

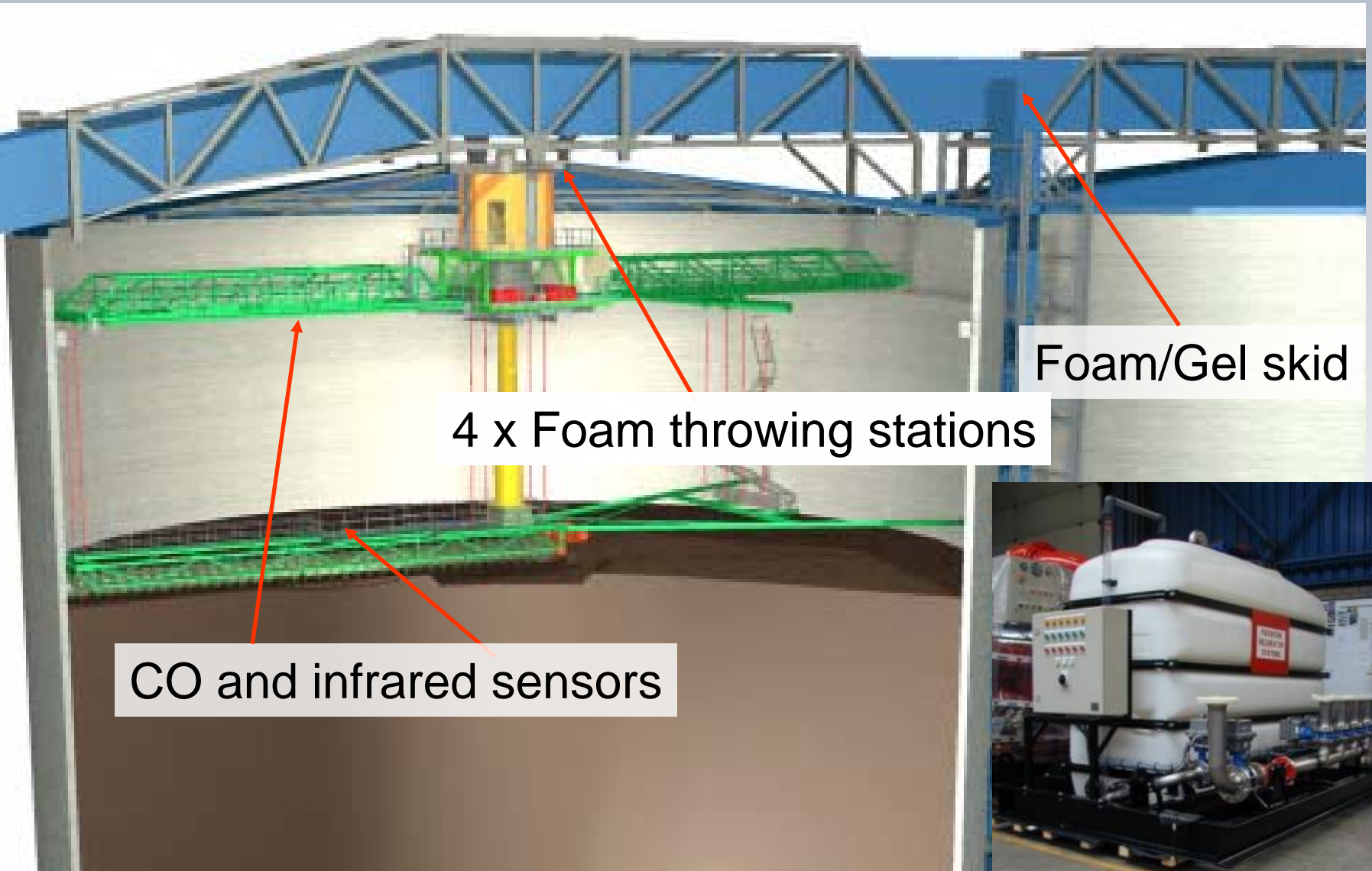
BIOMASS STORAGE IN EUROSILOS



We want to prevent this!!



