

台朔重工

FORMOSA HEAVY INDUSTRIES CORP.

石化製程設備及產業機械



Petrochemical Process Equipment & Industrial Machinery



工程規劃、製造、安裝 Engineering-Fabrication-Installation

台朔重工在石化整廠及相關設備的工程規劃、製造及安裝上累積數十年的豐富專業知識及實績。設計上運用電腦輔助設計及各類工程分析軟體；在應力分析方面，使用 ANSYS 及 Nastran 來作壓力容器之不連續應力、熱應力及疲勞分析以提昇設計品質與效率。

製造上擁有優越的冷作、電焊以及機械加工等專業技術，並具重型設備搬運、吊裝及整廠統包建造的能力，為國內最具規模、經驗及實績的專業廠商。

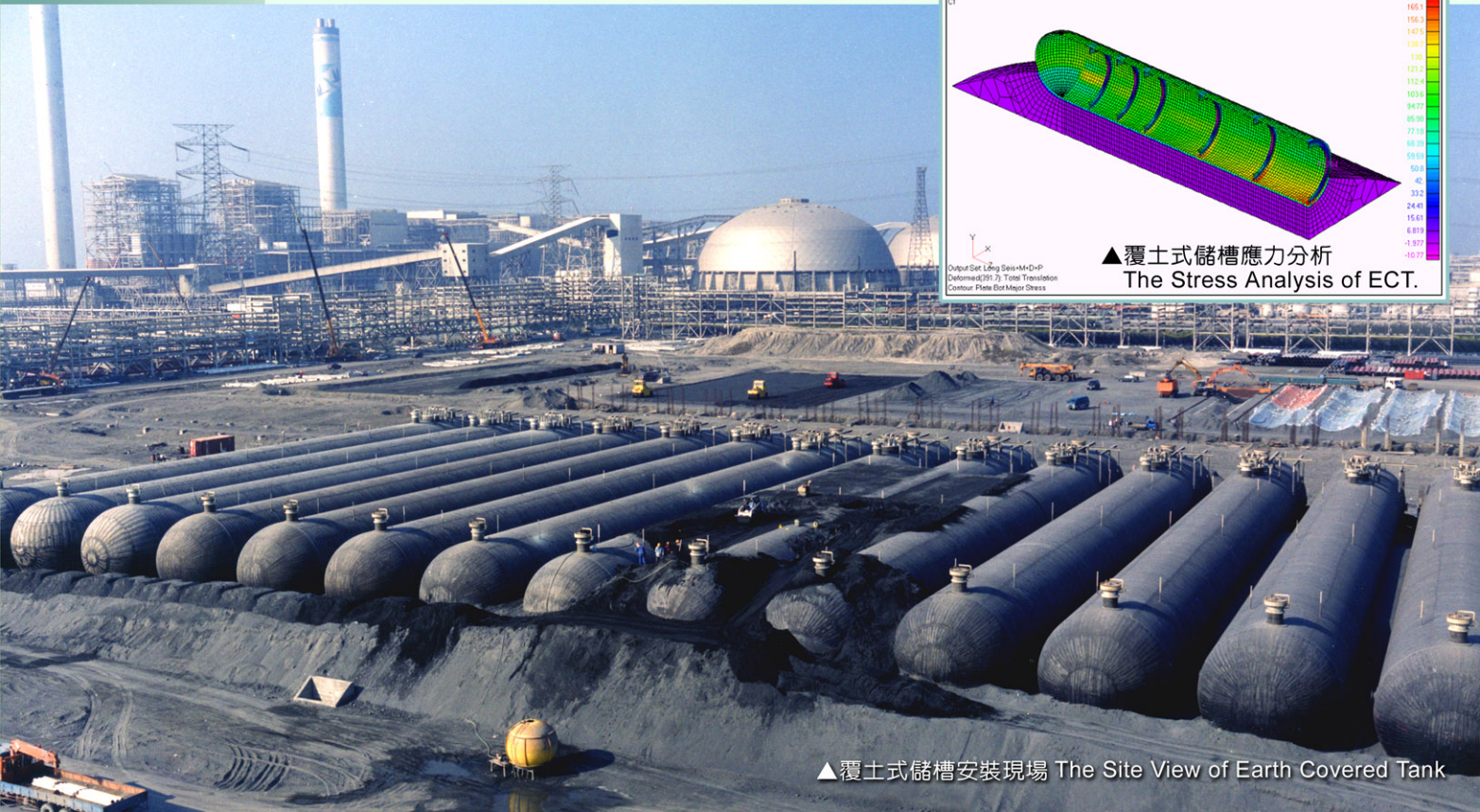
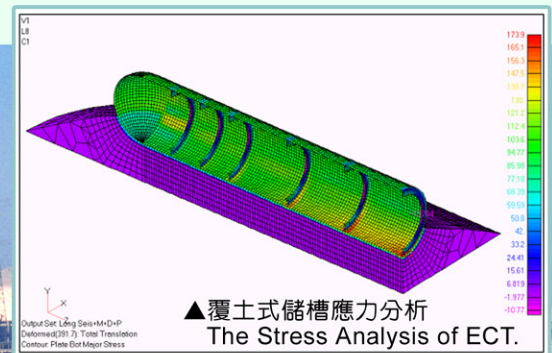
FHI accumulated specialization and experience of several decades in engineering, fabrication, and installation of petrochemical plants and the related equipments. CAD and various engineering analysis softwares have been applied ANSYS and Nastran used in stress analysis to make a discontinuous stress analysis, thermal stress analysis, and fatigue analysis of pressure vessel in order to enhance design quality and efficiency.

