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08.2020.030



#### **RK ENGINEERING CO., LTD.**



#### Introduction

In March 2012, RK ENGINEERING CO., LTD was established as a manufacture that can bring together the technical strength of Japan and the talented Vietnamese staff in Hai Phong which is Vietnam's third largest city.

It has realized the high level of manufacturing technology and quality control required by plant manufacturers in and out of Vietnam and can meet a high level of cost-effectiveness.

In February 2019, we also completed a one-stop in-house production line including the Vertical Precision Milling Machine in order to make from the head plates which are indispensable for pressure vessel manufacturing to can manufacturing, heat treatment and machining.

The trolley type convection heat treatment furnace, exhaust duct and chimney were designed by Rozai Industry and manufactured by RK Engineering, and the LPG tank and LPG supply system for the incidental structure were designed and manufactured only by RK Engineering's Vietnamese staff.

We believe that with this skill, we can provide equipment in various fields that can meet our customers' requirements. We all, Japanese and Vietnamese, will continue to proceed to the reliable manufacturer for our customers.

# There are three biggest reasons why RK ENGINEERING chose the Deep-C Industrial Park in Hai Phong.

#### **1. Regional characteristics**

Vietnam is located in the center of Southeast Asian countries and China and it has remarkable economic development. Hai Phong City is located 100km east of Hanoi which is the capital city and it is a logistics center having an international trading port.

#### 2. Site location

The Deep-C Industrial Park is adjacent to Dinh Buo Port, Hai Phong's international trading port, and it is very suitable for loading raw materials and shipping large-scale products by sea. They also completed the construction of Lac Yen Port to meet the increasing demand for containers.

What's more it has a highway CT.04 between Hanoi and Hai Phong other than sea transportation, it takes 1 hour and 45 minutes by car to Hanoi, and it also has Cat Bi International Airport connecting central and southern Vietnam from it.

#### 3. Technical capabilities

Haiphong is historically well known for the shipping industry, and there are many factories engaged in cutting, bending, and welding iron because shipping industry has its own wide skirts. Therefore, we can hire highly skilled employees, and also find many companies who can help us with our production.

### ASME certified company

On December 4, 2012 RK ENGINEERING got the ASME certificate, which is a manufacturing technology standard for the production of power boilers and pressure vessels.

It is the first Japanese company in Vietnam to obtain ASME qualification for manufacturing power boiler and pressure vessel, and it has contributed to the production of power generation, chemicals, and food plant facilities in Southeast Asia, including Vietnam, or China.



ASME Section I Power Boiler (S) No.43958

ASME Section ₩ Div.1 Pressure Vessels (U)No43959

ASME is an abbreviation for The American Society of Mechanical Engineers. Among the standards established by ASME, the ASME Boiler and Pressure Vessel Code (ASME Boiler and Pressure Vessel Code) establishes safety rules governing the design and inspection of pressure vessels as well as equipment in nuclear power plants.

# Registered Company of Quality Management System (ISO 9001-2015) Safety Control

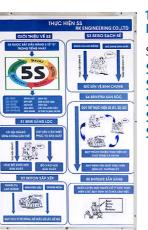
We are increasing corporate value and building relationships that customers can trust by manufacturing safe products.

#### **Ouality policy RK QUALITY POLICY** Chính sách chất lượng Để thòa mãn yêu cầu của khách hàng về Chất lượng, Giá thành, Thời gian giao hàng và An toàn, chúng ta phải làm rõ vai trò, trách nhiêm của tổ chức, nâng cao năng lực của từng viên, cùng phối hợp thực hiện và cải thiện không ngừng ệ thống quản lý chất lượng sản phẩm competence. 品質方針 RK ENGINEERING CO.,LTD CÙNG NHAU CHÀO HỔI HÃY CHẢO NHAU BẰNG CẢ TẨM LÒNG HÃY ĐÁP LAI BẰNG NU CƯỜI THÂN THIÊN CÙNG NHAU XÂY DƯNG MÔI TRƯỜNG VĂN HÓA NHẤT VÙNG あいさつ運動 大きいな声で挨拶をする 大きいな声で返事をする めざせ!あいさつ地域No.1 **RK ENGINEERING CO., LTD** Greeting Campaign

Gulf of Tonkir

**RK ENGINEERING** 

**Deep-C Industrial Zone** 











per 15-16. 2012) (Document)





Final survey for ASME (November 16, 2012) (Facto

To satisfy customer requirement on Quality, Cost, Delivery and Safety, we make concered efforts together to take actions to continually improve effectiveness of the quality management system by

clarifying the roles and responsibilities and by improving employee's

#### 1S + 5SImprovement activeties

- Safety **S1** Seiri (Sorting/Tidiness)
- **S2** Seiton (Setting in order/Orderliness)
- **S**3 Seiso (Shining/Cleanliness)
- S4 Seiketsu (Standardize)
- Shitsuke (Sustain/Discipline)





