CASE STUDY

A-Gas Partners with PSA Singapore to Reduce Refrigerant Emissions in Reefer Containers

BACKGROUND

About PSA Corporation Ltd

PSA Singapore operates the world's largest container transhipment hub in Singapore, handling 37.2 million TEUs of containers in 2021. With connections to 600 ports globally, shippers have access to daily sailings to every major port in the world, operating 24/7 all year round. Beyond port operations, PSA also offers cargo solutions to customers operating in advanced manufacturing, cold chain, e-commerce, and energy and chemicals. This value-adding service is enabled by CALISTA™, a digital platform that facilitates trade and helps shippers to better manage their physical movement of goods, trade financing and compliance.

About A-Gas

A-Gas is the world leader in the supply and lifecycle management of refrigerants and associated products and services. Through our first-class recovery, reclamation, and repurposing processes, we capture refrigerants and fire protection gases for future re-use or safe destruction, preventing their harmful release into the atmosphere.

For almost 30 years, A-Gas has supported our clients and partners on their environmental journey by supplying lower global warming gases and actively increasing the circularity of the industries we serve, building a more sustainable future.

CHALLENGE

Hydrofluorocarbons (HFCs), a type of refrigerant gas commonly used in refrigeration and air-conditioning, are potent greenhouse gases that can contribute to global warming if released into the atmosphere.

To further support the industry's push towards sustainability, PSA Singapore began exploring sustainable solutions on lifecycle refrigerant management for reefer containers.

AT A GLANCE

Challenges

- Customer wanted to recover refrigerants that is being released during servicing and maintenance of reefer containers.
- Customer wanted to make use of circular economy principles in using reclaimed products to re-charge into the reefer container cooling systems.
- ·All refrigerant recovery services and turnaround times needed to be aligned in accordance with container vessels and the containers' movement schedules.

Benefits

- A-Gas provided lifecycle refrigerant management solutions and training to successfully recover, reclaim and supply back reclaimed refrigerants, covering all terminals within PSA Singapore's operation schedule.
- Helped the customer to lower refrigerant emissions from reefer containers and to re-use existing resources, thereby lowering the industry's carbon footprint.

Through this partnership, A-Gas provided an effective and more sustainable solution to ensure a safe and circular service to successfully lifecycle manage the used refrigerants.

A-GAS®
TOGETHER WE CAN

PSA Singapore seeks to recover used HFC gases that were at risk of being released into the atmosphere, during the maintenance and repair works of the reefers.

Following the safe and efficient recovery of the used gas, PSA Singapore will reuse the reclaimed product and inject it back into the refrigeration system.

PSA Singapore operates 24/7 and offers a comprehensive suite of reefer container services that keeps laden reefers operating within their pre-set temperature range. All refrigerant recovery services are done before the reefers are loaded onto the container vessels.

SOLUTION

A-Gas was tasked to review the existing processes and offer sustainable solutions to the PSA team to ensure that the used refrigerants were recovered, reclaimed, recertified, and reused.

From here, the on-site refrigerant recovery trial was initiated. The A-Gas team provided portable recovery units and recovery cylinders, along with recovery training and technical support to the PSA Singapore team. Following a successful trial, PSA signed an equipment leasing agreement to ensure all its terminals are covered. To initiate and endorse the use of reclaimed refrigerant, PSA Singapore successfully conducted laden reefer container trials together with their customer using reclaimed refrigerants, supplied by A-Gas.

RESULTS

Through this partnership, A-Gas provided an effective and more sustainable solution to ensure a safe and circular service to successfully lifecycle manage the used refrigerants, covering all terminals and within PSA Singapore's operation schedule.

The reclaimed refrigerant by A-Gas is certified and complies with the AHRI 700 standard for laden reefer containers.

This also exemplifies our customer's commitment to and leadership in lifecycle refrigerant management. PSA Singapore is the first port in Southeast Asia to commence use of reclaimed refrigerants.

CONCLUSION

PSA Singapore is committed to using reclaimed refrigerant to support a more sustainable and resilient supply chain.

Through the effective management of the lifecycle of refrigerant gases, A-Gas enabled its customer to reduce emissions from reefer containers, thereby contributing to a more sustainable future.

A-Gas provided effective and sustainable solutions to ensure safe and environmental services to successfully recover, process and re-use the used refrigerants