

Outline of PT TOKKI ENGINEERING AND FABRICATION

Only One Next Stage

Company name : PT. TOKKI ENGINEERING AND FABRICATION (略称TEF)

Establish : 16 April 2019

Capital : IDR. 120,000,000,000 (1,200億ルピア)

Shareholder : 徳機(株)/ TOKKI LTD. (99.9%) & 岡田産業(株) / OKADA SANGYO CO.LTD (0.1%)

President Director : Ryoichi Yunomae (湯之前 良一)

Business: 圧力容器等溶接組立品 / Welding assembly including pressure



PLANT [**Discovery**] (Cikarang Factory)

Jl. Jababeka X II B Blok. W-26
Kawasan Industri Jababeka I
Desa Harjamekar Kec. Cikarang
Utara Kab. Bekasi Indonesia 17530
TEL : +62-21-893-6733
FAX : +62-21-893-6737



PLANT [**Endeavor**] (Cilegon Factory)

Kawasan Industri Krakatau 1
JL. Australia I Kav. C1/2 Kel.
Warnasari, Kec. Citangkil,
Kota Cilegon, Banten, Indonesia
42443
TEL : +62-254 831 7243, 831-7244



Direction from Endeavor (Cilegon) ⇔ Discovery (Cikarang)

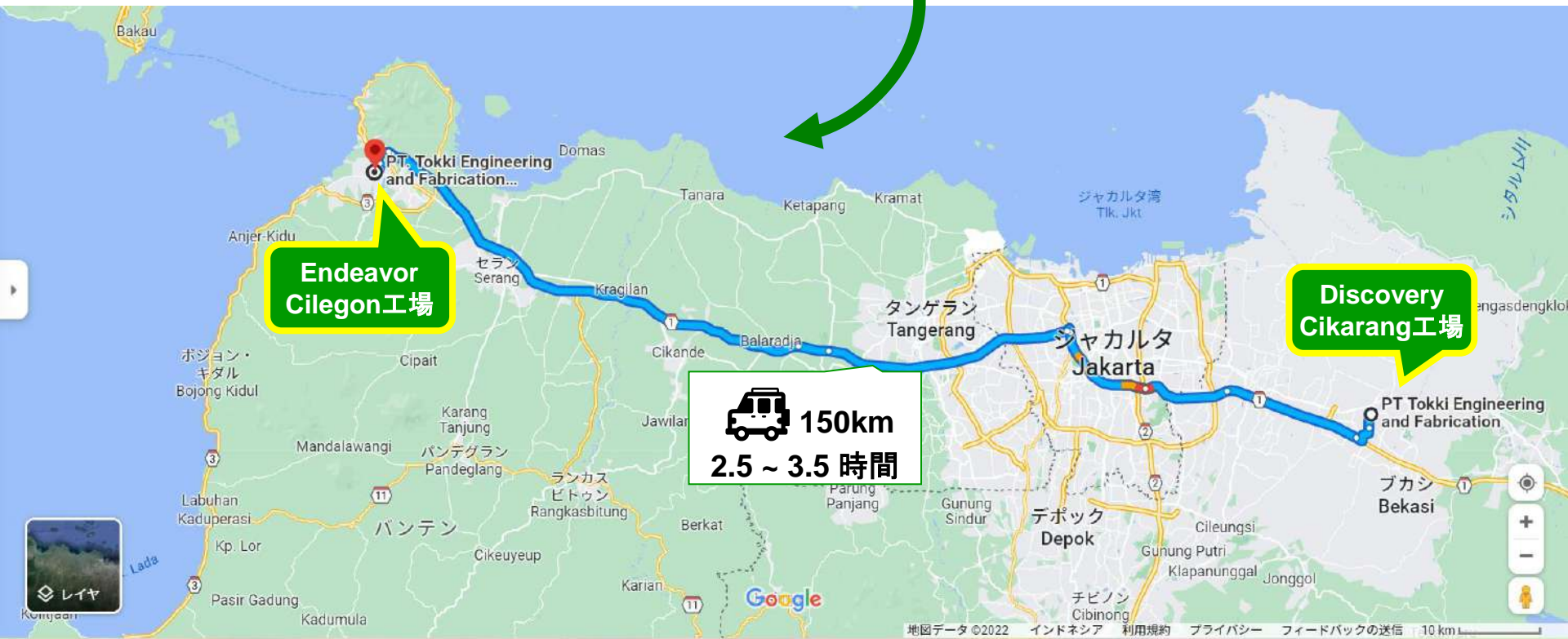
Endeavor (Cilegon本社工場) ⇔ Discovery (Cikarang) 道程及びロケーション



Endeavor (Cilegon)



Discovery (Cikarang)



PT TOKKI ENGINEERING AND FABRICATION is providing quality products and good after-sales technical service from the Tropical Island in Indonesia to all over the world.

We are the specialized Company in the welded pressure vessels and sheet metal combining of industrial infrastructure Including Oil & Gas, Petrochemicals, Pharmaceuticals, Fertilizer, Agricultural chemicals, Power Plant and Thermal Processing industries.

We show the spirit of challenge based on the differential advantage of "Engineering Capability", "Consulting", "Workmanship (Proficiency in Welding)", "Special Materials", research and develop, manufacture, and sell our products which make our Customers satisfied.