# | Equipments



Office



Entrance



**5** Canteen



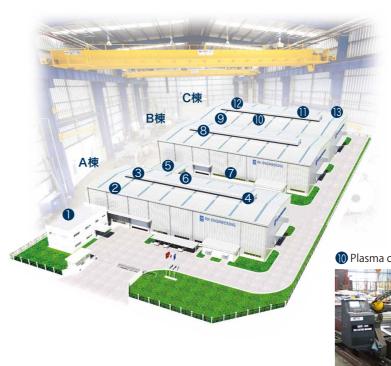


2 Machining area



Convection type car bottom heat treatment furnace











Overhead travelling crane 20t Factory B•C







3

Vertical Precision Milling Machine



9 Spinning machine





(1) Plasma cutting machine (3) Hydraulic pressing machine



SSM (Special Spinning Machine) 3 1000ton pressing machine



# Products Polishing shell plate Shell plate bending Assembly and welding of shell plate (Inner surface polished products) Installation of partition plate Assembly and welding of (SUS304) shell plate (SS400) 100m<sup>3</sup> Silicone oil tank for Japan SUS304 4 spaces inner surface polished #300 **φ** 3400 x L 12000 Shipping (for Japan) Polishing inner surface of Head plate Finish



Customer's witness inspection







Head plate A516-60 T16(Min12.8)xD2000xEDxSF38





Water tank SUS304 ■350A x L533

Chimney SUS201 OD360x1.2txL11570

OD960xID492xt13

SA36



GAC tank for CCBH SA240TP316L ■ID2100x



Stainless steel tank 11kinds, 17sets



Column SUS316L OD1582xID1364 x L3015

SUS304/SS400 ■ φ 356 x L 3370 ~ 120pc





Manhole cover for Japan SUS304

Casing SUS316L ■ φ 1860 x L 1960~ 2 pcs



Mixing tank

SUS316L/SS400

 $\phi 1850 \times H3100 \sim 1 \text{ pc}$  $\phi 1155 \times H2000 \sim 1 \text{ pc}$ 



SUS316L **Φ** *φ* 2200 × H 3900





RT Recuperator for Japan SUS304/SS400  $\blacksquare \varphi 216.3 \times L 1158 \sim 16 \text{pcs}$ 

Separator tank SUS304L ASME U-Stamp









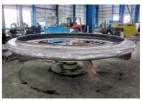








5



Expansion A515-60 Nom.12(min10.5)x



Oxygen surge tank for Japan SS400 ■ID3000xTL~TL5410xt12



Liquefied gas drainage tank SA240TP304 ■ID2100x TL~TL4614xt6



Duct for dust collector of AL melting furnace and attached structures SS400

■Total weight:9500kg



Impeller SUS316L ■ φ 1410 x L 1960~ 2 pcs



N2H2 Receiver tank SUS304  $1 \text{ m}^3 \sim 2 \text{ pcs}, 0.5 \text{ m}^3 \sim 1 \text{ pc}$ 



Buffer tank SS400 ■3.4m<sup>3</sup>



Heat treatment



Oxygen adsover for Japan SS400 ■ID3400xTL~TL1600xt12



MS adsorber SA516-70 (U-STAMP) ID2000x TL~TL2276xt10



Tank with Jacket Body:SUS316L JKSÚS304



L P G tank SA516-70  $\blacksquare \varphi 2500 \times L7250$ 



Recuperator for Thailand SUS304/SS400  $\phi$  267.4 x L 2620~16pcs



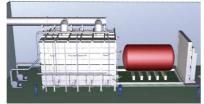
Cart

## Convection type car bottom heat treatment furnace

# Heat treatment for improving mechanical properties of metal

Heat treatment is essential to conform to standard of steel structures

Heat treatment is essential to improve mechanical properties of mechanical parts and structures by improving strength, elongation, and toughness. We equiped a heat treatment furnace which has one of the largest capacity of size and temperature in Vietnam. It made us possible to perform one stop production of products that require heat treatmentby various standards.







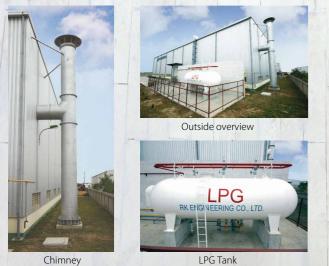
Inside of furnace



Convection type car bottom heat treatment furnace Closed

Our heat treatment furnace, exhaust duct, and chimney are designed by ROZAI KOGYO, manufactured by RK ENGINEERING.LPG tank and supplysystem for furnace is designed and manufactured by Vietnamese stuff of RK ENGINEERING.

