

# ALKEGEN APPLICATION STORY



**Product Solution:** Air Liquide

**Industry:** Industrial manufacturing – Science and Technology

**Application:** Cryogenic Insulation for Helium transfer lines

**Location:** France

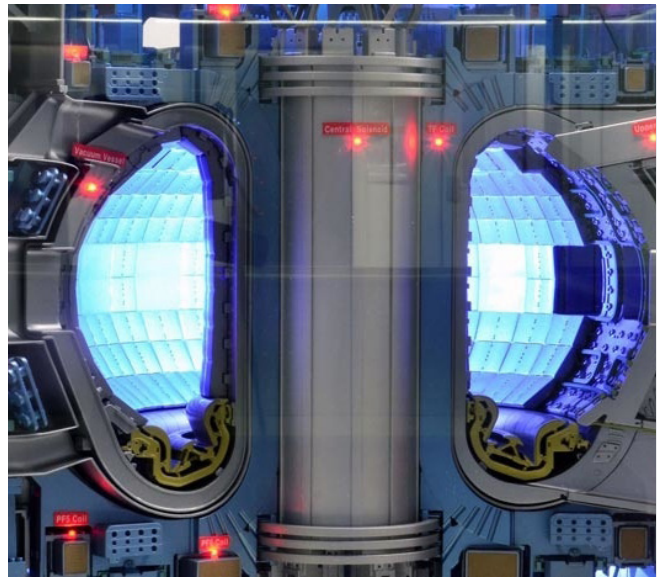
## Air Liquide

### BUSINESS CHALLENGE

ITER project – an international project to building an experimental reactor (or tokamak) which is exploring the parameters of fusion. The new cryogenic lines, which were notably entrusted to Air Liquide and then designed and manufactured by Air Liquide teams for ITER-India are one vital component of the project's cryogenic production system. These lines will transport helium at extremely low temperatures close to absolute zero in some cases (-269°C). The fabrication of these lines requires the use of high tech processes and sophisticated design intended to link up the cryogenic plant to the tokamak. The cryogenic lines designed by Air Liquide represent a 1.6km network that will distribute the cold power needed to run various ITER equipment.

### SOLUTION

We used our technical expertise and reputation as a global leader in cryogenic insulation, as well as our prior partnership with Air Liquide on cryogenic lines for CERN to collaborate and identify the best solution that offers critical thermal efficiency for the cryogenic lines for transferring super cooled Helium.



### BENEFITS

Chosen for high performance, high quality and consistent, stable supply, Alkegen cryogenic insulation products provide one of the most efficient thermal protection solutions for liquefied gases. In the ITER project, storage and transfer of these liquefied gases is essential, and Alkegen's products prevent evaporation loss that could occur with a lesser quality insulation.

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