FHI is the most outstanding company in Taiwan with superior technique in cold working, welding and machining, possessing abilities in transportation and heavy lifting of heavy equipment, and construction on a turn-key basis.

▼製造工廠 Shop of Fabrication



▲覆土式儲槽 (Earth Covered Tank, ECT)
SA537-CI.2 ϕ 7.3 m x 74.3 m L x 589 Ton



▲覆土式儲槽安裝現場 The Site View of Earth Covered Tank

超大型塔槽 Super Large Towers



▲C7101 二苯甲高塔 Xylene Column
SA516-70 ϕ 8.5 m / 9.5 m x 91.7 m L x 1,489 Ton



▲C9701 真空塔 Vacuum Tower
SA516-70 + 316L
 ϕ 10.2 m x 60.7 m L x 843 Ton



▲C-1401 乙烯分餾塔 Ethylene Fractionator
SA516-70 ϕ 6.7 m x 92.7 m L x 762 Ton



▲C470 乙烯分餾塔 Ethylene Fractionator
SA537-CI.1 ϕ 5.8 m x 114 m L x 911 Ton



▲C540 丙烯分餾塔 (1 號) Propylene Fractionator NO.1
SA516-70 ϕ 7.0 / 8.2 m x 80.5 m L x 1,260 Ton



