

GSK GSK Corporation

GSK Creates the better Future with Steel



+ Plate



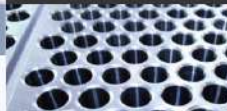
+ Forging Ring



+ Nozzle



+ Overly



+ Tube Sheet

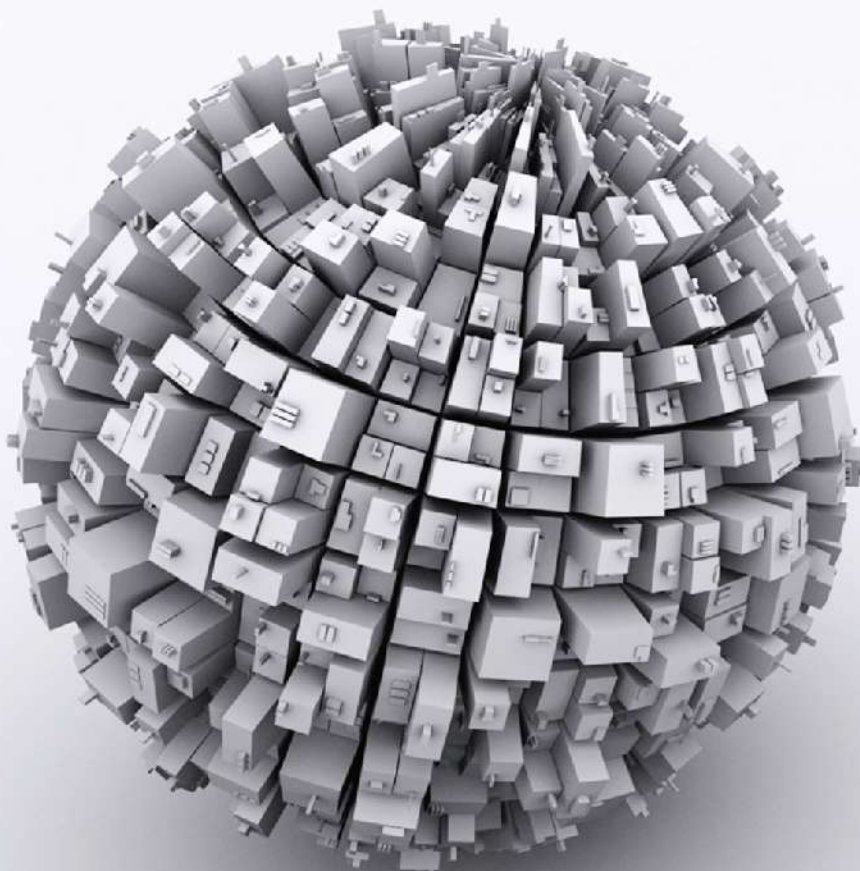


+ Tube



+ Heat Exchanger

+ More than Steel
+ More than Technology





More than Steel

More than Technology

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CEO's Message

It is a great pleasure and privilege for us to have this opportunity to introduce Our Global Steel Korea Corporation a leading supplier of Plates, Sheets and Coils/ Seamless hot rolled rings, Flanges and Special Forgings/ Equipments and Components ; Tube sheets, Baffle, Tie-rod, Tube support, Finned Tube, Dished Head, Pipe Fitting, Forged Fitting and Cladding (Welding Overlay) Used in the shipbuilding & construction, petroleum chemical, power facilities, Industrial facilities, nuclear power plant and plant construction fields based on rich experiences and accumulated techniques with up-to-date facilities and equipment.

Our, **GSK** has so far grown up since it's original establishment in and we are now acknowledged of superiority in technique and good quality from our valuable customers, as result of our utmost devotion and efforts, rendered to the satisfaction of our customers.

We, **GSK** will continue to devote ourselves to satisfy all the needs of ours customers in the future with the attitude and the we grow and thrive together with our customers by managing of the right-way Management and providing good quality and service.

We are also expecting you to support and encourage us continually so on, and we promise to create better services and investment opportunities for our Customers.

