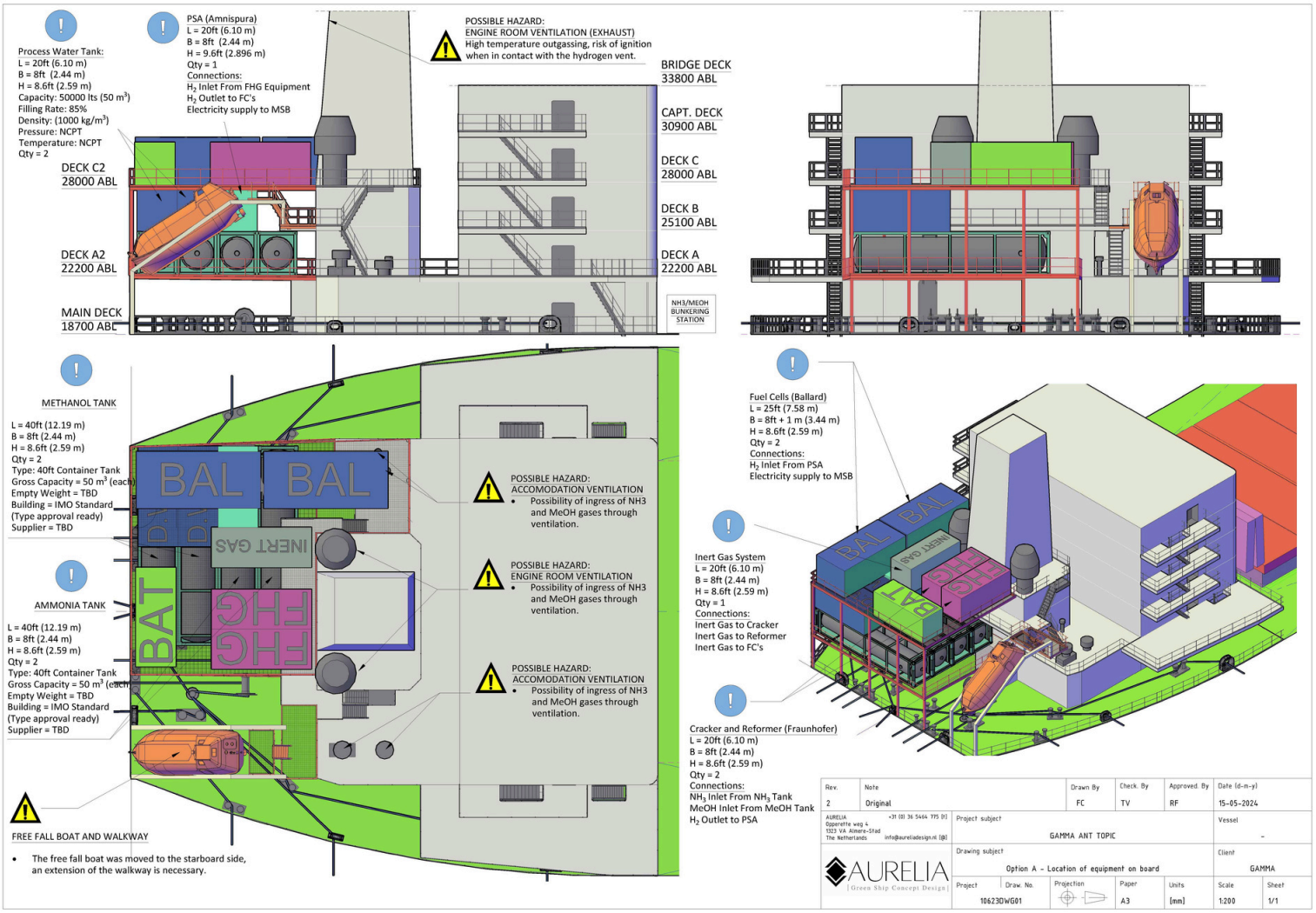
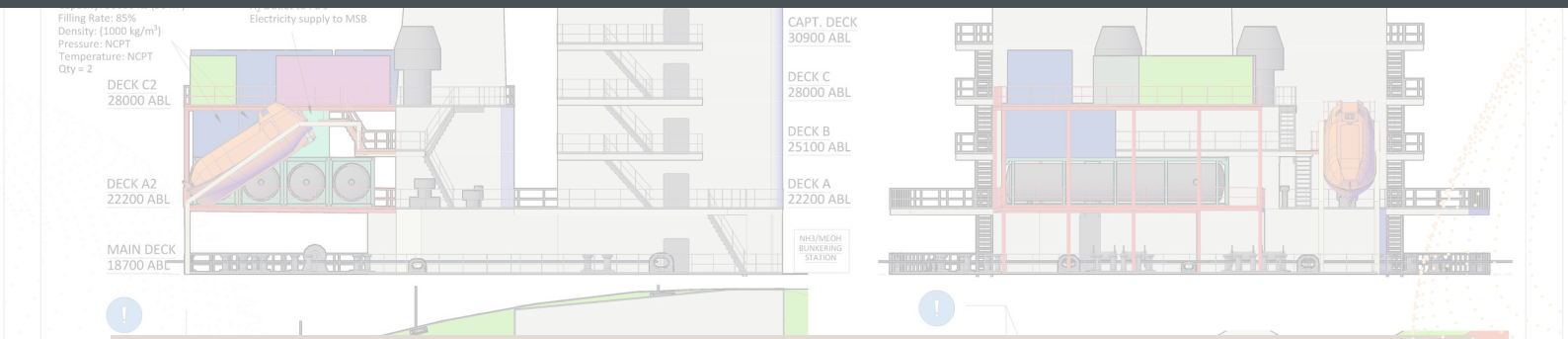
Do you know the best retrofit design strategy?