We believe our Company owes its prosperity to the strong and kind support of our Customers, people working with us, and local citizens. We would like to ask for your continued support and guidance.



Ryohichi Yunomae (湯之前 良一)

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E-mail: yunomae@tef.co.id

Year	Month	Event	出来事
1997	Mar	Establishment of PT MMC METAL FABRICATION (MMF)	MMF会社設立
1998	Jan	Beginning of MMC METAL FABRICATION operation	MMF操業開始
1999	Sep	ISO9001 acquisition	ISO9001 取得
	Nov	First MHLW Class 1 vessel	第一種圧力容器初号機
2000	Apr	ASME license acquisition	ASME認証取得
	Apr	Titanium (Ti) fabrication started	Ti 機器施工開始
	May	Entered the pharmaceutical business	医薬プロセス機器に参入
2002	Feb	First ASME vessel	ASME容器初号機
	May	First HPGSL vessel	高圧ガス特定則機器初号機
2007	Feb	Achieved 1,000 projects	1,000号機出荷
	Mar	10th anniversary	設立10周年
2015	Nov	Achieved 2,000 projects	2,000号機出荷
2017	Mar	20th anniversary	設立20周年
	Nov	Opening of marketing branch in Cilegon	Cilegon営業・マーケティング事務所開設
2018	Aug	Opening of workshop in Cilegon	Cilegon工場開設 (レンタル工場)
2019	Apr	Establish of PT TOKKI ENGINEERING AND FABRICATION (TEF)	TEF会社設立
	Nov	Business transfer from MMF to TEF	事業移管 (MMF⇒TEF)
2021	Nov	Cilegon dream factory “Endeavor” Start of Construction	Cilegonドリーム新工場Endeavor着工
2022	Jul	Start production at “Endeavor” Cilegon Plant	新工場Endeavorの事業開始



Admiral (大将)
Yunomae



Profit management (Profit responsibility)
Business strategy planning & execution function

Division	Section
General affairs (Yudi)	ADM (Yudi)
	Accounting (Yudi)
QA (Farid)	QA (Farid)
Manufacturing and Production Engineering (Asep)	Design (Asep)
	Production Engineering (Asep)
	Procurement (Johan)
	Logistics (Johan)
Sales planning (Dindin)	Cost Control (Asep)
	Sales & Marketing (Hendrayana *Con) (Agus) (Sutriyono)
	FAB (Suhardo, Denny)
Business Planning (Rivaldi)	Service (Akmal, Mamad)
	HSE (Yunomae)
	HSE (Imam *Con)

Cost management (Responsibility)
Production, cost, delivery management function

Discovery

Captain (船長)
Dindin

Division	Section
MFG (Suhardo)	Production (Wawan)
	QC (Hendrayana)
	Project control (Andi)
	Factory control (Imam)

Endeavor

Captain (船長)
Rivaldi

Division	Section
MFG (Akmal)	Production (Denny)
	QC (Dwika)
	Project control (Akmal)
	Factory control (Denny)



<i>Position</i>	<i>Number</i>
President Director	1
Plant Manager (EOO)	2
General Manager	1
Manager	12
Assistant Manager	2
Senior Staff	6
Staff	16
Leader	21
Chief / Master	28
Operator	102
TOTAL	191

<i>Employee type</i>	<i>Number</i>
Japanese	1
Permanent	157
Contract	33
Total	191

<i>Gender composition</i>	<i>Number</i>
Female	16
Male	175
Total	191

<i>Plant composition</i>	<i>Number</i>
Discovery (Cikarang)	141
Endeavor (Cilegon)	50
Total	191

塔・槽類

Vessel, Reactor and Tower



熱交換器

Heat Exchanger



配管

Piping (Fittings)



Chemical processing (化学・医薬プロセス)

Industrial furnaces & Steel mill (工業炉及び製鉄産業)