(Shinpyung-dong) 23 bibong-ro,
Saha-gu, 604-834 Busan, Korea

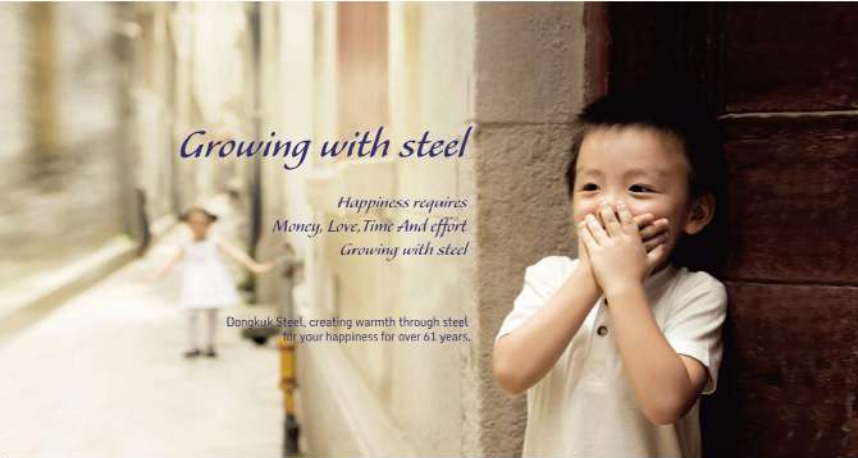
G S K

President **JEFF, CHOI**

Growing with steel

*Happiness requires
Money, Love, Time And effort
Growing with steel*

Dongkuk Steel, creating warmth through steel
for your happiness for over 61 years.



More than Steel

G S K Offers Plate

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■ Steel Plates

Steel Plates means thick steel sheet. It is usually 6mm thick and used for shipbuilding.

It is widely used for bridge construction and various industrial machinery.

Dongkuk Steel gained classification standard from a classification society of ten developed countries including Japan and the United States. The steel plates are widely used for shipbuilding, general structure, welding construction, boiler and pressure container, machinery structure according to the material.

+For boilers and pressure vessels

According to development of energy industry, the demand for oil pipelines and oil well pipelines is increasing. Besides, the steel plates are used for pipes, structures, piles, boilers and heat exchangers.

Standard number	Type and grade
ASTM/ASME	A285, A516
JIS G 3103	SB410, SB450, SB480
JIS G 3115	SPV235, SPV315, SPV355, SPV410

+For General and Welded Structures

The steel plates are used for bridge construction, building, and steel structures.

The demand for this steel plate is increasing according to the trend of larger and higher buildings.

Standard number	Type and grade
ASTM/ASME	A285, A516
JIS G 3103	SB410, SB450, SB480
JIS G 3115	SPV235, SPV315, SPV355, SPV410
BS 4360	43A, 50A, 50B, 50C
EN10025	S235JR, S235JO, S235J2, S275JR, S275JO, S275J2, S355JR, S355JO, S355J2, S275N, S275NL, S355N, S355NL, S275M, S275ML, S355M, S355ML



Forging

- Common carbon steels and stainless steel, being frequently used in the worldwide.
 - Power Station Construction
 - Wind Energy Markets
 - Machine Construction
 - Apparatus Engineering and Pressure Vessel Building
 - Oil & Gas Markets
 - Petrochemical Industry
- High-Alloy steels, Nickel-based alloys, aluminum, copper and titanium alloys are standard material.
- **GSK** has been acquiring an extraordinary knowledge in the machining of a comprehensive range of the most different materials over decades.

High-temperature steels

Carbon & Low-Alloy Steel	Low-Alloy Steel	Martensitic Stainless Steels
SA / A105 SA / A765	SA / A182 Gr.F1 / F2 / F5	SA / A182 Gr.F6a CL,1 / CL,2
SA / A266	SA / A182 Gr.F9 / F91	SA / A182 Gr.F6a CL,3 / CL,4
SA / A350	SA / A182 Gr.F11 CL,1 / CL,2	
A694	SA / A182 Gr.F22 CL,1 / CL,3	

FAustenitic Stainless Steels	Ferritic - Austenitic Stainless Steels [Super-] duplex steels
SA / A182 F304 F304L F310	SA / A182 Gr.F50 / F51 / F53
SA / A182 F316 F316L F317	SA / A182 Gr.F55 / F60
SA / A182 F317L F347 F321	

