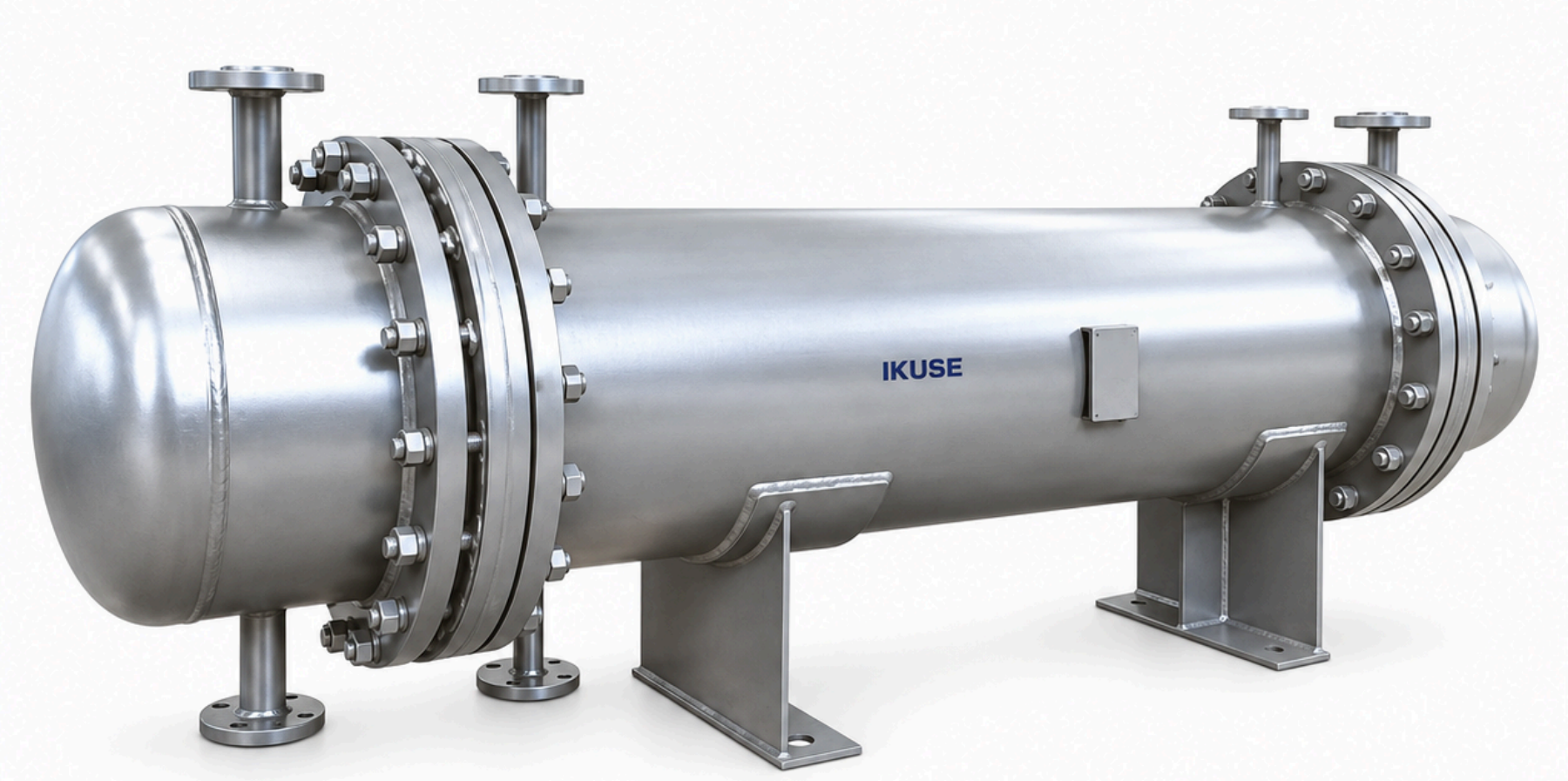
Silicon Carbide Heat Exchanger

Product & Technical Configuration



Overview

A silicon carbide tube bundle is combined with double seals and double tubesheets to separate corrosive process fluids from the utility side. Select shell and seal materials for the fluid, temperature and pressure.

Technical Configuration

Item	Configuration
Brand	IKUSE
Heat transfer tubes	Silicon carbide (SiC)
Main components	Shell, tube bundle, heads, baffles, tubesheets and seals
Sealing	Double O-ring sealing system
Isolation	Double tubesheets with a separate isolation chamber
Shell options	Carbon steel, stainless steel, PTFE lining, glass lining, or corrosion-resistant metals and alloys

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Construction & Materials

Double Seals & Tubesheets

Double O-ring seals are provided at both tube ends. Double tubesheets form a separate isolation chamber to reduce fluid-mixing risk if a seal is damaged or leaks.

Confirm the pressure relationship and allowable differential pressure between the isolation chamber, shell side and tube side for the selected construction.

Material Selection

SiC engineering ceramic offers useful thermal conductivity, hardness and wear resistance. Select the shell and seals together with the fluid concentration and temperature.

Shell options include carbon steel, stainless steel, PTFE lining, glass lining, and corrosion-resistant metals and alloys.