Wood pellet silo - Safety concept



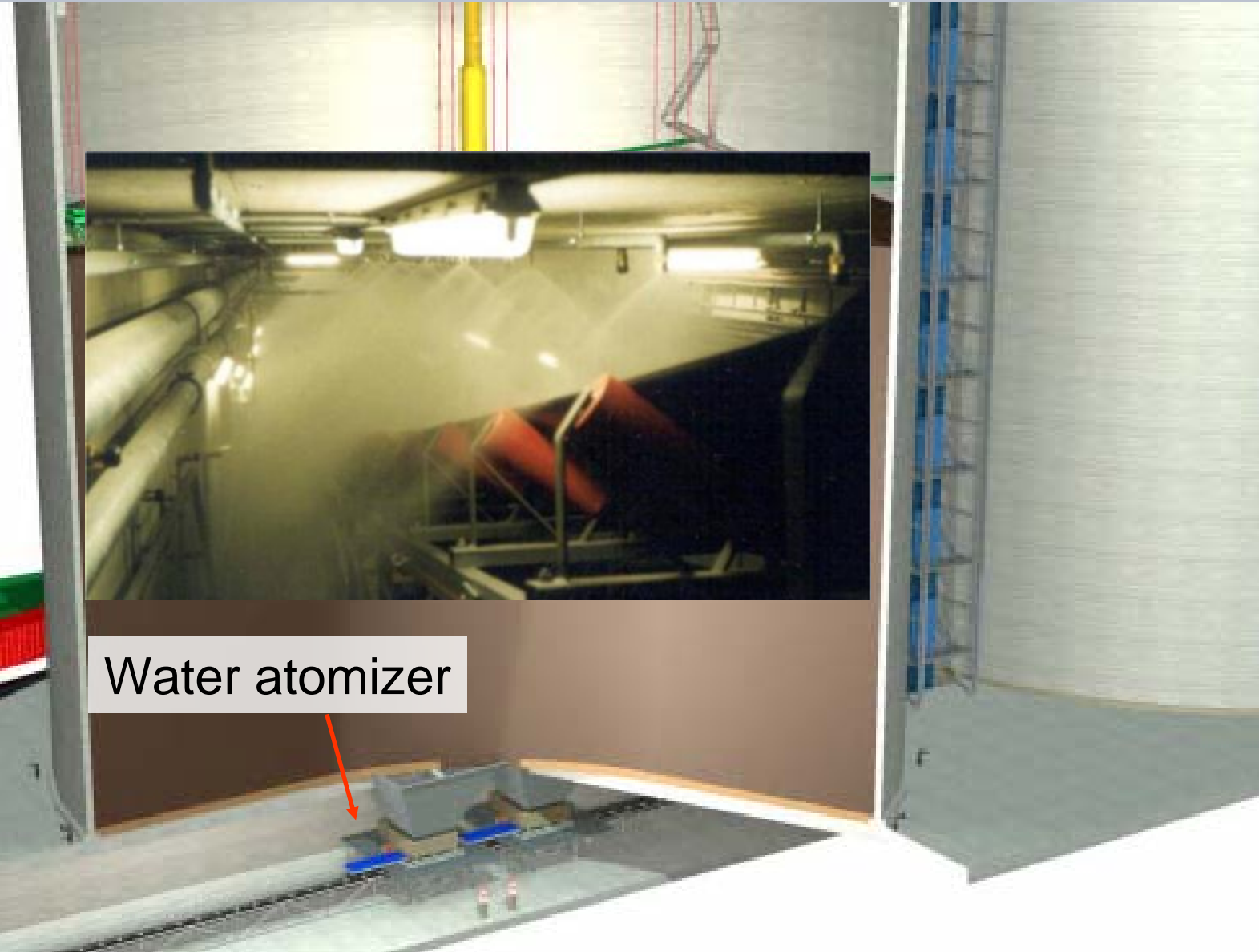
Wood pellets silo – safety concept



Wood pellets silo – fire protection



Water atomizer



Research

- Research together with the University of Delft concerning relevant properties of woodpellets during storage
- Many worldwide studies have been done
- General conclusion so far:
 - Condition of woodpellets differ all the time due to moisture content, type of wood being used, temperature etc.
 - **CONTROLLING THE WOOD PELLETS IN THE SILO IS A MUST!!!**

