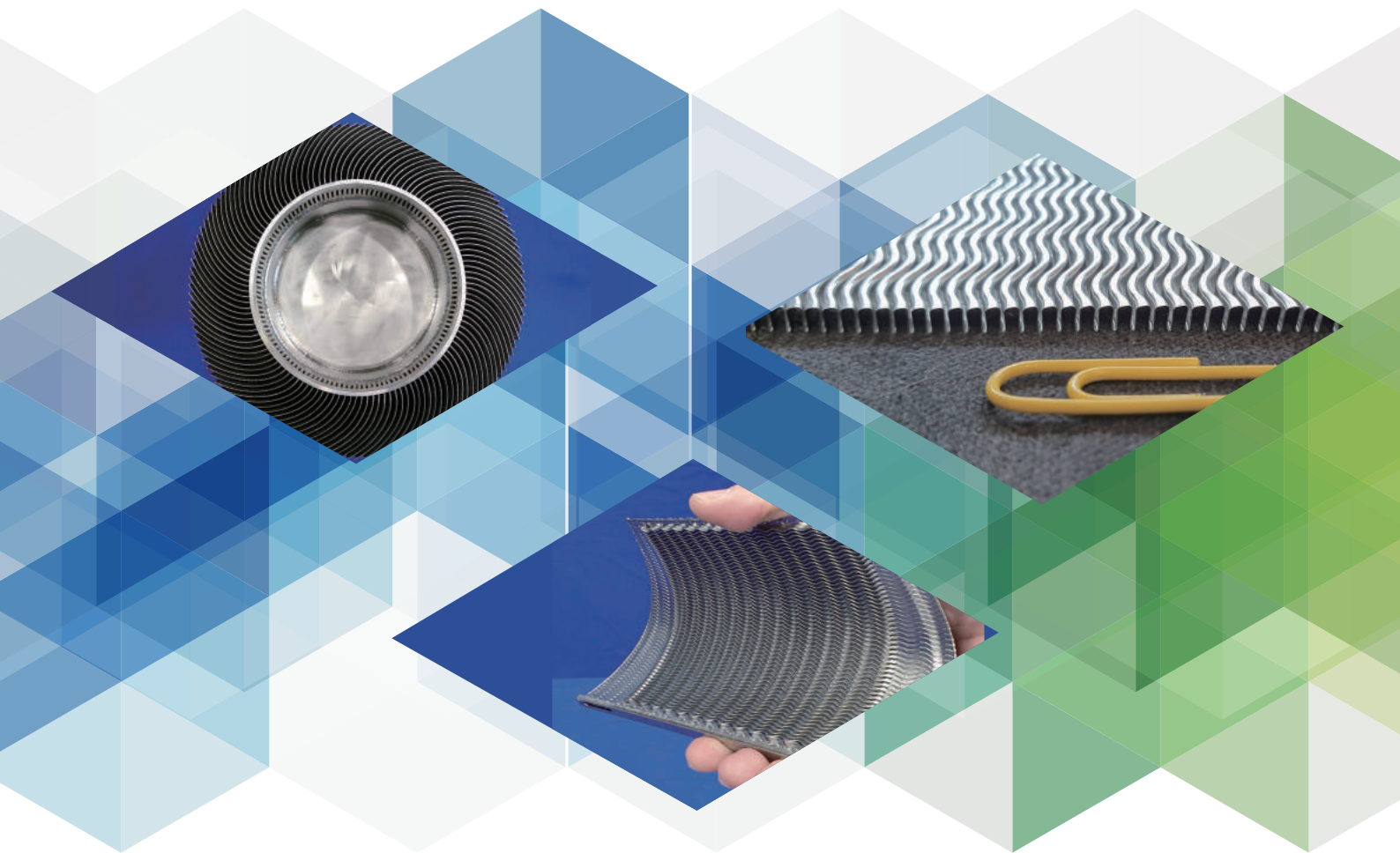


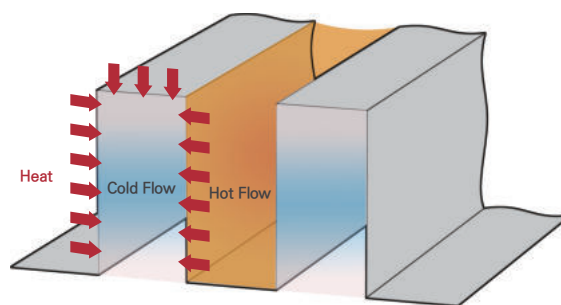
Specialized in highly compact heat exchanger



Benefit

Compact

by having very large heat transfer area and primary heat transfer surface only.



Primary Surface Heat Exchanger

Superior Heat-resistance

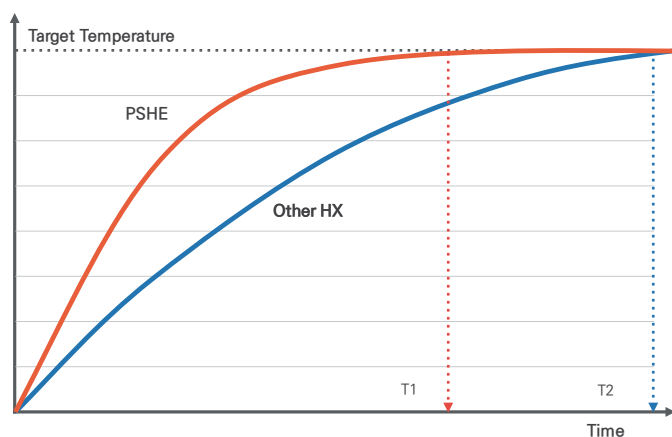
by using heat-resistance stainless steel alloy generally used for gas turbine industry.