High-resisting alloys

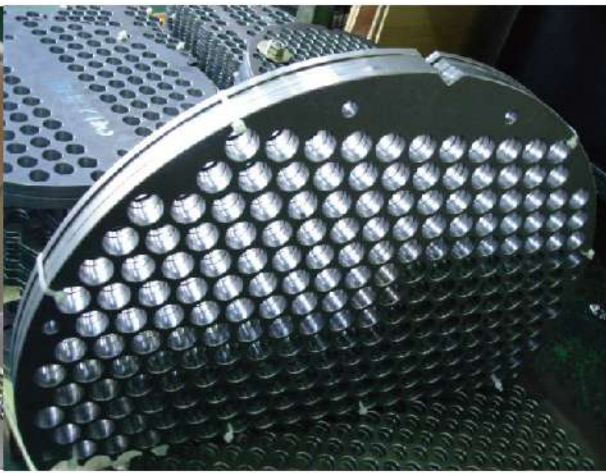
European nomenclature	ASTM		German nom.
	ASTM	UNS	
Alloy 625	SB / B 564 Gr,N06625	N06625	NiCr 22Mo 9 Nb
Hastelloy C276	SB / B 564 Gr,N10276	N10276	NiMo 16 Cr 15 W
Incoloy 825	SB / B 564 Gr,N08825	N08825	NiCr 21 Mo
Alloy 600	SB / B 564 Gr,N08811	N08811	

Copper / Copper alloys [Brass]

Aluminium alloys

Titanium / titanium alloys

ASTM nomenclature	ASTM nomenclature		ASTM nomenclature	
Nomenclature	ASTM	German nom	ASTM	German nom
SA / A B171 C46400	SB / B 247 5083 H112	AlMg 4,5 Mn 0,7	SB / B 381 Gr,1	T1
SA / A B171 C70600	SB / B 247 5083 H111	AlSi 1 MgMn	SB / B 381 Gr,2	T2
			SB / B 381 Gr,5	TiAl6v4



Products

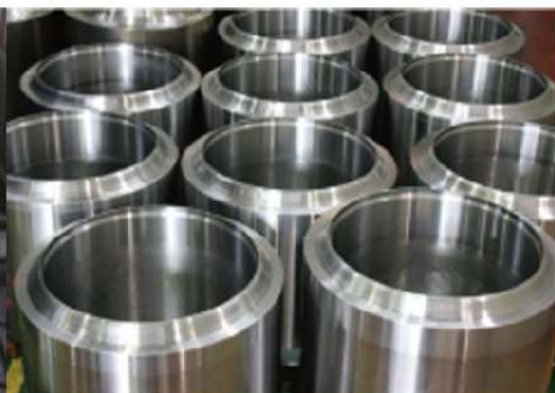
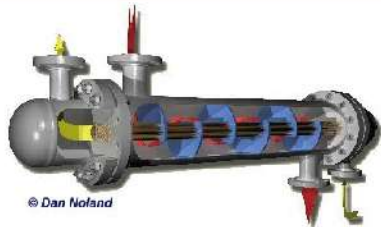
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-> Petrochemical

- + Channel cover & Flange
- + Blind
- + Girth Flange
- + Reducer

- + Tube sheet
- + Forged neck
- + Forged pipe
- + Forged boss
- + Standard Flange
- + API 6A Flange

- + Forged Shell
- + Long Welding Neck
- + Self-Reinforced Neck
- + Tube sheet
- + Baffle





Tube for Heat Exchanger

Heat Exchanger Tube

Product Information

- Outside Dimeter : 4mm to 76,2
- Wall Thickness : 0,8mm to 25mm
- Lengths : Under 23 Meter

This is a heat exchanger that is used for the petrochemical industries and it's purpose is to transfer heat to the inside or outside. This prides itself for the best quality in terms of the heat transfer effect, durability and pressure-resistance thanks to the make-up that is uniform and stabilized when it comes to the welding and basic material parts since it was nomalized and heat processed at 900°C at the latest Tough Potch annealing furnace facility. Moreover, U-ending and tube expansion are facilitated thanks to outstanding processability. The quality is stable due to outstanding quality of tube's external appearance and superb inspection Equipment thanks to the automatic production system.

Product Specs

- Heat exchanger, Carbon steel pipe for boiler ; Seamless Carbon steel Heat Exchanger tube & Boiler Tubes

ASTM & ASME SPEC No.

S / A 179, S / A 192, S / A 210 A-1, C, S / A 106 Gr.A, B, C

- Heat exchanger, Carbon steel pipe for boiler ; Seamless Ferritic alloy-steel Boiler and Heat Exchanger tube

ASTM & ASME SPEC No.

S / A 213 Gr.T2, T5, T5b, T5c, T9, T11, T12A, T17, T21, T22

- Heat exchanger, Carbon steel pipe for boiler ; Seamless Welded Carbon and alloy-steel tubes for Low-Temperature Service

ASTM & ASME SPEC No.