Ammonia, Methanol and Hydrogen on 1 vessel is finally possible!

3 solutions from AURELIA!



Option A: at stern

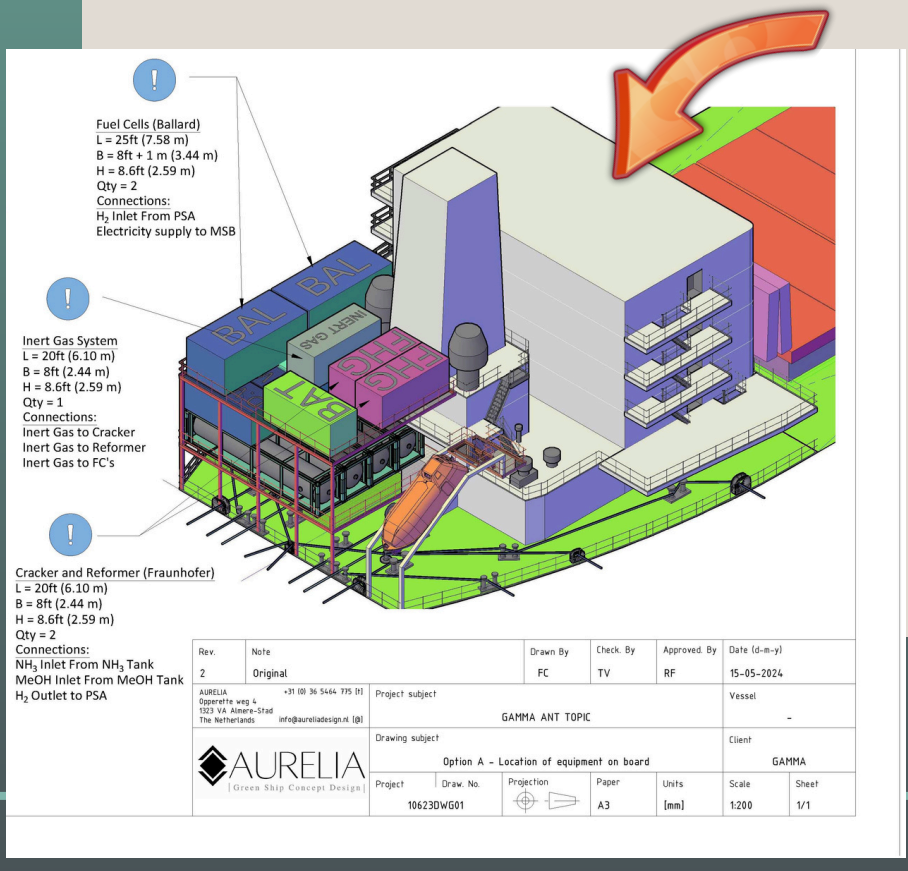


Option A: at stern

- Ammonia Tank type: 40ft container
- BioMethanol Tank type: 40ft container

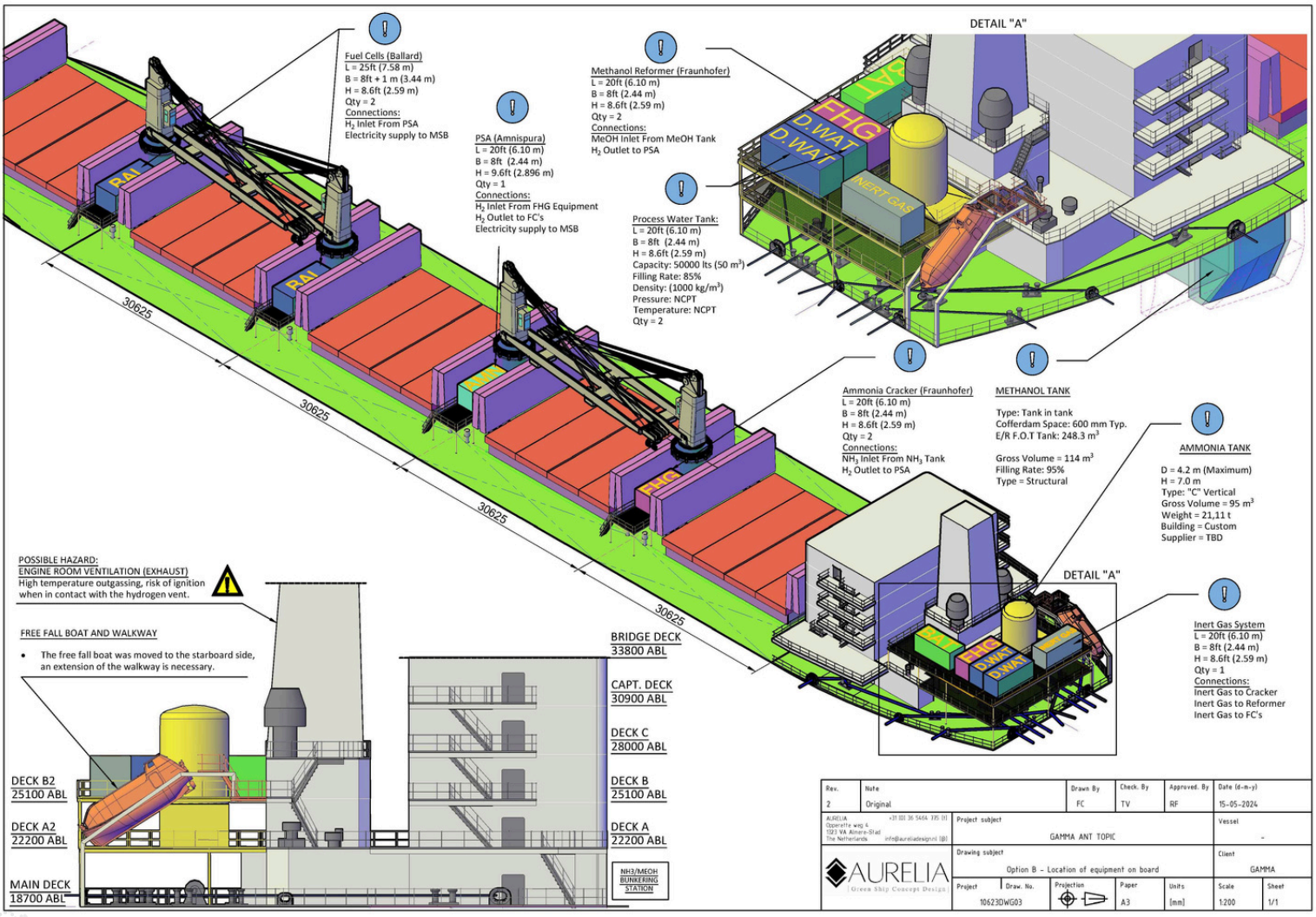
The location of new equipment and the ammonia and methanol tanks (both container type) will be concentrated at the stern of the ship. This will include a design and development of a new platform with two levels, taking into consideration the existing platform used for provision cranes and lifeboats. Ammonia and methanol tanks are located on the first level. This option, although easy to install and integrate, required repositioning of safety evacuation equipment.

Above the ammonia and methanol tanks are positioned the two containers for the process water used in the methanol reforming and for the PSA units.