ESI EUROSILLO

- Independent Dutch company with more than 30 years of experience, 120 silo's around the world.
- The storage capacity up to 100,000 m³ and meets requirements of environmental protection agencies worldwide.
- Turnkey delivery or partly local supply.
- ESI Eurosililo is ISO 9001:2008 Certified
- Engineering studies (feasibility, basic and detailed)

Bulk products stored in Eurosilos

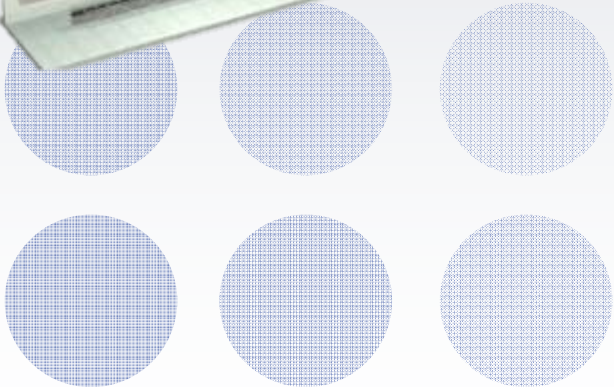
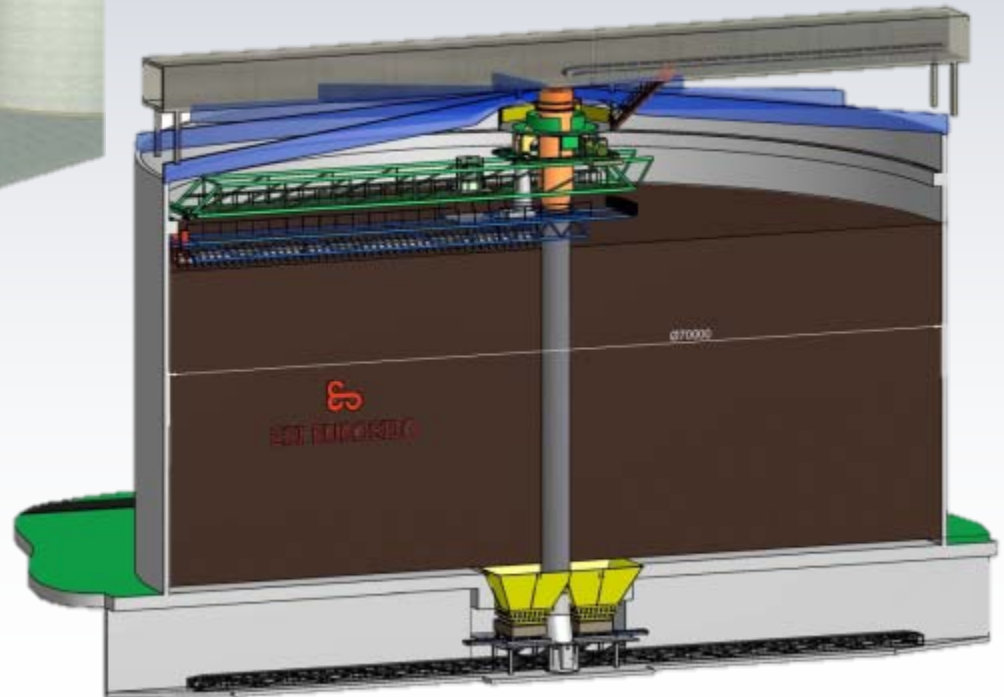
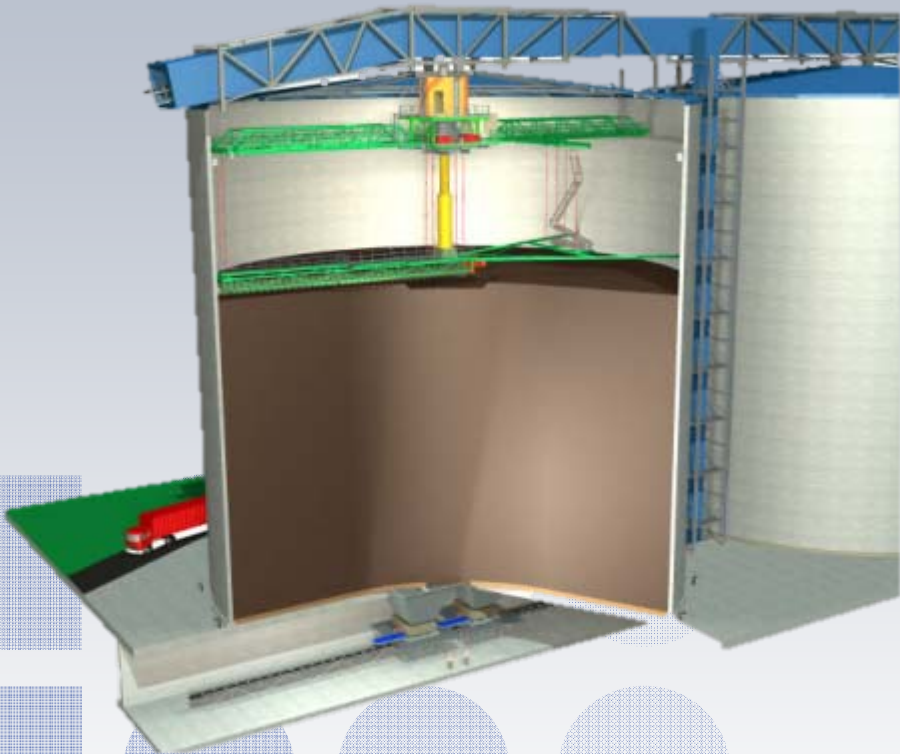
■ Power Plants