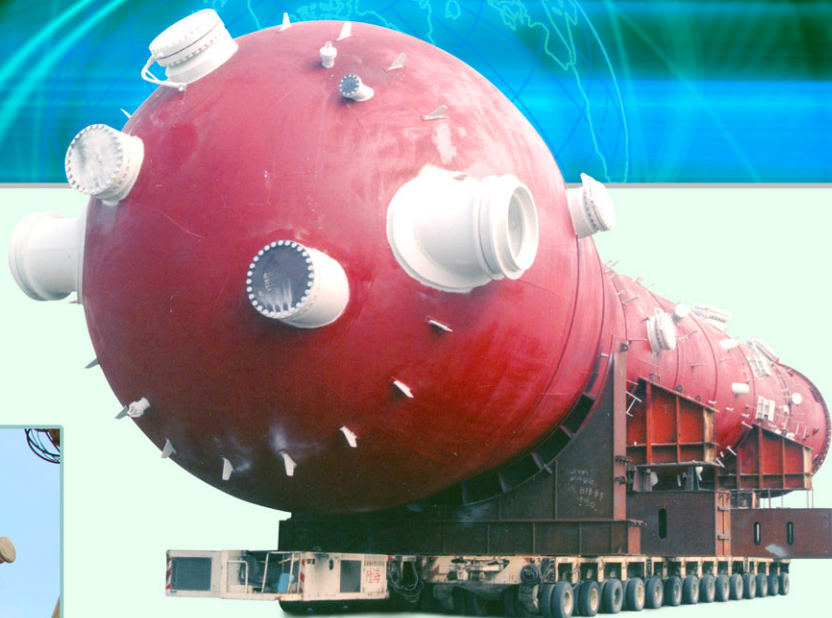
▲C210 汽油分餾塔
Gasoline Fractionator
SA516-70 ϕ 12.2 m x
67.9 m L x 1,092 Ton

C220 冷卻塔
Quench Tower
SA516-70 ϕ 11.2 / 17.0 m
x 54.7 m L x 1,174 Ton



▲C5551/C5552 苛性水洗滌塔
Amin/Caustic Water Wash
Tower
SA516-70 ϕ 7.8 m x 74.6 m L x
1,060 / 1,240 Ton

反應槽 Reactor



▲LLDPE 聚合反應槽 (LLDPE Polymerisation Reactor)
SA516Gr70 x 85 mm T
φ 8,660 mm x φ 5,000 mm x 39,380 mm L x 430 Ton



▲130 m³ PVC 重合槽 (130 m³ PVC Reactor)
Material : Stainless Steel Clad
φ 4,400 mm x 10,384 mm L x 75 Ton



▲PP 反應槽 (PP Reactor)
SA516Gr70 + SA240Tp304
φ 2,700 mm x 16,000 mm L x 112,7 Ton



▲EO 反應槽 (EO Reactor)
SA543GrB CL-1 x 117 mm T
φ 7,670 mm x 22,097 mm L x 1,070 Ton



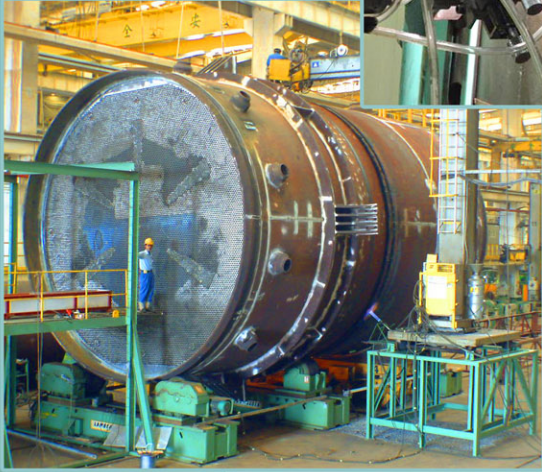
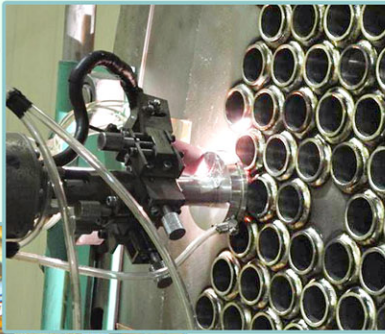
▲POS 反應槽 (POS Reactor)
Material : Stainless Steel Clad
φ 3,350 mm x 9,015 mm L x 4,038 mm H x 73 Ton



▲VCM 廠 O.C 反應槽 (O.C.Reactor for Vcm Plant)
Material : Duplex Stainless Steel
φ 5,000 mm x 16,426 mm L x 180 Ton