On the second level are located the new technology containers for reforming methanol and cracking ammonia. The obtained hydrogen will be purified in PSA unit and used for the fuel cell, also located on the top level of the new platform.

Option B: at midship

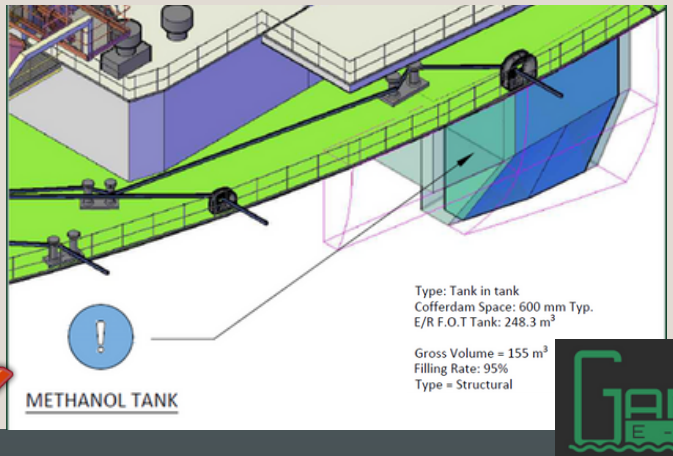


- Ammonia Tank type: 40ft container
- BioMethanol Tank type: Structural type

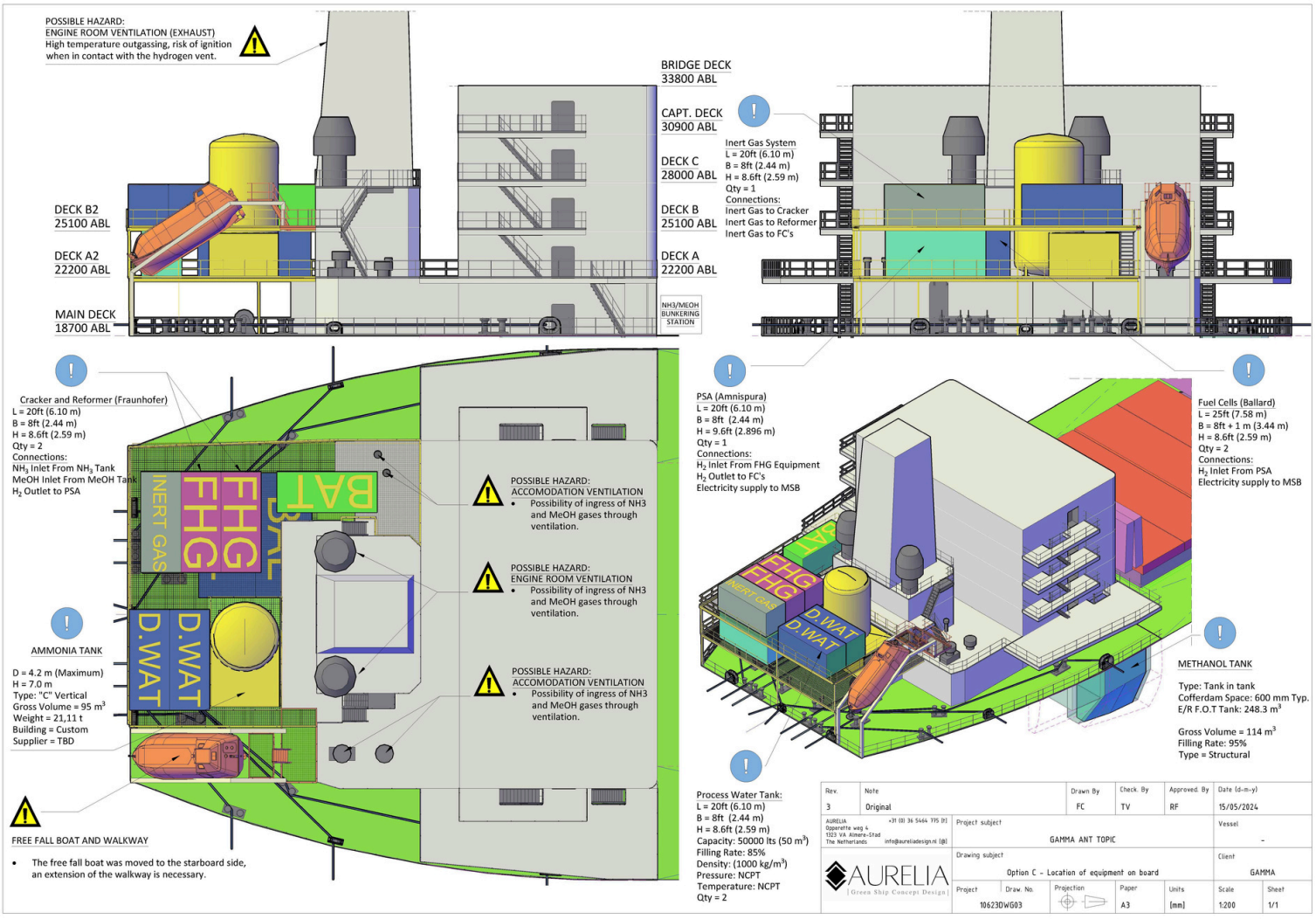
Option B consists of placing the various equipment along the length of the ship. This option allows a better distribution of the equipment, resulting in a lower impact on the trim of the ship.