S / A 334 Gr.1, 3, 6, 7, 8, 9

- Heat exchanger, Carbon steel pipe for boiler ; Electric-resistance-welded carbon steel boiler & Heat-Exchanger and condenser tubes

ASTM & ASME SPEC No.

S / A 178 Gr.A, B, D S / A 214



내일을 비춥니다

아이의 미소가 세상을 맑게 만드는 것처럼
빛나는 원이 세상을 맑게 합니다
더 밝은 내일을 위해 오늘을 준비하겠습니다

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Welding Overlay Cladding and Joint Welding

GSK performs under the roof of the Component Building Division Weld Overlay Cladding of forgings and Joint Welding of complex components, including subsequent operations until the final delivery of the finished component.

Weld Overlay Cladding on Forgings :    

- Cladding and welding of flanges, rings and forgings.
- Weld overlay in all common stainless steel material grades and nickel based alloys, such as F316L and Inconel 625
- Inner Diameter starting from 50mm to a length of 4,000mm

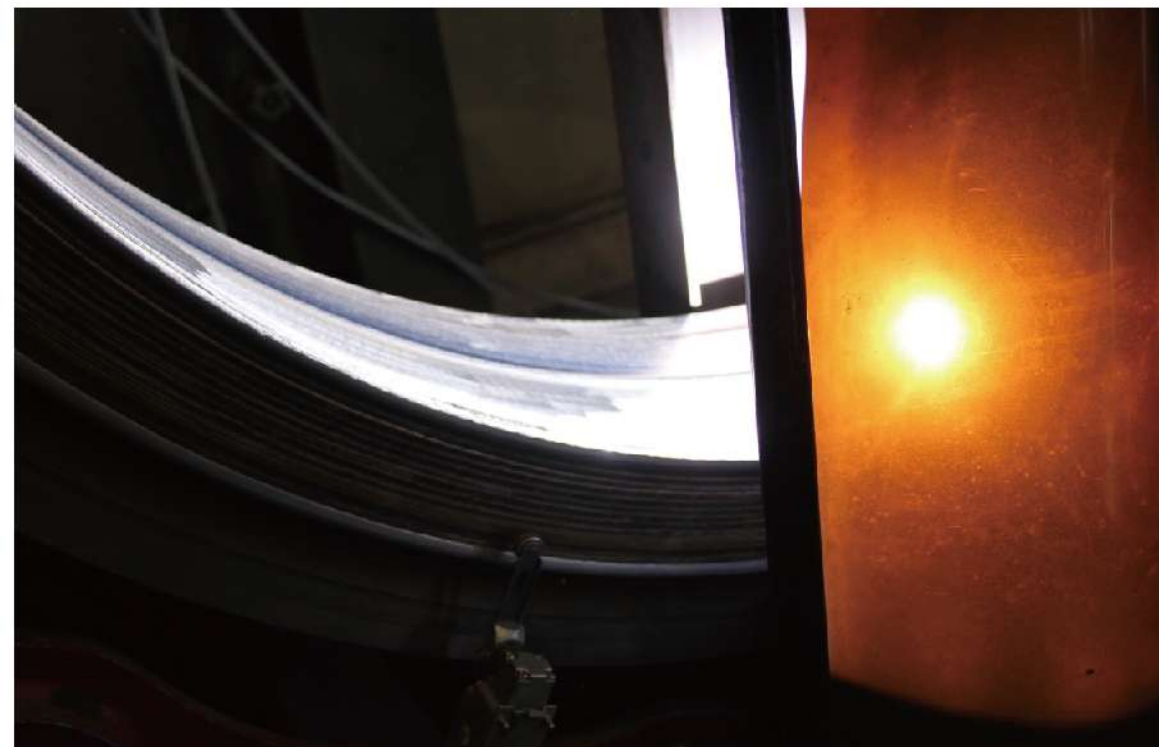
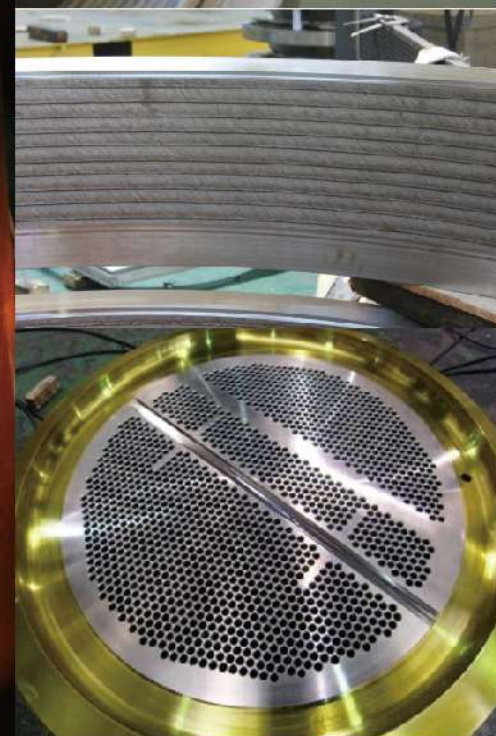
■ All fabrication steps under one roof :