熱交換器 Heat Exchanger

強力焊接管端封焊▶
Appearance of Tube to
Tubesheet Joint With
Strength Weld



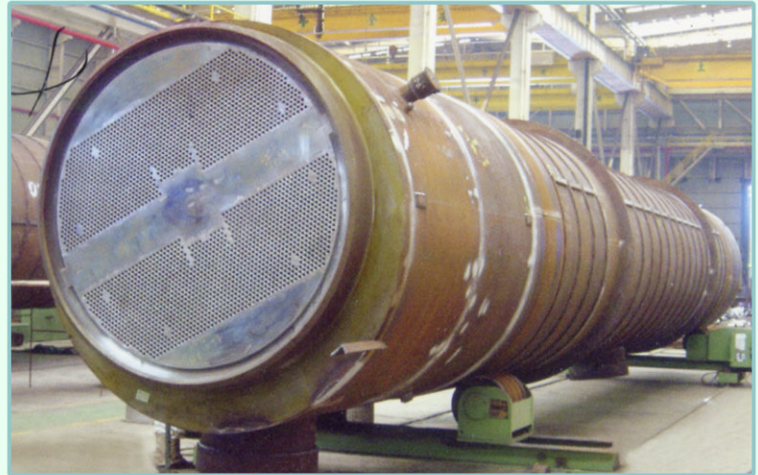
▲EO 反應槽 (EO Reactor)
SA543GrB CL-1 x 117 mm T
φ 7,670 mm x 22,097 mm L x 1,070 Ton



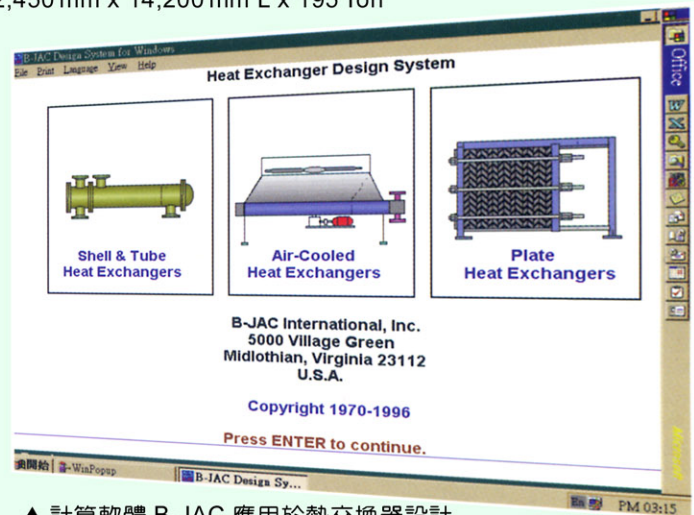
▲機械廠內觀
A View of the Fabrication Shops



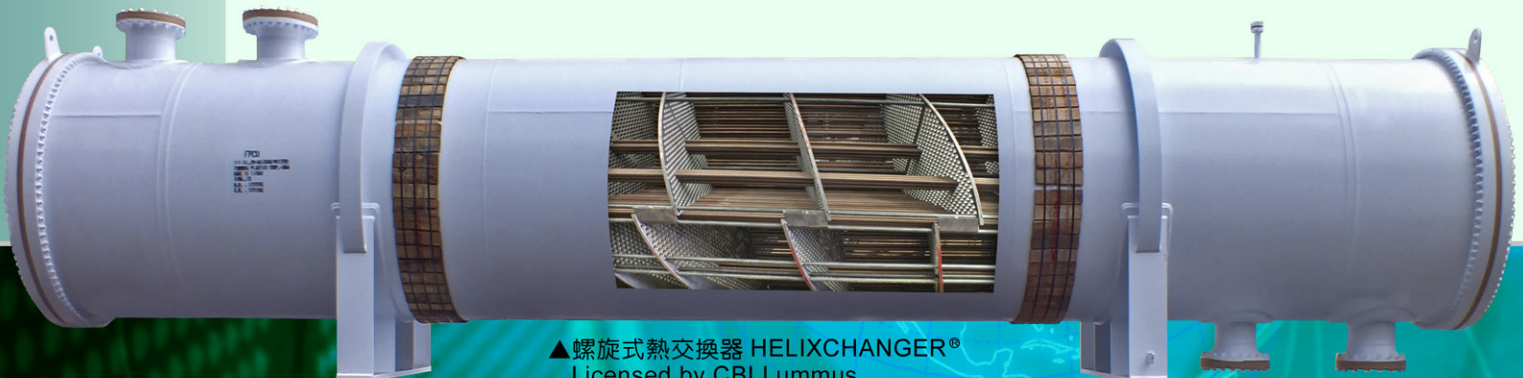
▲再生再沸器 (Dea Regenerator Reboiler)
φ 2,700 mm x φ 1,525 mm x 11,318 mm L x 38 Ton
Heat Transfer Area : 901 m²



