



TECNOCRYO



COIL-WOUND HEAT EXCHANGER

PRODUCT DESCRIPTION

Coil wound heat exchangers (CWHE), also called spiral wound heat exchangers (SWHE), were born at the origin of cryogenic industry so that we cannot imagine cryogenic vaporization without this solution. More than thousand coil-wound heat exchangers have been installed around the world for cryogenic as well as for other industry fields.

Coil-wound heat exchangers are quite compact and very reliable for different application specially when broad temperature are involved (vaporization). Its point of force remains the wide range of service pressure that don't still find any limitation since now. It is also suitable for single or multiphase flow.

MAIN FEATURES

Performance data

Compatible fluids	LN2/L O2/LAr and LNG
Service pressure	H.P. series up to 500 bar L.P. series up to 40 bar
Temperature range	-196° / +100°C or more
Ambient temperature	-40° / +65°C
Relative humidity	Up to 100%
Service conditions	24H service no stop
Seismic code	UBC / Eurocode
Pressure code	ASME / EN
Vessel material	304/304L
Coil wound material	304L, 316L or Copper
	Thousands of hours without any maintenance

Certifications

- Type approved by TÜV 0984 Notify Body
- Pressure tested and certified
- Cryogenic cleaning and degreasing EN12300 and according to ELGA 33/06/E
- European Directives:
2014/68/EU PED
2014/34/EU ATEX
- Rules for Ships Construction (ABS, RINA, DNV, Lloyd's)
- Material compatible for Oxygen or LNG

TECNOCRYO DESIGN

Features

Coils-wound in a vessel is one of the most robust and reliable solution for the vaporization of cryogenic liquids such as Nitrogen, Oxygen and LNG. The coils are put together to form a bundle which is installed inside a vessel where the hot liquid flows through. Hot water or water solutions (glycol-water) are usually used as heat transfer fluid with different heat sources like electric power, steam etc.

Benefits

The coil-wound exchangers are:

- the best solution for discontinuous operations because of their heat capacity reservoir.
- the best solution for compensation of small temperature variation during the service



**In-House
Cryogenic
Stabilization
at -196°C
With Liquid
Nitrogen
relieves the
residual,
post-
fabrication,
mechanical
stresses**

- immediately ready to give the full capacity
- easy controllable from reduced flow to full flow in both cold side and hot side
- designed for a lot of applications and can cover a broad range of heat capacity and flow rate

Because of their design, using tubes to form coils and bundle of coils, the CWHE exchangers are very robust since the pressure bearing is delegated to the cylindrical tubes, the easiest and best pressure bearing components. Indeed the coils keep high the elastic capacity when shrinking is imposed by temperature difference, hence the thermal stresses are reset and tube breaks are an unknown event for these exchangers.