Plus, it takes into account the current position of the crane pedestal for 4 new platform design, facilitating the integration of the new construction.

For the methanol tank, in this case a retrofitting of an existing fuel tank is considered using therefore a structural type one.



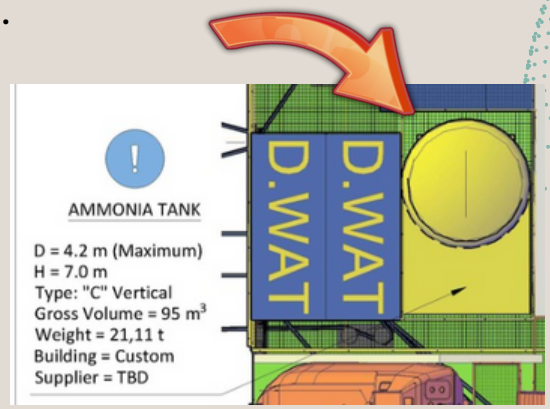
Option C: at stern with vertical tank



- Ammonia Tank type: Cylindrical - Vertical type C
- BioMethanol Tank type: Structural type

As option A, the location of new equipment and the ammonia and methanol tanks will be concentrated at the stern of the ship.
The difference stands in the shape of the ammonia tank which will be cylindrical, instead of a container one.

The cylindrical NH3 tank simplifies the system in terms of the number of connections, as each tank will have a single tank connection box and piping connections to and from other systems. The methanol one, instead, will follow option B.



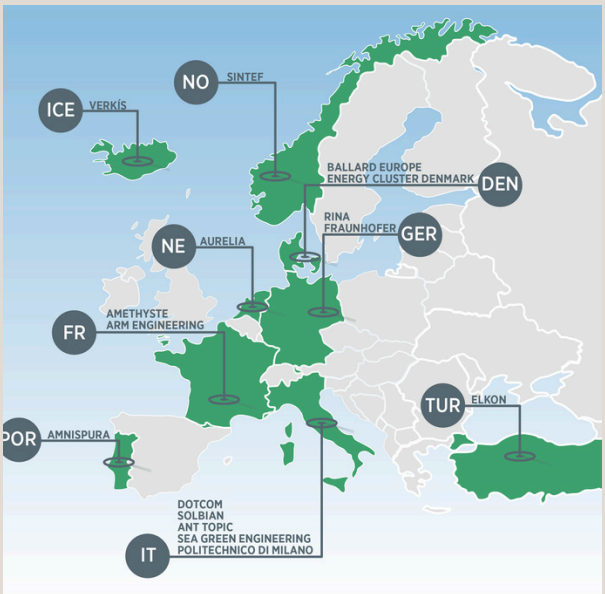
Do you want to know more?

Contact us for the best solution for you!

Sneak peek behind the curtain of AURELIA Green Ship Concept Design

AURELIA IS LEADING THE GAMMA CONSORTIUM TOWARDS A SUCCESSFUL RETROFIT OF THE AUXILIAR ENGINE OF A BULKCARRIER

A GAMMA Update



Final goal:

feeding fuel cell with purifying hydrogen extracted on board from ammonia and methanol.

Thanks to a great start and an efficient collaboration between partners, AURELIA reached the first milestone defining a retrofit strategy that will guide the whole consortium in the following 4 years of the project.

GAMMA E-FUELS

We work to design innovative proposals to suit the wishes of our customers