Forging process - Pre-machining - Welding - Heat treatment - Finish machining

- Welding Consumable
+ SUS304L, SUS316L, INCONEL, MONEL
+ HASTELLOY, NI/CU, STELLITE

+ Flange Overlay
+ Fitting Overlay
+ Tube sheet Overlay

+ Pipe Overlay
+ Ball Valve Overlay
+ Butterfly Valve Overlay





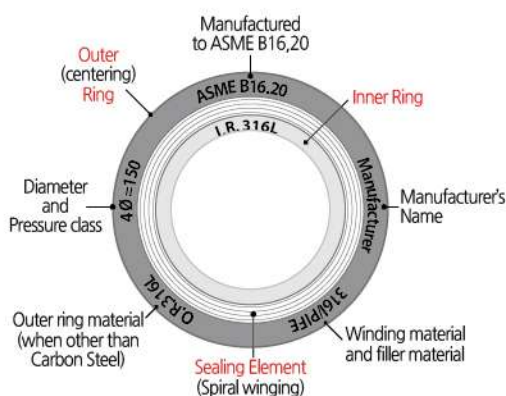
Gasket

Spiral Wound Gasket

Characteristic

A spiral-type gasket is an ideal type among other semi-metal gaskets. The V-shaped metal plate and non-metal fillers are overlapped, and they are wrapped into the spiral pattern and the two ridges are soldered together. As it is consisted of flexible metal and smooth filler, it has the following excellent gasket functions:

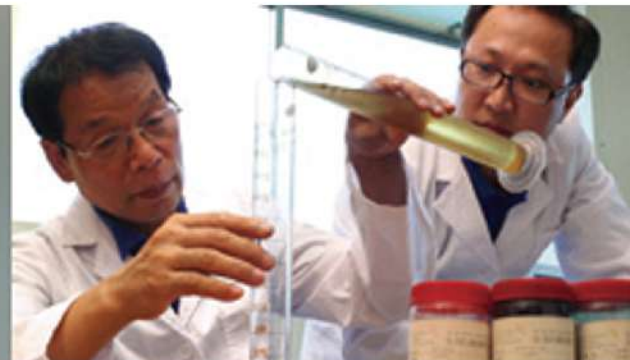
- To be used for high pressure and high temperature
- Automatically adjusts to the changes of the pressure, temperature and vibration.
- It has excellent sealing capability compared to the size.
- It has an excellent sealing capability on the irregular flange surface.
- Any shape of size is available with reasonable price.
- Hoop and filler materials can be selected according to the special operation conditions.



Part	Material	Thick
Inner Ring	304SS, 316LSS, 347SS Others	2.95mm-3.2mm
Hoop	304SS, 316LSS, 347SS Others	0.15mm-0.2mm
Filler	Graphite, Non-Asbestors, Mica	0.38mm-0.6mm
Outer Ring	304SS, 316LSS, 347SS Others	2.95mm-3.2mm



Cross Section	Type	Standrd
	Basic Type Suitable for tongue and groove, male and female or grooved to flat face flange assemblies	KS B1518 JIS B2404 JPI 7S-41
	With Inner Ring Type Suitable for male and female pipe flange	KS B1518 JIS B2404 JPI 7S-41
	With Outer Ring Type It is very easy to install the gasket to flange face because the end of outer ring will touch at bolts. Suitable use with flat face and raised face flanges.	KS B1518 JIS B2404 JPI 7S-41 ASME B16.20 EN-1514-2
	With Inner & Outer Ring Type A inner ring and outer ring type gasket will give an additional compression limiting stopper for gasket inner and outer side.	KS B1518 JIS B2404 JPI 7S-41 ASME B16.20 EN-1514-2