▲高壓換熱器 (High Pressure Heater)
Design Pressure 165 Kg/cm²
SA516Gr70 / SA688Tp304L
φ 2,450 mm x 14,200 mm L x 195 Ton



▲計算軟體 B-JAC 應用於熱交換器設計
B-JAC for Heat-Exchanger Design



▲螺旋式熱交換器 HELIXCHANGER®
Licensed by CBI Lummus
φ 1,676 mm × 13,760 mm L × 62 Ton
Tube Material : SB359 UNS 70600
Heat Transfer : 7,673 m²

表面式冷凝器 Surface Condenser

▼表面式冷凝器模組

The Module of Surface Condenser

Quantity : 600 MW x 13 Units x 52 Modules

Module Size : 3.0 m W x 4.5 m H x 15.2 m L x 63 Tons

Heating Area : 33,055 m²

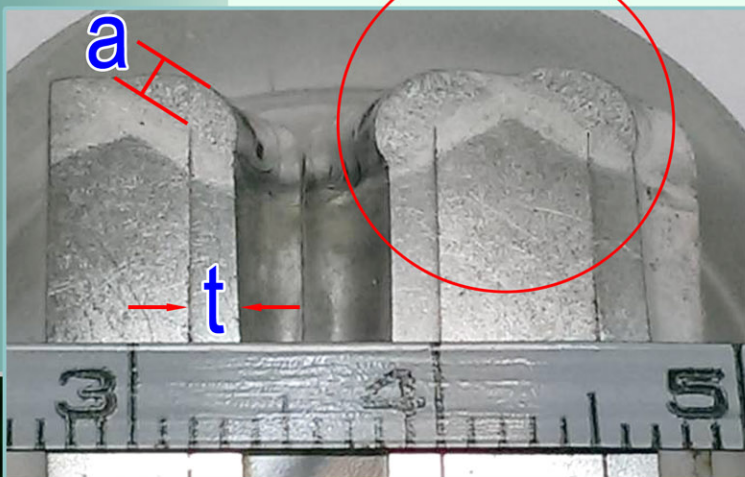
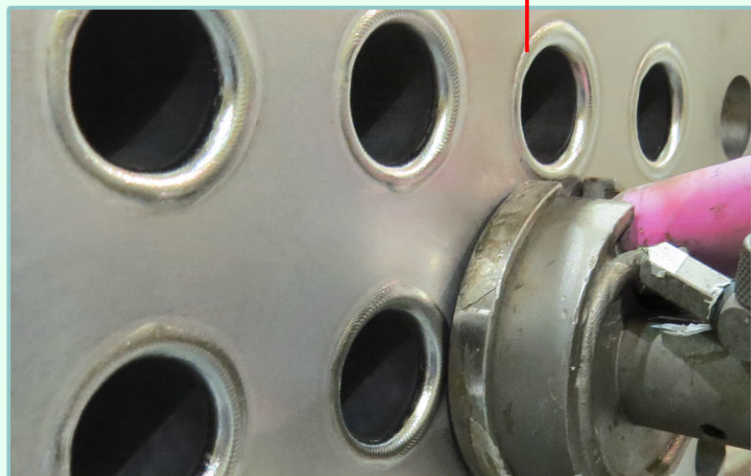
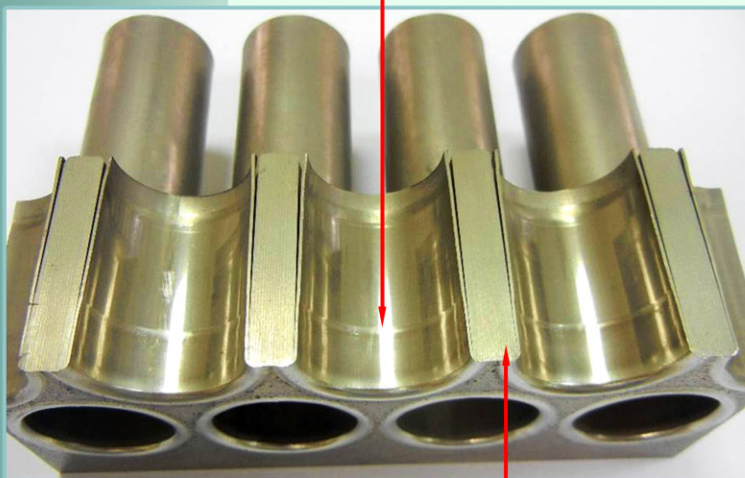
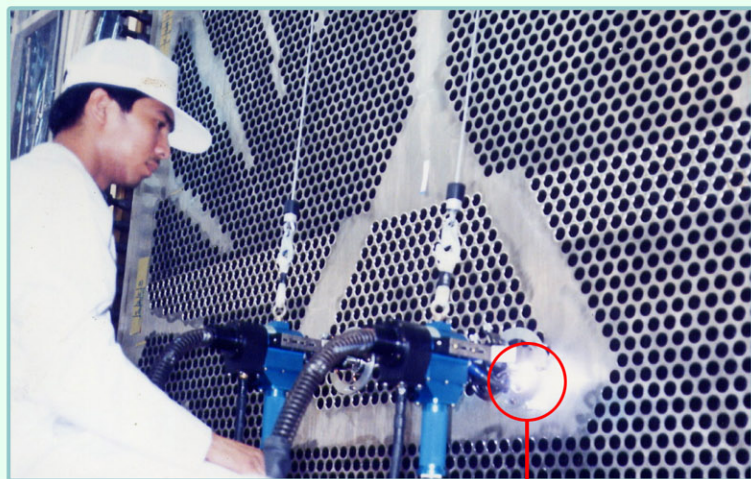
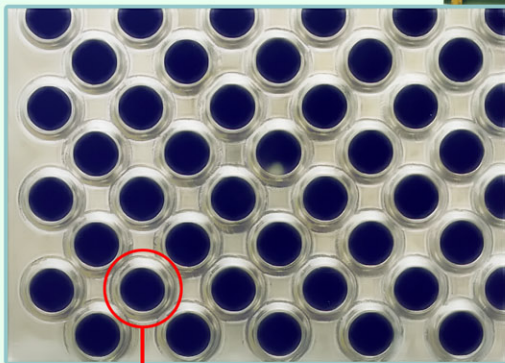
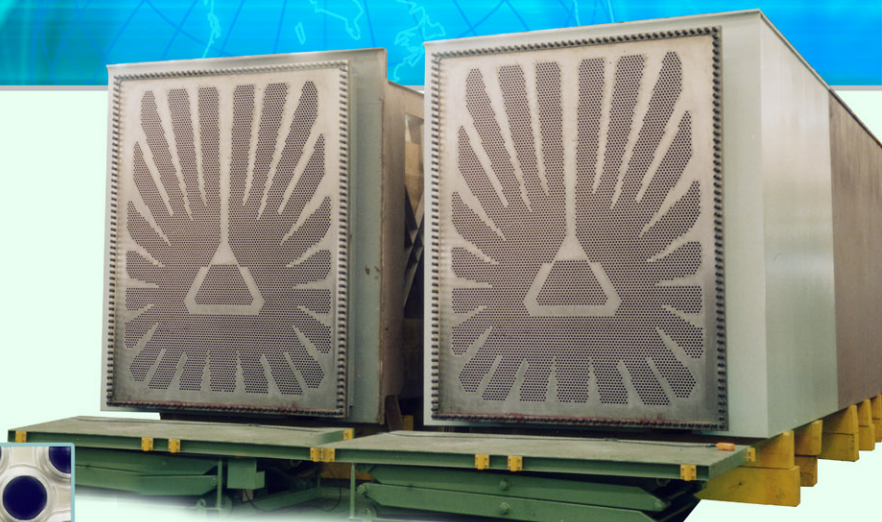
Tube Material : Titanium SB338Gr.2

