## **ALKEGEN APPLICATION STORY**



Product Solution: Alkegen's CryoTherm® and double aluminized polyester film

Industry: Industrial manufacturing - Science and Technology

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

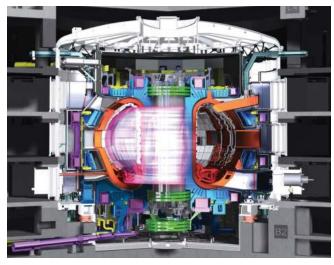
**Location:** France

# **Air Liquide**

Air Liquide is a world leader in gases, technologies and services for Industry and Health. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

#### **BUSINESS CHALLENGE**

ITER project – an international project to build an experimental reactor (or tokamak) which is exploring the parameters of fusion. The new cryogenic lines designed and manufactured by Air Liquide for ITER 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.



Credit © ITER Organization, http://www.iter.org/

### **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 liquified gases are essential, and Alkegen's products prevent evaporation loss that could occur with a lesser quality insulation.

The following are registered trademarks of Alkegen: CryoTherm

The test data shown are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes. Product Information Sheets are periodically updated by Alkegen. Before relying on any data or other information in this Product Information Sheet, you should confirm that it is still current and has not been superseded. A Product Information Sheet that has been superseded may contain incorrect, obsolete and/or irrelevant data and other information.

Form A-5081 Effective 02/22 © 2023 Alkegen All Rights Reserved Page 1 of 1

#### Alkegen

Email: info@Alkegen.com Telephone: 716-768-6500 Canada: 1-800-635-4464