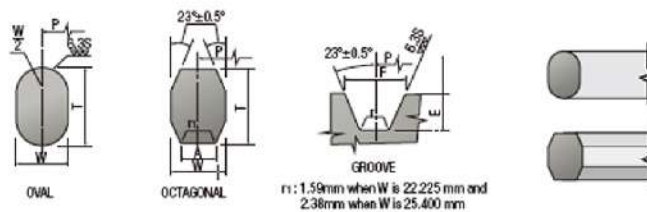


Gasket

Ring Type Joint Gasket

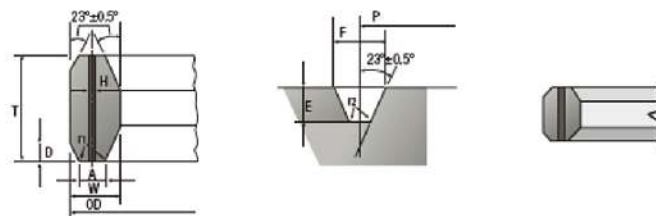
TH4080/TH4080R

These rings are manufactured according to JPI-7S23, ASME B 16.20 and API 6A Which are used for the ring-type flanges described in JPI-7S-15, ASME B16.5, API spec 6A and MSS SP-44



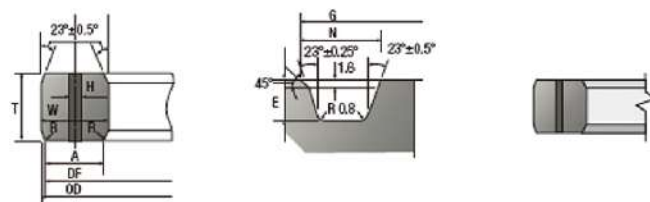
TH4081RX

RX-Type Ring Joint Gaskets are manufactured according to API 6A ASME B16.20 which is used for 6B Flange of API Spec 6A,



TH4082BX

BX-Type Ring Joint Gaskets are manufactured according to API Spec 6A and are used for 6BX Flange of API Spec 6A,





Formed Head

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Global Steel Korea has been manufacturing the variable kinds Formed Head, Roll Bended Products, Expansion Joint and Cone Formed Head of High Pressure Vessel, General Vessel, Heat Exchanger etc, for Petro-chemical plant, other industrial plant with excellent equipment, well trained workers, experienced engineers, intensive management.

81t x ID4750 x TL100 ..

APPROXIMATE 2:1 SEMI-ELLIPSORIDAL HEAD



61t x ID3460 x TL160 x r260 Flanged only Head



DX DONGKUK STEEL
ASME SA516-70 MT
A526834-01 N1020223
38.10X2950X6140



Shell Bending & Pressure Vessel

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- + Shell bending and Rolling / Heavy size Reactor / Pressure Vessel
- ++ Ecc and Reducer / Cone Bending / Cylinder Tube Shell / Wire Drum / Steel Pipe & Support Pipe