ラジアントチューブ

Radiant Tube



マッフル

Muffle








その他





Others



Lifecycle Mix

Business Mix

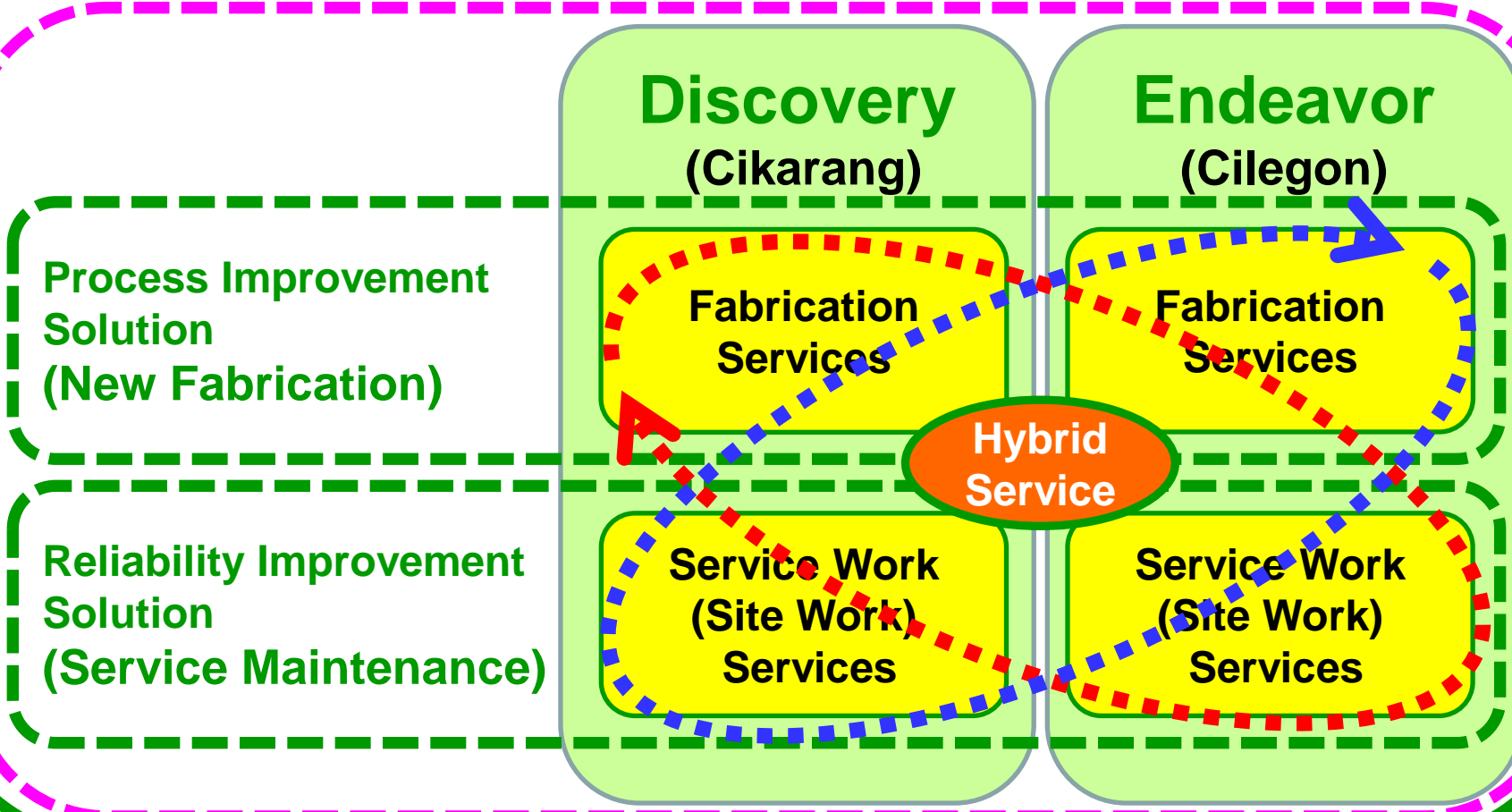
	Engineering Service	Repeat version upgrade
	Spot type	Continuous type
Service	 <p>Maintenance Work (Re-tubing, Repair, Overhaul)</p>	 <p>ASDM Work Site Work</p>
Fabrication	 <p>Pressure Vessels</p>	 <p>Radiant Tube</p>  <p>Muffle</p>

	Endeavor (Cilegon)	Discovery (Cikarang)
	F1 Pit & Critical care management (F1ピット&救命救急経営)	New material construction & New technology development (新素材施工 & 新技術開発)
Fabrication	EDV X FAB	DSC X FAB
TEF core business (TEF基幹ビジネス)		
Maintenance / Service	EDV X MTN (Service)	DSC X MTN (Service)
One-stop service (ワンストップサービス)		

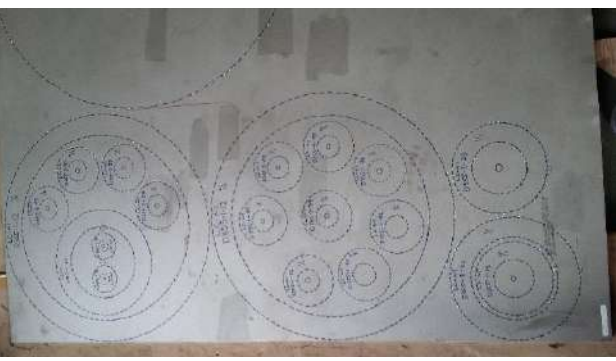
Hybrid service as our business concept



PT. TOKKI ENGINEERING AND FABRICATION
“Support the Reliability of Industrial Equipment”



圧力容器の施工フロー / Process flow of fabricated products



Scribe (けがき)



Cutting (材料切断)



Material Preparation (材料準備)



Weld joint (溶接継ぎ)



Bending (曲げ)



Head Forming (鏡成型)



Assembling (組立)



Inspection (検査)



Finishing (仕上・養生・出荷)

