vapor barrier in LEM roll
- Smooth surface even applied in narrow space

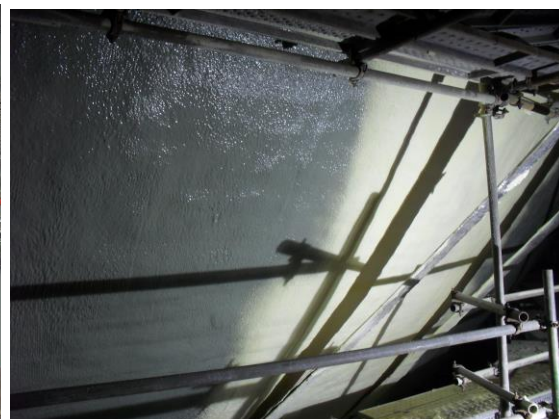


Each prefabricated roll length is 30m x 1m and consist of modified polyurea / SUS mesh and AL-Pet foil

Increased smoothness/ Vapor tightness

TiG panel joint up grade solution





All pictures and 3d's by Mr.Aagaard from various projects. Further detailed information can be obtained by contacting aagaard@gti-cryoservice.com