PIPE Fitting

Forged Fitting

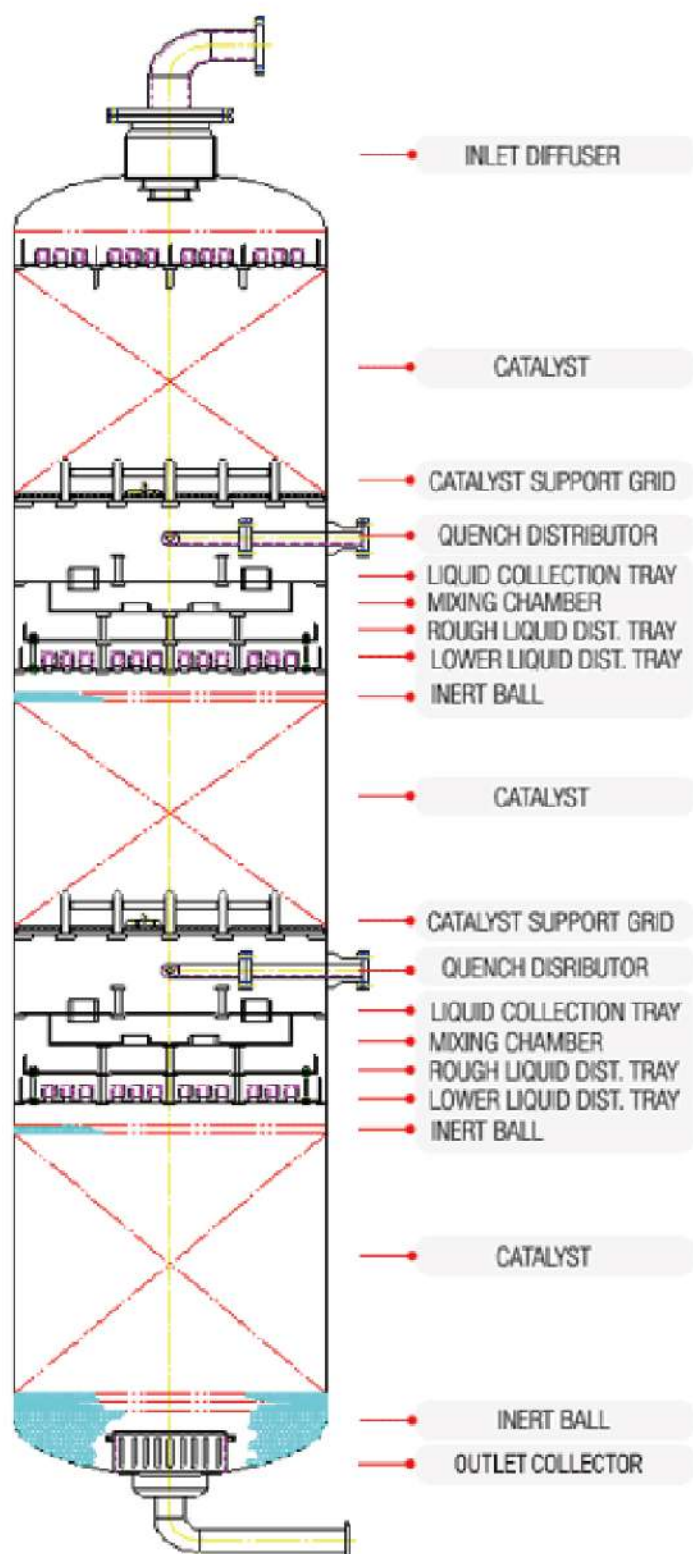
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INTERNALS FOR CHEMICAL EQUIPMENTS

REACTOR INTERNALS

- + DISTRIBUTOR TRAY, COLLECTOR TRAY
- + CATALYST SUPPORT GRID, SCALE



Top Distributor



Scale Basket

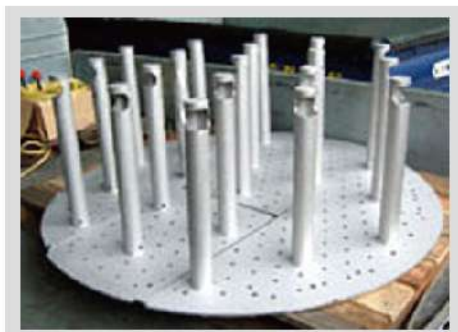


Catlyst Support Grid

INTERNALS FOR CHEMICAL EQUIPMENTS

REACTOR INTERNALS

- + CATALYST BASKET, INLET DIFFUSER
- + STRAINER NOZZLE
- + COALESCER (METAL, NYLON, POLYPROPYLENE)
- + INLET GAS DISTRIBUTION DEVICE



Distributor Tray



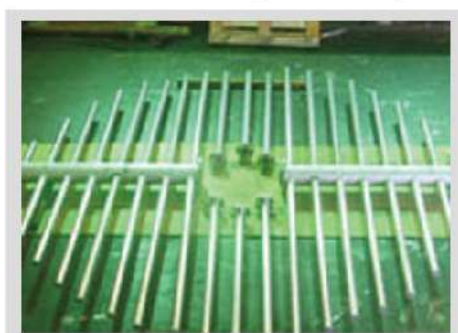
Outlet Collector (Profile Wire)



Outlet Collector (Profile Wire)



Top Distributor



Liquid Collector (Profile Wire)



Alumina Ball



Distributor Tray



Outlet Collector (Slot Hole)