TEFの主なお客様 / Major customers in ASEAN



Singapore



Malaysia



Thailand



東南アジア 及び 日本の主要なお客様 Major customers in South East Asia & Japan

Indonesia



Japan



材質及び製品タイプ別販売実績 / Experienced Materials and Equipment Diagram



MATERIAL		UNS Number	TOWER/ COLUMN	VESSEL/ REACTOR	HEAT EXCHANGER	PIPING	MUFFLE	RADIANT TUBE	OTHERS
Ni Base Alloy	MAT21	N06210							
	ALLOY C-22	N06022							
	ALLOY C-276	N10276							
	ALLOY C-4	N06455							
	ALLOY B-2,3	N10665 / N10675							
	Ni 200/201	N02200 / N02201							
	Monel 400	N04400							
	ALLOY 230	N06230							
	ALLOY 600	N06600							
	ALLOY 601	N06601							
	ALLOY X	N06002							
	ALLOY 800/H/HT	N08800/N08810/N08811							
	ALLOY 625	N06625							
	ALLOY 20Nb-3	N08020							
	MC ALLOY	N06044							
	MA47P	-							
	UMCo-50	-							
	ALLOY G-30	N06030							
ALLOY C2000	N06200								
ALLOY 926	N08926								
ALLOY 59	N06059								
ALLOY 31	N08031								
Titanium	Ti Gr.1	R50250							
	Ti Gr.2	R50400							
	Ti Gr.7	R52400							
Duplex SS	SAF2707 HD	S32707							
	SAF2507	S32750							
	SAF2205	S31803/S32205							
	S.S.329J4L	S32506							
Austenitic SS	SANICRO28	N08028							
	253 MA	S30815							
	254 SMO, YUS270	S31254							
	S.S. 904L	N08904							
	S.S. 347	S34700							
	S.S. 321	S32100							
	S.S. 310/310S	S31000/S31008							
	S.S. 317L	S31703							
	S.S. 316 / 316L	S31600 / S31603							
	S.S. 304 / 304L	S30400 / S30403							
Copper Nickel	C71500								
Carbon Steel									

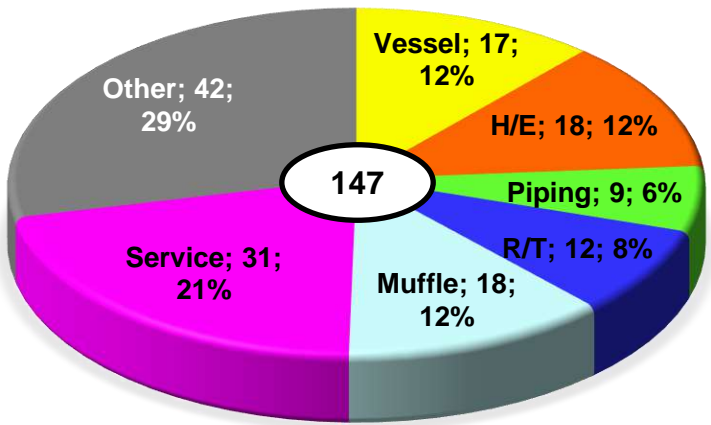
A number of achieved
from 1998 ~ April 2023 is

(1) 3,148 projects
(2) Export to 16 countries
(3) Fabrication is over 40 type of materials
(4) More than 350 customers (570 plants)

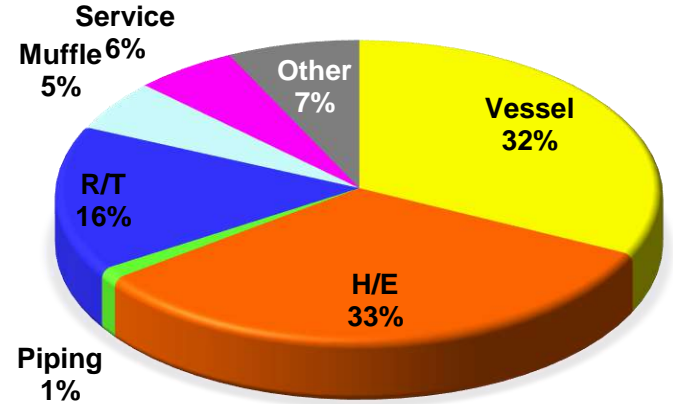
Business achievement by products & materials in FY2021



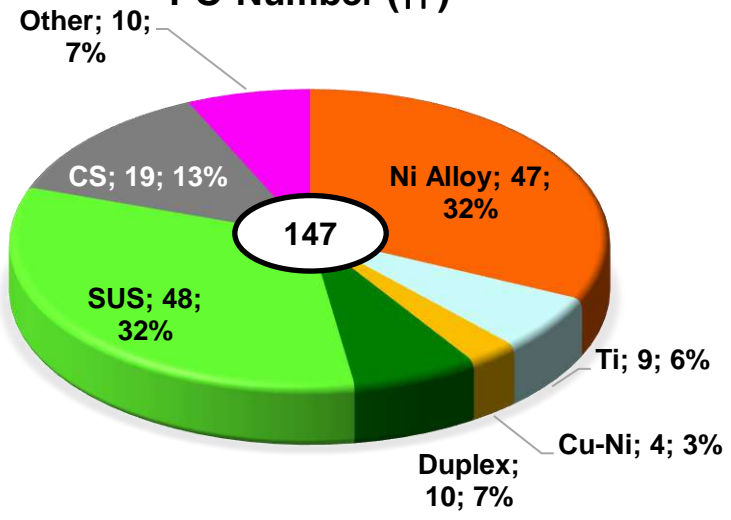
PO-NUMBER (件)