Quantity : 1,350 MW x 2 Units x 12 Modules

Module Size : 4.8 m W x 6.4 m H x 15.7 m L x 156 Tons

Heating Area : 113,523 m²

Tube Material : Titanium SB338Gr.2



▲鈦管管端自動封焊
Automatic Welding of Titanium Tube to Tubesheet

▲喉深 $a > 0.8t$ (管壁厚)
Throat Depth $a > 0.8t$ (Tube Thickness)

特殊材質及鋼鐵廠設備

Equipments for Specil Material & Steel Mill

▼清淨室 (Clean Room)

加壓清淨室 (Pressurized "Clean Room")

Size : 10,000 mm W x 7,500 mm H x 40,000 mm L

提供特殊材質 (鋁、鈦、鎳、鉬、鉭 ... 等) 適合的製造條件

Provides Proper Manufacturing Conditions for Special Material
(ex Al、Ti、Ni、Zr、Ta...etc)



▲貯槽 (Drum)

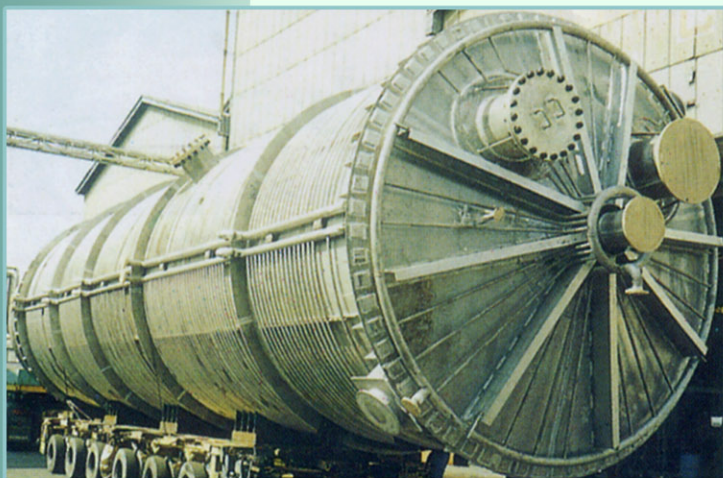
Material : Titanium

SB265Gr7 x ϕ 4,400 mm x 9,600 mm L



▲脫除槽 (Stripper)

Material : Inconel Alloy SB168-600



▲脫除器 (Desorber)

Material : Aluminum Alloy



▲電弧爐 (Electric Arc Furnace)



◀連鑄廠鋼包迴轉台

(Ladle Turret for Slab Caster)



▲精煉爐爐蓋

(Ladle Roof for Ladle Furnace)



台塑企業
FORMOSA PLASTICS GROUP

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