ATI 321, ATI 347 and ATI 348 stainless steels are also advantageous for high temperatureservice because of their good mechanical properties. ATI 321, ATI 347 and ATI 348 stainless steels offer higher creep and stress rupture properties than ATI 304 alloy and, particularly, ATI 304L stainless which might also be considered for exposures where sensitization and intergranular corrosion are concerns. This results in higher elevated temperature allowable stresses for these stabilized alloys for ASME Boiler and Pressure Vessel Code applications. The ATI 321, ATI 347 and ATI 348 alloys have maximum use temperatures of 1500°F (816°C) for code applications as does ATI 304™ stainless, whereas ATI T304L™ stainless is limitedto 800°F (426°C).

(Source : Manufacturer's Technical Data Sheet)

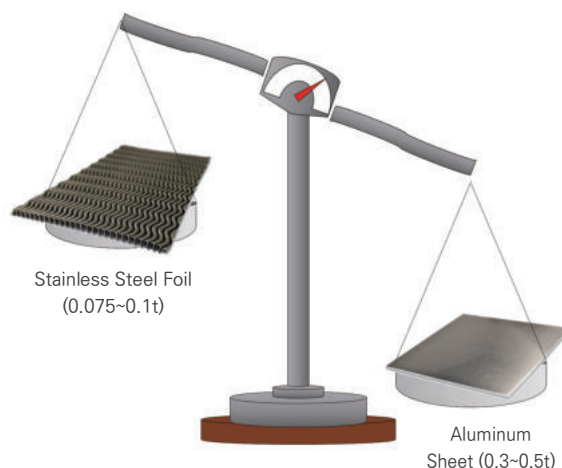
Fast Response Time & Higher Effectiveness

caused by small thermal mass & low axial conduction



Light

by using 0.1mm thickness of stainless foil or less.
(Conventional heat exchanger uses the thicker aluminum alloy than 0.3mm)



Products

Air-oil Heat Exchanger for ECS

It is used for heating up the cold air from outside using hot oil for making proper environment for pilot and electronics in the aircraft.

Such a heat exchanger had made by aluminum alloy until now for having lightness & compactness, but our heat exchanger showed similar weight but better heat transfer rate, endurance and compactness even though it is made of stainless steel.

Especially we had analyzed various mission, and designed it for meeting all design & off-design requirement, and proved it through functional test, environment test and flight test.



Air Cooler for OBIGGS

OBIGGS(On-board Inert Gas Generating System) is the device for separating Nitrogen from the outside air. To keep the suitable temperature of air, it needs to be cooled.

We developed this heat exchanger for Suri-On helicopter manufacturing now in Korea.

More than 100 units were delivered after passing very severe reliability & environment test.

It has very fast response time, compactness, light weight, reliability and endurance.

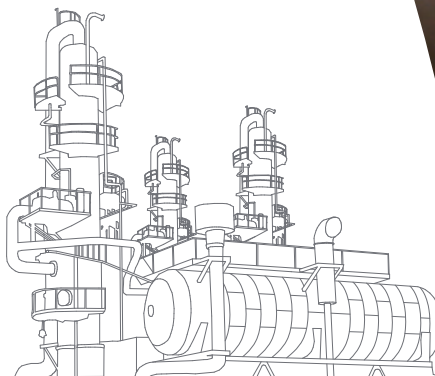
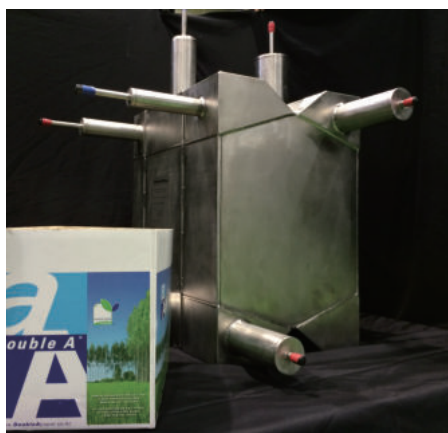
Another bigger model for commercial aircraft was also developed and is on flight test now.



Products

Recuperator for MGT/SOFC

Mostly heat recovery system is highly required for the power generation system such as MGT(Micro Gas Turbine) and SOFC(Solid Oxide Fuel Cell) for getting the better efficiency. Both annular type of recuperating heat exchanger for 60 kW & 200 kW class of MGT and box type of air preheater for 20 kW class of SOFC were developed until now. Also the customized design is possible.



Gas-to-liquid(GTL) Reactor

GTL process is for making the synthetic oil from the natural gas, and the fast heat dissipation during the extremely fast exothermic process is the most important factor in the design of this process. Comparing to the conventional GTL reactor, our corrugated fin type compact GTL reactor uses stainless steel fin for process channel & cooling channel for realizing fast heat removal and high-pressure capability. We demonstrated it with delivering to Korean gas company.