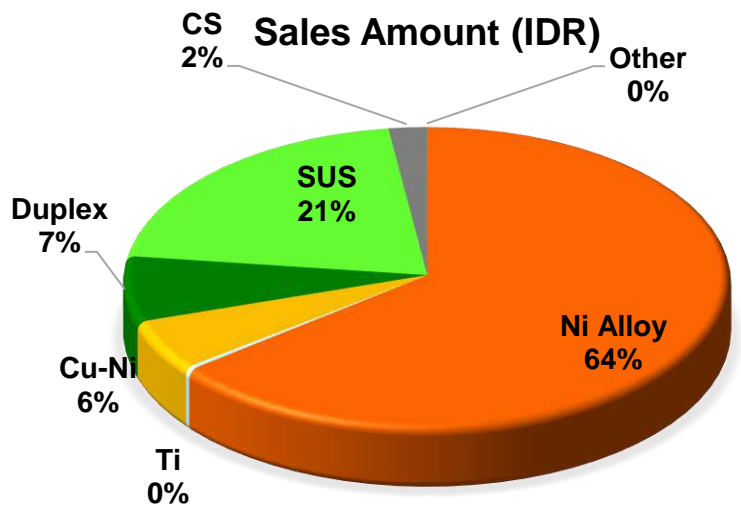
Sales Amount (IDR)



PO-Number (件)



Sales Amount (IDR)



「特殊金属を用いた設計・施工(溶接)によるプロセス産業へのソリューションの提供」
Providing solutions to the process industry through design and construction (welding) using special metals



エンジニアリング力
Engineering
Capability



コンサルティング力
Consulting



匠の溶接
Workmanship
(Proficiency in Welding)



特殊素材
Special Materials

各種認証 / Various Certifications



☆ **TEF** が有する認証:

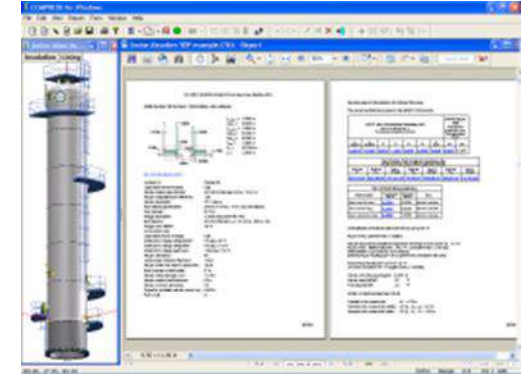
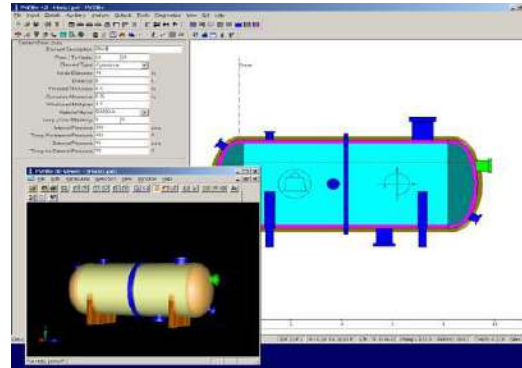
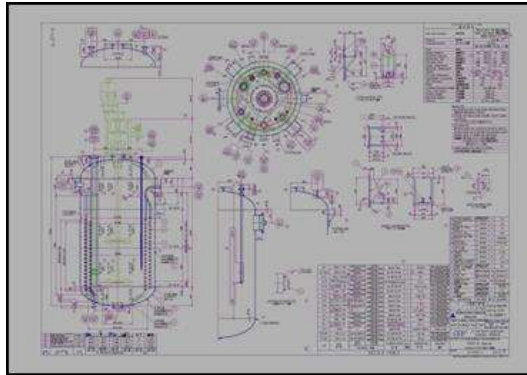
- 1) ISO 9001-2015
- 2) ASME U and R stamp
- 3) The National Board Certificate
- 4) MIGAS Certificate / SKT MIGAS
- 5) EBTKE (Geothermal)



☆ **TEF** は日本の第一種圧力容器、第二種圧力容器、高圧ガス特定則の他、マレーシアDOSH やシンガポールMOMにも対応可能です。

TEF also can comply other Pressure Vessel Code such as Japanese code, DOSH (Malaysia), MOM (Singapore).

- AutoCAD & ZW CAD
- Compress (圧力容器等強度計算ソフト)
- PV Elite (容器および熱交換器設計支援)
- TOSCA (構造最適設計システム)
- Fast Cut (material nesting system program)



Manufacturing Facilities (1)



Area	Land area	15,000m²
	Workshop area	3,100m²
	Tent area	700m²

Cranes	20 / 5 ton x 9.6H	1 unit
	5 / 1 ton x 9.6H	2 units
	2 ton x 5.8H	2 units
	1 ton x 5.8H	2 units
Hydraulic press machines	750 ton	1 unit
NC press Break	220 ton	1 unit
Roll Bending Machines	t : 20mm	1 unit
	t : 12mm	1 unit
	t : 8mm	1 unit
NC Hydraulic Shearing Machines	t : 25mm	1 unit
	t : 8mm	1 unit

Manufacturing Facilities (2)



Machining	Lathe mahines	5 units
	Milling machines	2 units
	Radial Drilling machine	2 units
Welding machines	TIG Welding Machine	40 units
	MIG Welding Machine	8 units
	Plasma Welding Machine	2 units
	Submerged Arc Welding Machine	1 unit
Cutting Machine	Plasma Arc Cutting Machine	3 units
	CNC Plasma Cutting Machine	1 unit
	Semi Auto Bandsaw Machine	1 unit
	Cutting machines	1 unit
Polishing Machine	Auto Polishing Machine	1 unit
Pipe Bending	Hydraulic Section and Pipe Bending	1 unit

Maximum size of Fabricated Products



Maximum size of the Fabricated Products are limited by inland transportation.