- FGD Gypsum
- Coal
- Wood pellets
- Limestone

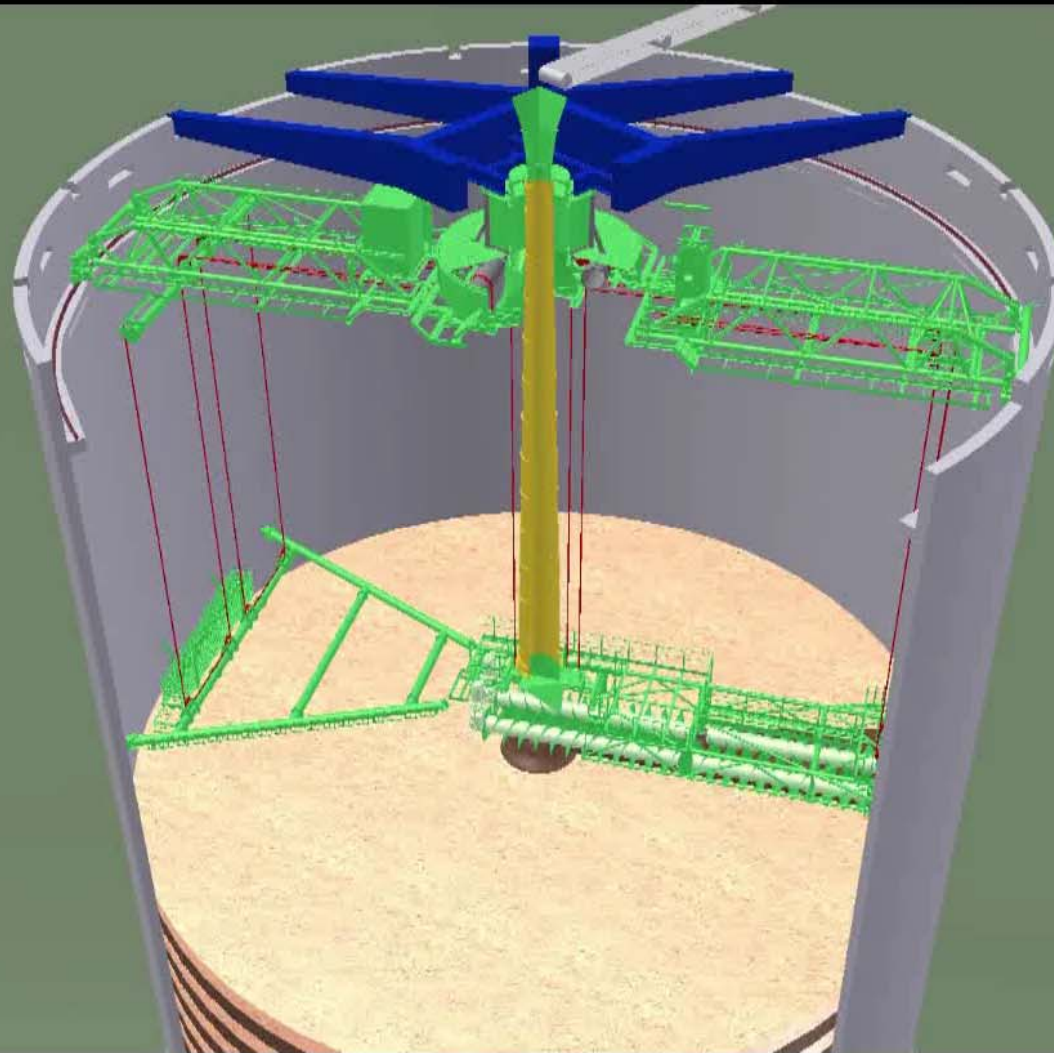
■ Chemical Plants and Agribulk

- Common salt
- Mineral salt
- Fertilizer
- Potato starch

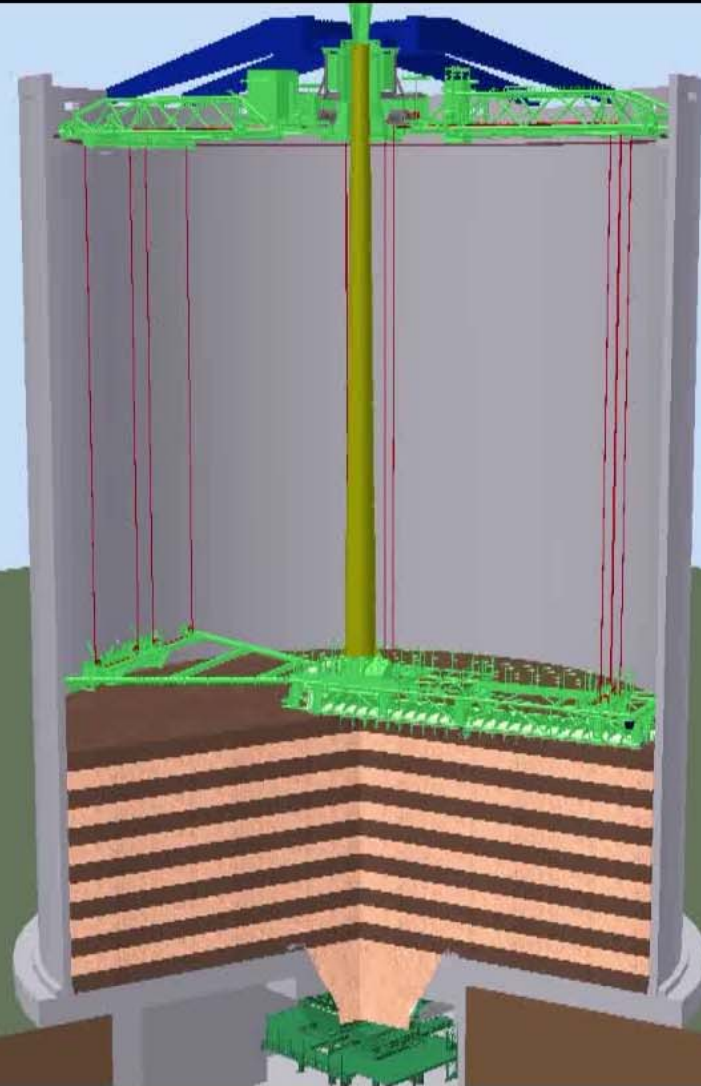
Wood Pellets – General Arrangement



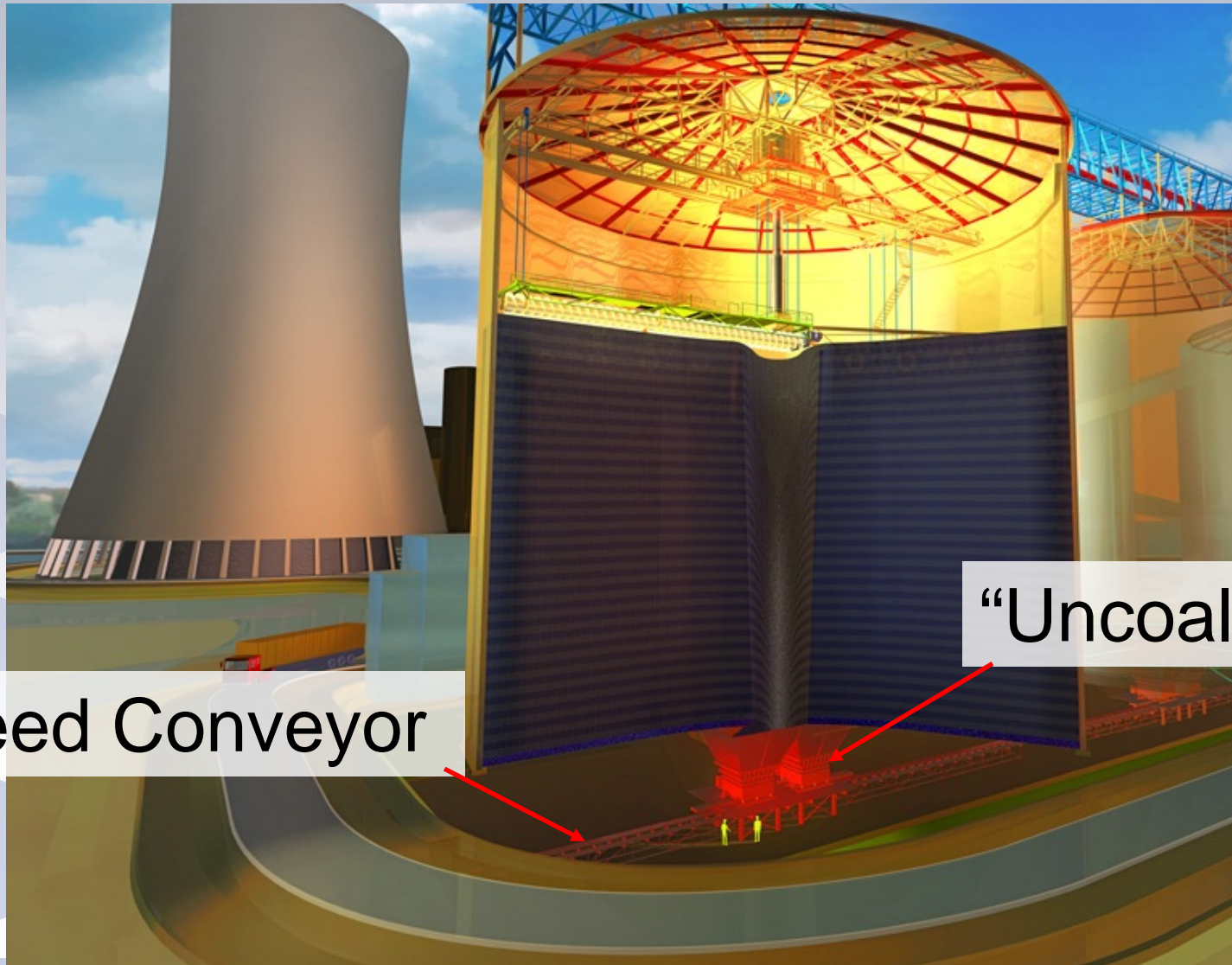
WOOD PELLET – INFEED principle



