KLINGE CORPORATION

PRESS RELEASE – KLINGE CORPORATION DELIVERS -60°C (-76°F) CONTAINER BLAST FREEZER TO MINISTRY OF MARINE AND FISHERIES OF INDONESIA

Klinge Corporation has delivered their Container Blast Freezer Unit Model CBU-30 to the Ministry of Marine and Fisheries of Indonesia (through PT Waisity Indonesia) for the Fishermen Empowerment project. The CBU-30 is designed for quickly freezing cargo down to -60°C (-76°F). The Ministry will be using the Blast Freezer to keep sashimi/sushi-grade tuna at their required temperature.

Blast freezing tuna and other high value fish to an ultra-low temperature of -60ºC (-76ºF) substantially reduces transportation costs as the fish can be transported by container ship rather than air freighted. It also allows for long term storage of the tuna so customers can purchase as needed and no tuna is wasted. Tests have also shown that shelf-life is increased when tuna is frozen to -60ºC (-76ºF) and thawed, at a time of the customer's choosing, in a controlled environment.

The Freezer Container was delivered to the Port of Surabaya where it was then transferred to the remote Banda Islands. Polly Katipana, the Indonesian agent and in-country Project Leader, noted of the arrival that the newspaper in Ambon, part of the Maluku Islands (which includes the Banda Islands) published an article on the CBU-30 Blast Freezer on December 31, 2016. The article was entitled "High Technology of Freezer produced by Klinge Corporation USA, already in Banda Naira". The Governor of Maluku discussed the unit with the lead fisherman of the group using the container, who referred to it as a gift of the holidays.

Interestingly enough, the Banda Islands were known for being the sole producer of nutmeg in the 17th century and their history is uniquely intertwined with one of the world's most well-known cities. At the time, nutmeg was thought to cure the plague, so battles ensued between the Dutch and the British to claim this island for its spice:

> Intent on securing their hold over every nutmeg island in Southeast Asia, the Dutch offered a trade: if the British would give them Run [one of the Banda Islands under their rule], they would in turn give Britain a far-away, much less valuable island that the British had already occupied illegally since 1664. The British agreed. That other island was: Manhattan.*

* http://www.neatorama.com/2012/08/06/The-Nutmeg-Wars/

Features of the Blast Freezer

2-step refrigerant system:

One (1) high temperature system (2 compressors) on R134a, and one (1) low temperature system (1 compressor) operating on R23. The high temperature system cools the condenser for the low temperature system.

High capacity:

The CBU can be set to achieve the desired core temperature during either a 12- or 24-hour plus cycle during which the unit will maintain a supply air temperature of between -30°C (-22°F) and -65°C (-85°F) depending on the required capacity needed for product freezing.

Full airflow, even in loads with a very high cargo internal pressure drop:

If the unit's evaporator fan fails to press the air through the load, both the airflow and the unit's capacity will drop, and the evenness of the temperature within the load will be affected. Many standard units are not equipped with an evaporator fan designed for cargoes with high-pressure drops. Without the special design, airflow would be reduced and the blast freezing process would take considerably longer.

Even temperatures throughout the entire cargo:

The design of the evaporator fan and the adjustable ceiling that covers the cargo provide efficient airflow control, which is essential for a quick lowering of the cargo's temperature.

Ceiling:

The adjustable ceiling allows for even faster blast freezing by ensuring that the maximum airflow is pulled across your cargo -- thereby ensuring quicker cooling and less overall power use. The ceiling, which spans the entire container, is also easily adjustable by one person and can be adjusted to a variety of different load heights.

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About Klinge Corporation

Klinge Corporation is the leading provider of specialized transport refrigeration and power generation equipment. Founded as a spin-off of the Transport Refrigeration Equipment department of York International, Klinge has been producing refrigeration equipment at its manufacturing facilities and headquarters in York, Pennsylvania, USA since 1984.

The company's customized designs offer commercial and military customers robust alternatives to standard, mass-produced refrigerated containers which often cannot meet the requirements of harsh environments or stringent testing.

Klinge Corporation offers Dual Refrigerated Containers, Offshore Explosion-Proof Refrigerated Containers, Refrigerated Tank Containers, Blast Freezers, Ultra-Low Temperature Units, Quick Thaw Units, Integral and External Generator Sets, and Collapsible Food Storage Bins.

The company designs and manufactures the following:

- **Ultra-Low Temperature (-60°C) Freezer Containers** – for pharmaceuticals, ice cores, tuna, etc
- **Offshore Refrigerated Containers** – for Hazardous Zones such as oil rigs, oil tankers, and chemical plants
- **Explosion-Proof Refrigerated Containers** – for Petrochemical, Self-Reactive and Like Products
- **Dual Refrigeration System Refrigerated Containers** (with 100% emergency backup capabilities) – for chemicals, pharmaceuticals, and dangerous goods.
- **Tank Refrigeration & Heating Units** – for ISO Containers, Road Trailers and Stationary Applications
- **Military Refrigeration and Air Conditioning Applications –** built to military standards
- **Transport Air Conditioning Units** – built to withstand extreme high temperatures & sandstorms

- **Pre-Coolers** – used for fruit and vegetables in the field allowing for longer shelf life
- **Transport Generator Sets** – built to withstand extreme high temperatures & sandstorms

For more information, please email Klinge Corporation's Vice President at inquiry@klingecorp.com or visit www.klingecorp.com.