Maximum Diameter	6 m
Maximum Length	30 m approximately

The Fabricated Products with the maximum limit size will be negotiable.





TEF製品の応用例 / Application examples of our products

主要マーケット / Our key markets of focus



Oil & Gas



Petro Chemical



Heat Treatment



Pharmaceutical



CAL & CGL for Steel Mill



FGD system for Power Plant

Application of Ni alloys to Synthetic pharmaceutical production process

医療用合成医薬品生成プロセスへのNi合金の応用



**Alloy C-22
Reactor**



Alloy C-22 condenser



Hastelloy C-22 vessels for Pharmaceutical processing

医療用合成医薬プロセス向けハステロイC-22反応槽



SS904L UNS N08904 Autoclave Vessel



Brine Tank made of Ti Gr.2 for chlorin and alkaline processing クロル・アルカリプラント向けTiタンク



Columns made of Pure Ni201 for Petro chemical processing 石油化学プラント向け純Niタワー



Columns made of Pure Ni201 for Petro chemical processing 石油化学プラント向け純Niタワー





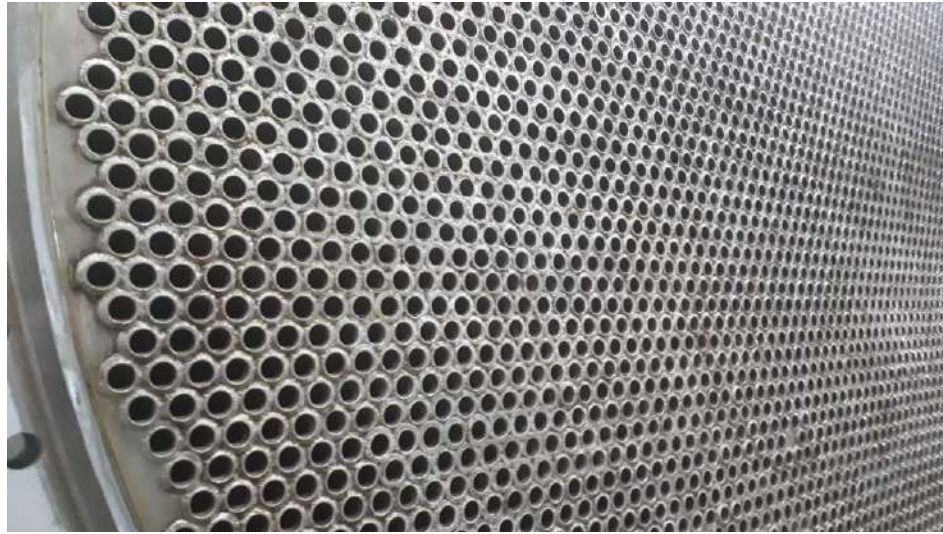
- (1) Heat Exchanger**
- (2) Number of Tubes : 3,204**
- (3) Surface area : 1,117.7 m²**
- (4) Empty weight : 27,180 kg**
- (5) MTL : Sandvik SAF 2707 HD
(UNS S32707)**