Wood pellet silo – outfeed principle



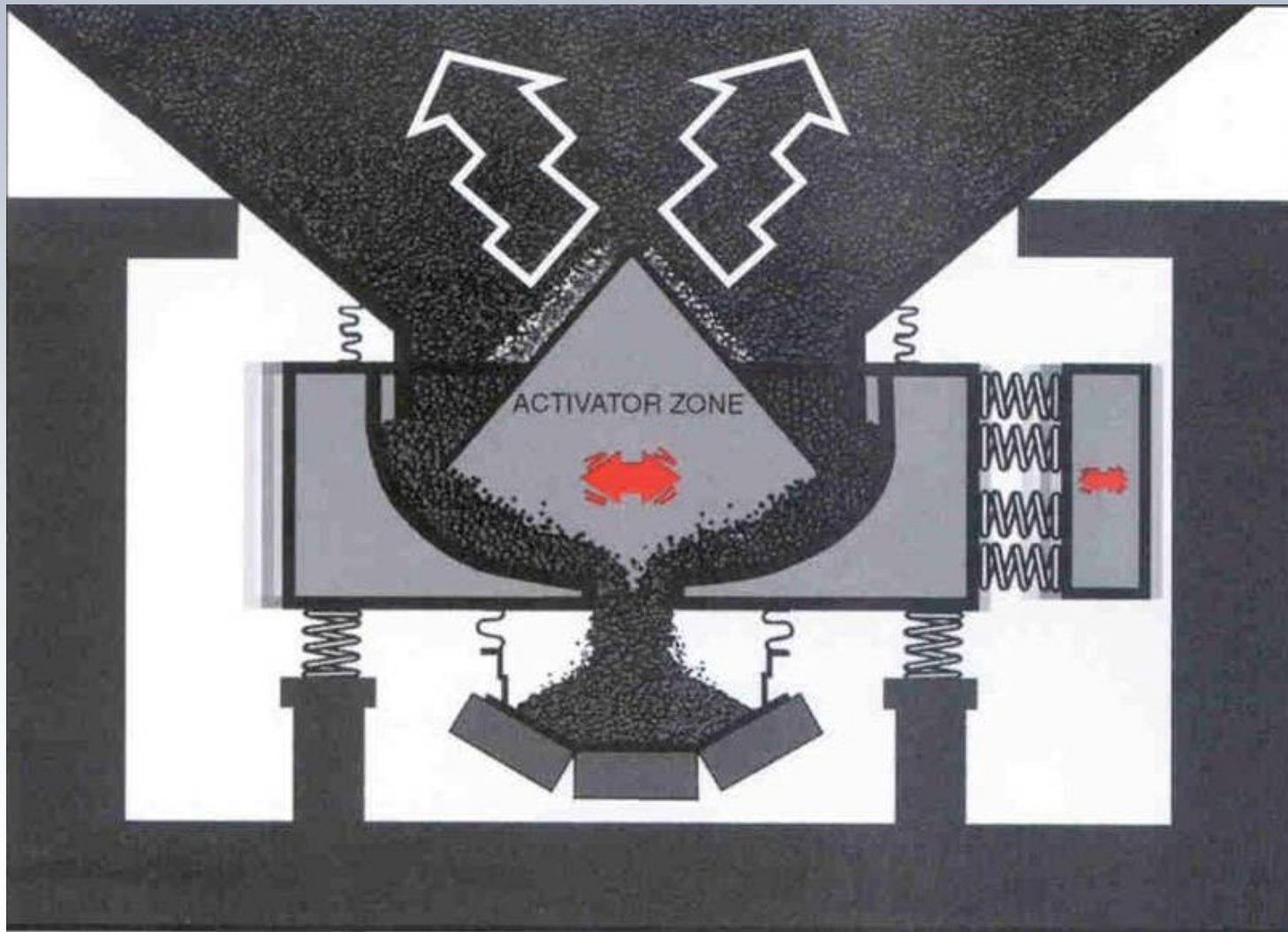
Wood pellet Silo Outfeed principle



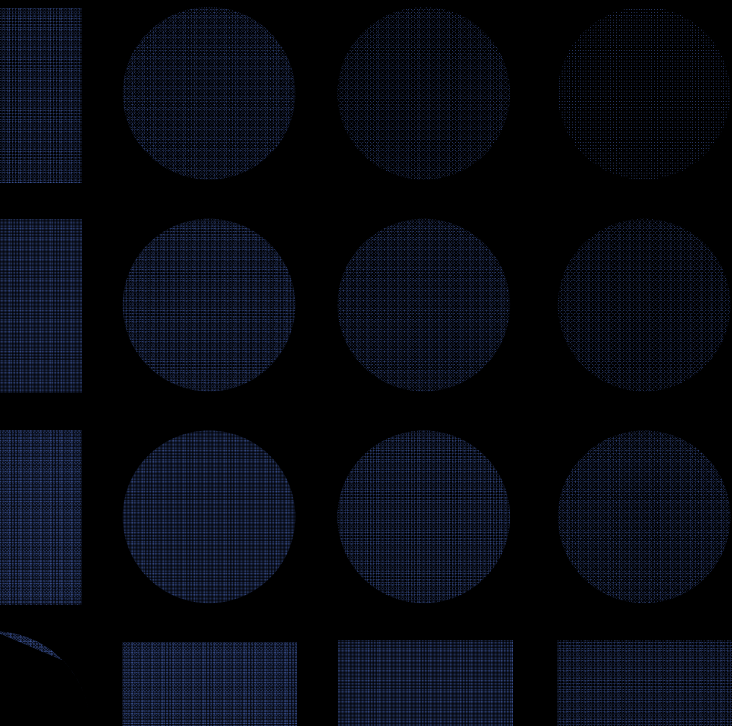
Outfeed Conveyor

“Uncoalers”

Wood pellet silo – “Uncoaler”



Wood pellet silo – “Uncoaler”



SALMISAARI HELSINKI FINLAND



Salmisaari: system underground

63,000 m³ coal



Salmisaari: system underground



people

TRIANEL LÜNEN GERMANY



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US Dept of State
© 2010 Europa T

50°54'33.88" N 7°42'49.72" O verh. 258 m

Ooghoogte

TRIANEL LÜNEN – OUTSIDE OVERVIEW



TRIANEL LÜNEN – INSIDE VIEW



TRIANEL LÜNEN



Storage and handling of Woodpellets

- Criteria for choosing Eurosilos system:
 - Keep the stored material dry
 - Minimize the reaction with oxygen
 - Minimize dust
 - Able to store high volume of material with minimum land use
 - Precautions for dust explosions equal to coal
 - 30 years of experience

In cooperation with:

Delft University of Technology, Department of Marine and Transport Technology

Thank you for your attention!!