Increase Efficiency. Reduce Cost.

PLATECOIL®
Prime Surface Heat Exchanger

PLATECOIL Banks Reduce Installation and Labor Costs

Marine cargo heating systems are known to be expensive to fabricate, energy inefficient, and slow to respond. Factory engineered and fabricated PLATECOIL® heat exchanger banks surpass field-fabricated linear pipecoil in initial cost economy and thermal performance. These integral, one-piece banked assemblies comprise a rugged, high-strength design. Yard installation involves one inlet and outlet connection per PLATECOIL bank. Available in carbon and stainless steel, titanium and higher alloys, these engineered packages conform to ASME, U.S. Coast Guard, DNV, ABS, and Lloyds Register codes.

Cargo heating bank fabricated from PLATECOIL panels.

Cargo Hold Product Heating

PLATECOIL offers inherent design advantages when used to heat heavy, viscous products in preparation for efficient cargo unloading in cargo holds of tankers and barges. Initial cost economy is attractive, since these pre-assembled banks completely eliminate linear pipe heating components, significantly reducing onsite shipyard pipefitting labor costs.

Factory manufactured PLATECOIL systems offer superior mechanical integrity and quality assurance, along with reduced weight. Minimized yard installation virtually eliminates the possibility of damage to cargo hold coatings.

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PLATECOIL Advantages

Performance—PLATECOIL® banks reduce energy consumption through higher heat transfer efficiency and a chimney effect that induces more effective circulation. This effect promotes rapid, uniform heating through natural convection, reducing heating and cargo handling times significantly.

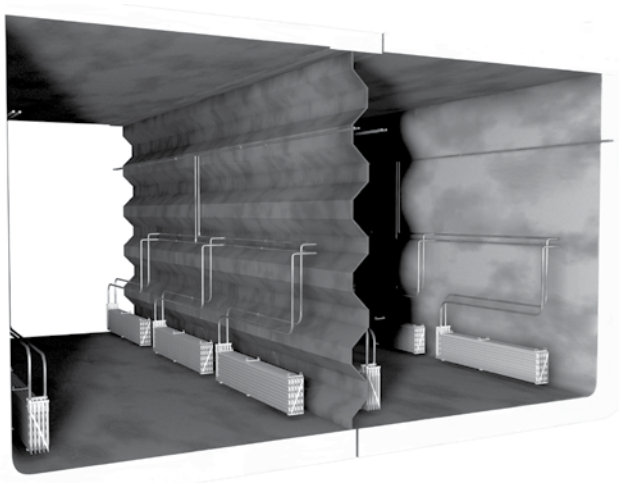
Operation and Durability—PLATECOIL banks are not susceptible to flow-induced vibration, vibration-induced fatigue cracking, and waterhammer from condensate blocking. Although they constitute a more compact design, they offer superior baffling performance in active seaways.

Shipboard Applications

- Fuel Oil Tankers
- Cargo Tankers
- Asphalt Barges
- ATBs

Simple Installation—PLATECOIL banks are assembled into a rigid, integral unit comprised of:

- Manifold connections
- Support and stiffening structures
- Integral feet for elevating the PLATECOIL bank off the deck



PLATECOIL based cargo heating system in articulated tug barges. Please note the drawing is not to scale; banks and piping are enlarged for clarity.

PLATECOIL vs. Pipecoil Installation

Recent Barge Project—A 185,000-barrel coastal articulated tank barge containing 14 cargo holds with a capacity of 600,000 U.S. gallons per hold.

A **Pipecoil** installation for this application would have required 24,000 linear feet of schedule 40 Pipecoil to properly heat the holds.

Instead, a **PLATECOIL** installation for this application required a total of 42 PLATECOIL banks, 3 banks per hold. Each bank consisting of 2 plates measuring 22” x 143” with 304L stainless steel style 80 PLATECOILS.

PLATECOIL Installation May Reduce

- Material and labor costs
- Vessel weight
- Expansion tank size
- Heat transfer area
- Heat transfer oil volume
  - Reduces weight of oil on vessel
  - Lowers initial fill cost
  - Lowers disposal cost

When compared to the Pipecoil system, the compact, efficient design of the PLATECOIL heat exchanger significantly reduced labor costs, decreased vessel weight, and reduced thermal oil volume. The overall improvement in efficiency regarding these areas helped reduce the initial capital investment for the 185,000-barrel tank barge project by $200,000.

Contact our sales and engineering team to learn more about the PLATECOIL Prime Surface Heat Exchanger—the right technology for preheating heavy products.

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