Heat Exchanger made of SAF2507 Duplex SS for Petro chemical processing



Heat Exchanger made of Cu-Ni for Petro chemical processing



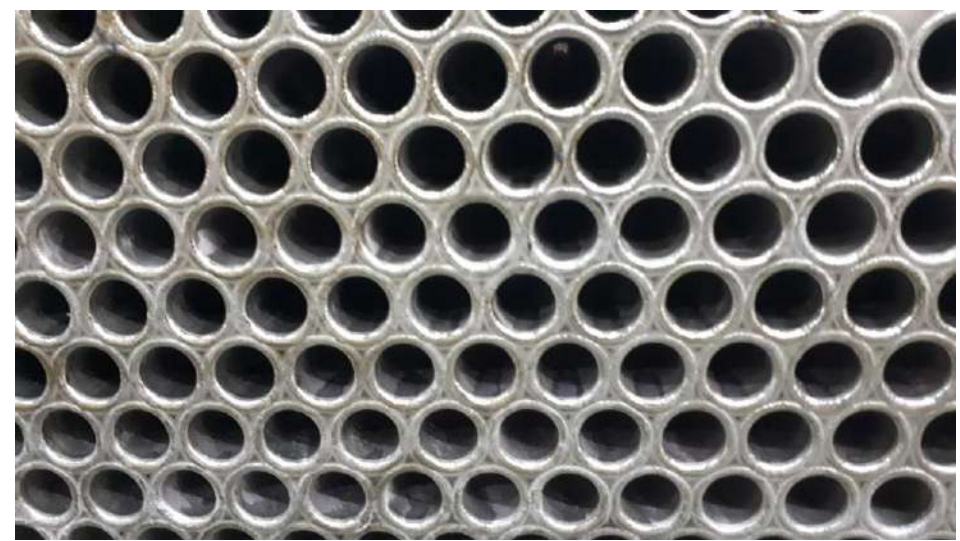


Heat Exchanger made of Alloy 400 (Monel) for Petro chemical processing

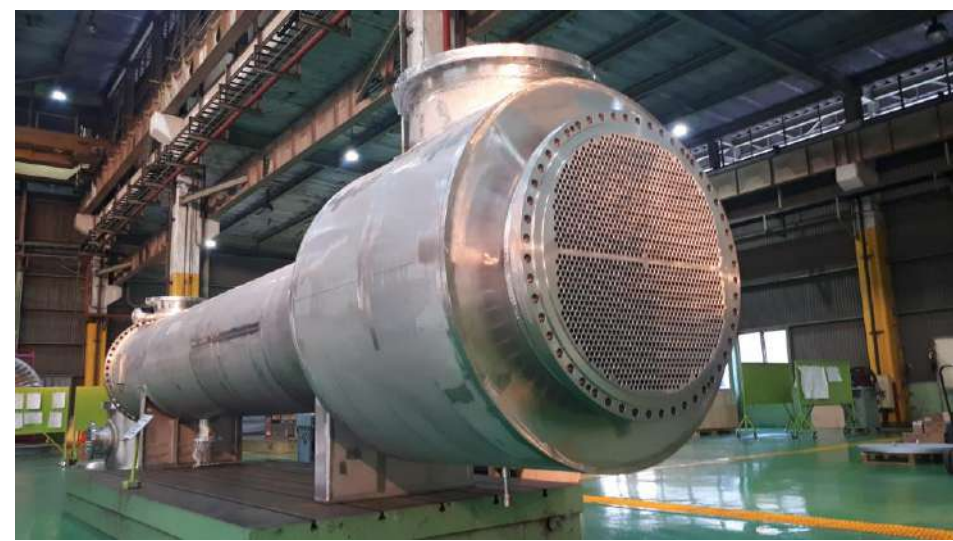


Heat Exchanger made of Pure Ni201 for Petro chemical processing





Condenser made of SS316L for Geothermal Power Generation 地熱発電所向けコンデンサー



Alloy 625 Fin Fan Cooler



Welded Pipe Service



By using these 750ton press, forming die, roundness die, semi-automatic welding machine, and our skill, we can manufacture welded pipe of any size.





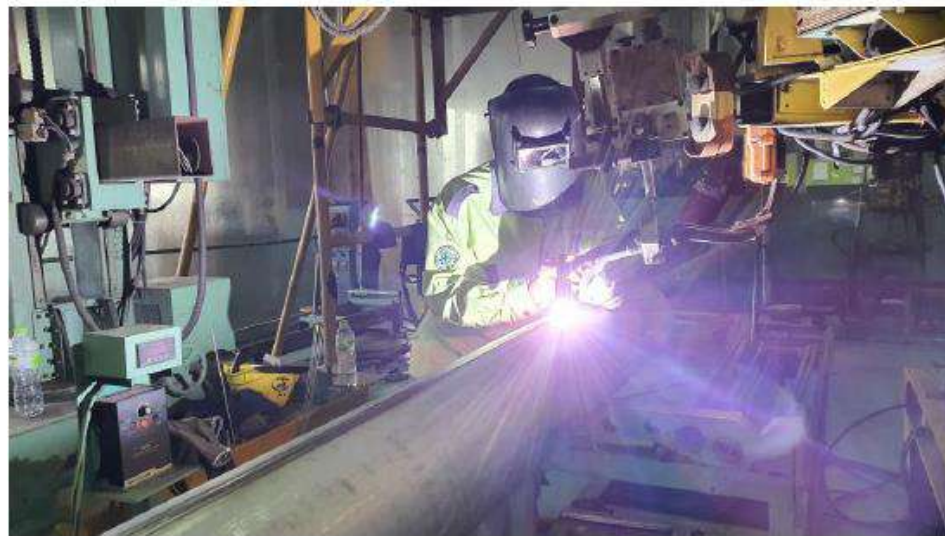
Available Range of Production for JIS Standard Welded Pipes

OD / t (mm)	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	Max L (mm)
21.7	★	★	-	-	-	-	-	-	-	-	-	1,000
27.2	★	★	-	-	-	-	-	-	-	-	-	1,000
34.0	★	★	-	-	-	-	-	-	-	-	-	1,500
48.6	★	★	★	-	-	-	-	-	-	-	-	1,500
60.5	★	★	★	-	-	-	-	-	-	-	-	2,000
89.1	★	★	★	-	-	-	-	-	-	-	-	3,000
114.3	-	★	★	★	★	-	-	-	-	-	-	3,000
139.8	-	★	★	★	★	-	-	-	-	-	-	3,000
165.2	-	★	★	★	★	★	★	-	-	-	-	3,000
168.3	-	★	★	★	★	★	★	-	-	-	-	3,000
193.0	-	★	★	★	★	★	★	-	-	-	-	3,000
194.0	-	★	★	★	★	★	★	-	-	-	-	3,000
216.3	-	★	★	★	★	★	★	★	★	-	-	3,000
267.4	-	★	★	★	★	★	★	★	★	-	-	3,000
273.0	-	★	★	★	★	★	★	★	★	-	-	3,000
318.5	-	★	★	★	★	★	★	★	★	★	★	3,000
355.6	-	★	★	★	★	★	★	★	★	★	★	3,000

★ : Available

However, it is not limited to JIS standards, and we can manufacture welded pipes of any out diameter any length.

