

DCHE

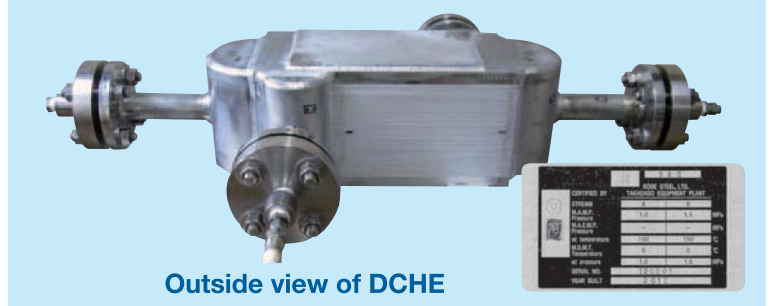
(Diffusion-bonded Compact Heat Exchanger)

Feature of DCHE

Not only KSL is a major supplier of BAHX (Brazed Aluminum Plate Fin Heat Exchanger), but also has vast experiences in designing and building pressure vessels and compact heat exchangers for global markets. KSL will retain its market for BAHX whilst expanding the product range by offering DCHE technology

Features

- a) Compact thanks to the high heat transfer performance
- b) Can handle multi stream in one block
- c) Can apply from low temperature use (-196°C) to high temperature (900°C)
- d) Can withstand high pressure based on uniform diffusion bonding (approximately 100MPa)



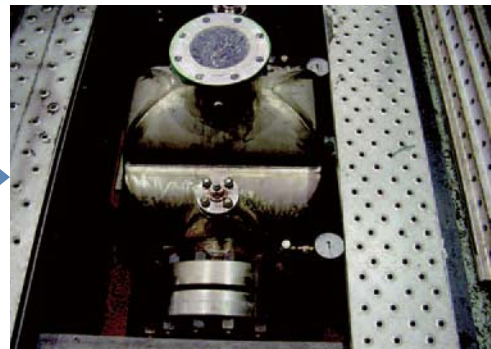
Test Results

DCHE is applied to the after cooler for high pressure gas compressor, instead of shell & tube type. The same heat transfer and pressure drop performance was achieved with 1/10th size and 1/8th weight, through the bench test.



Shell & Tube Type

Size (Weight): $\phi 650 \times 4200$ TL-TL (5500kg)



DCHE

Size (Weight): 330×350×650 (700kg)

Applications

DCHE is most suitable for application where

- i) smaller plot area and related piping is required, such as:-
 - aa) Compressor cooler for offshore use,
 - bb) Compressor cooler for hydrogen station, and
- ii) robust operating condition is required, such as large temperature difference, high pressure and/or cyclic operation.

Applied for high pressure hydrogen station

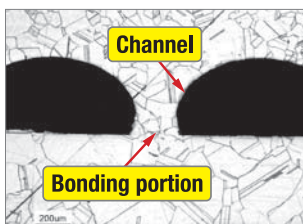


Photo of bonding area



Applicable code: ASME, Japanese High pressure gas safety law and others.