

Represented by:  
**Mr. Danny Chan**  
Technical & Operations Manager



“It is the duty and moral responsibility of the company to ensure a safe work environment for all. Our priority is to see everyone returns home safe at the end of every day.”

**Mr. Peh Lam Hoh**  
Managing Director

## SSB Cryogenic Equipment Pte Ltd ISO Tank and Liquid Gas Cylinder Silencer

Team Members: Danny Chan, Anthony Leong, Issac Ho, Adrienne Tan, Winson Soo, Shegaran, Max Ling, Tan Kian Choong, Aw Han Wei



SSB Cryogenic Equipment's provides cryogenic and hydrocarbon bulk liquid and ISO tank leasing to the gas and marine industry. As such, the process of refilling cryogenic liquid from the ISO tanks to liquid gas cylinders (LGC) is a daily routine. During the refilling process, it produces a loud noise as high as 111.4 dBA which can be heard by companies nearby. Most importantly, the employees in SSB Cryogenic Equipment are susceptibly exposed to the noise every day. As a result, it affects the hearing and health of the employees due to the prolonged exposure to loud noise.

To tackle the health hazard, the team developed a cylinder silencer to reduce the noise levels during the refilling process. The cylindrical structure is made from stainless steel and weighs only 200 grams. The silencer is connected to the LGC and ISO tank vent lines and can withstand the freezing temperatures of the cryogenic vapour. Inside the silencer, there is an inner layer filled with wool to reduce the venting speed of the cryogenic vapour which helps to reduce the noise levels.

The silencer is designed at a 90 degrees angle as a safety feature to prevent workers from direct contact with the freezing cryogenic liquid if there is any spillage.

Since the implementation of the silencer, the noise level has significantly lowered from 111.4 dBA to 67.8 dBA. This has led to a better working environment, reduction in the number of NID cases and the level of noise emission is in compliance with the WSH (Noise) Regulations 2011 of less than 85 dBA exposure limit. The refilling process time is also reduced from 4.5 min/cylinder to 3.5 min/cylinder which results in a 22% productivity increase.