Manufacturing Process of Welded Pipes



Welded Pipes for Piping Line





PT. TOKKI ENGINEERING AND FABRICATION

is an innovative leader in the development and manufacture of fabricated products for high-temperature and corrosive industrial applications in installations around the world.

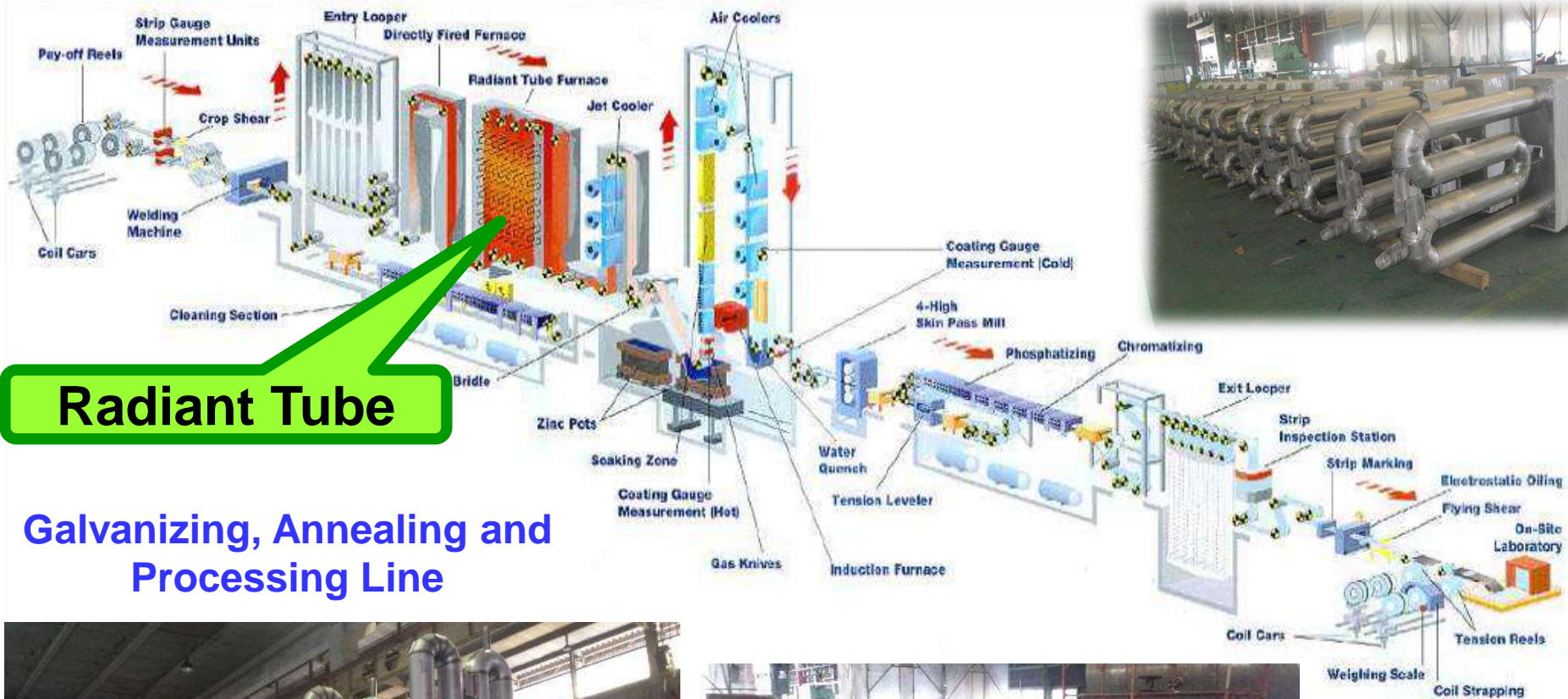
Our thermal processing products such as

- Radiant-tubes
- Muffles
- Retorts

for several type of heat treat furnaces. **Radiant tube** using UNS No. N06230 is a flagship product due to its good strength, its resistance to carburization, and its resistance to thermal fatigue after repeated temperature cycling.

Radiant Tube for CAL / CGL of Steel Making Processing

連続溶融亜鉛メッキライン用ラジアントチューブ



Radiant Tube

Galvanizing, Annealing and Processing Line





Applications of Heat Resistant Alloy MA23 products Muffles

連続焼成, 熱処理炉用マッフル



Terima Kasih / ありがとうございます



PT. TOKKI ENGINEERING AND FABRICATION