Profile Wire Screen



Distributor Tray

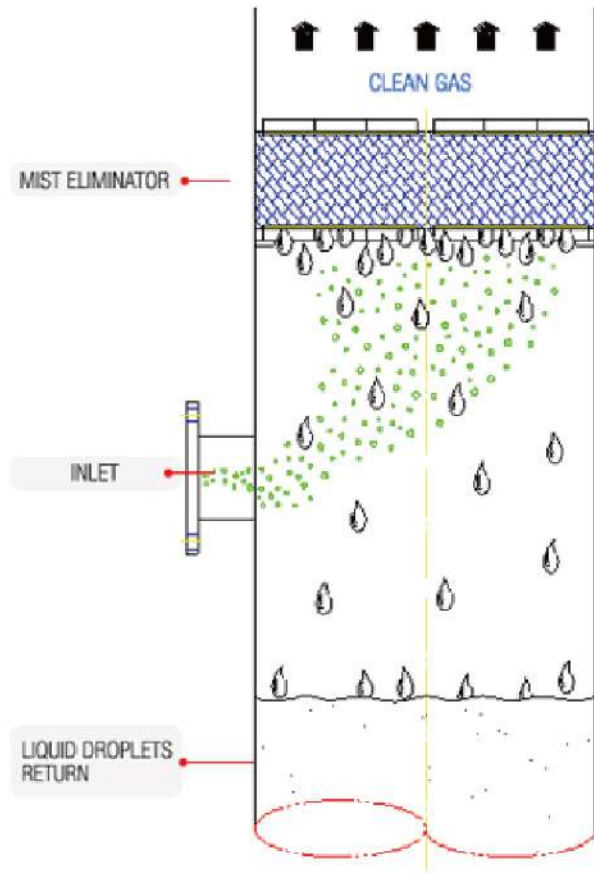


Support Grid



Ceramic Ball

■ CRINKLED WIRE MESH TYPE MIST ELIMINATOR



Crinkled Wire Mesh Type Mist Eliminator

When vapor and entrained liquid pass the Mist eliminator pad, the liquid droplets from the gas stream contact the wire surfaces and stick there and grow until that can not be held there because of its size, and fall off. In the mean time the vapor goes through the Mist eliminator pad is pure, containing no liquid, no dirt and no dust.



Demister(Monel-400)



Demister

- + Vacuum Tower / Absorber / Knock-out- Drums / Gas Separator vessel / Compressor Suction
- + Drums / Evaporator / Scrubber / Distillation Column / Concentrators / Dust Collectors

Style	Density kg/m ³	Surface Area m ² /m ³	Void Space %	Other Company Style		
				YORK	Nihon Mesh	UOP Type
JET-80	80	158	99.0	931	H	B
JET-120	120	210	98.5	631	L	-
JET-128	128	460	98.4	326	SN	-
JET-144	144	280	98.2	431	N	A
JET-193	193	375	97.6	421	SL	C
JET-300	300	575	96.2	346	SM	-
JET-390	390	750	95.0	-	SH	-
JET-220	220	905	97.2	-	T	-
JET-330	330	1,395	95.8	-	ST	-
JET-432	432	1,780	94.5	333	R	-
JET-220	220	428	97.2	-	W	-
JET-GS	160	5,000	94.0	371	GS	-
JET-117N	117	213	98.5	483	-	G
JET-64T	64.1	410	97.0	221	-	-
JET-64P	64.1	492	97.0	241	-	-

GSK supplies as Approved Supplier
the Worldwide Market Leaders in the Power Industry

PRODUCTION FACILITIES

To maximize value to our customers, **G S K** offers complete production facilities for a wide range of production.

REDUCE YOUR TIME TO MARKET

G S K understands that time is money. Our field-proven, pre-engineered designs and in-stock inventory reduce the number of days to bring your plant online.

CUSTOM PLANTS AND FACILITIES

Our broad experience and in-house engineering can deliver innovative designs to address your unique challenges.

STANDARDIZATION

Standardization is a key element of our custom-engineered packages and plants, which are designed to meet requirements that exceed the capabilities of our pre-engineered equipment lines.

G S K's long experience in applications and manufacturing allows us to work from established and proven standard designs, which are adapted to the specific application as needed.

ABOUT GLOBAL STEEL KOREA CORP., (G S K)

G S K is a leading global provider of productions and services to the oil & gas industry with decades of experience offering solutions for production, processing, compression, critical process, water treatment, and aftermarket parts and services. We also offer fast, efficient delivery and startup of equipment, projects and services by integrating our product lines with in-house engineering and project management for a complete single-source solution. Contact us to learn how we deliver the solutions you need.



G S K Busan

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GSK GSK Corporation