#### **External equipments**





Convection type car bottom heat treatment furnace Opened

#### Specification of Heat treatment furnace

Туре	Convection type car bottom heat treatment furnace	
Fuel	LPG	
Inside dimension	4000W × 7000L × 4000H	
Capacity	30Ton / CH	
Heat treatment temperature	Annealing	600 ~ 650℃
	Normalizing	900 ~ 950℃
	Solution	Max.1050℃
Tolerance	±25℃	

# Vertical Precision Milling Machine

# Realizing a new era of one-stop productivity with the new Vertical Precision Milling Machine

With the multi-sided simultaneous processing, which is a feature of the Vertical Precision Milling Machine, it can finish complex processes from the top to the side at once It greatly improves the machining of pressure vessels and structures, and also improves quality, delivery time, and price to meet the customers' satisfaction.

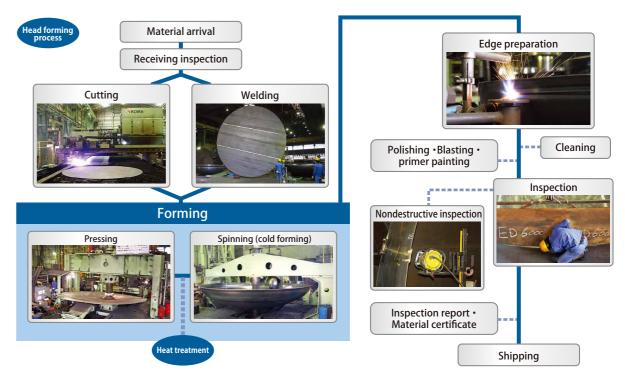


## Forming Head plate

# Forming technology of Head plate that is used in various fields.

#### Head plate is essential for vessel

We deal with various Head plates that is used in chemical, pharmaceutical, and food plant. Besides plant, Head plate is used for boiler, underground storage tank at gas station, tank truck and tank train. In addition, our technology is used for lighted buoy that is necessary for safe voyage. Head forming technology will continue to contribute to development of industry.







### Equipment List

Equipment	Description	Quantity
Convection type car bottom heat treatment furnace	Inside dimension (W4000×H4000×L7000) Max.temp. 1050℃ Max.weight 30t	1set
Hydraulic pressing machine	1000t W6000×Daylight 2500	1set
Hydraulic pressing machine (with manipulator)	300t	1set
Spinning machine	$22t \times \varphi 800 \sim \varphi 4000$	1set
Special Spinning Machine	$14t  imes \varphi$ 3000 $ imes$ Max.Height 3000	1set
Bending roll	25t×W2550	1set
Bending roll	6t×W2000 (Min. φ150)	1set
CNC gas/plasma cutting machine	W2500×L6000 Thickness (SS Max. 60mm, CS Max. 120mm)	1set
Vertical Precision Milling Machine	W2300×H2100×L4000	1set
Lathe	Max. $\varphi$ 1600, Max.length 3000	3sets
Band saw machine	Thickness Max. 400mm	1set
Milling machine	Table length 800mm	2sets
Radial drilling machine	1210L $ imes$ 640H Max. $\varphi$ 32	2sets
Slotter	Max. <i>φ</i> 100mm	1set
Welding positioner	500kg, 150kg	3sets
Turning rolls	10t	6sets
Turning rolls	5t	3sets
Gas cutting machine		6sets
Plasma cutting machine	Max. 60mm	1set
Submerged arc welding machine	1000 A	1set
MAG welding machine	350 A	25sets

(As of March 2020

Equipment	Description	Quantity
TIG welding machine	300 A	9sets
TIG welding machine (Small-sized)	200 A	2sets
Arc welding machine	400 A	3sets
Arc welding machine (Small-sized)	200 A	5sets
DC arc welding machine	630 A	2sets
TIG Meister		2sets
Tube end seal automatic welder		1sets
Grinder		27sets
Beveling machine for Head plate		1set
Polishing machine (Automatic)		1set
Polishing machine (Manual)		13sets
Hydraulic pressing machine (for straightening)	100t	2sets
Compressor	15Hp	2sets
Pressure pump		4sets
PMI (Positive Material Identification) equipment		1set
Overhead travelling crane	20t	2sets
Overhead travelling crane	10⁄5t	1set
Overhead travelling crane	10t	2sets
Overhead travelling crane	5t	5sets
Gantry crane at open yard	20/5t×22mm	1set
Jib crane	0.5t	4sets
Forklift	5t	1set
Welding rod dryer	100kg	1set
Portable welding rod dryer		4sets

### Local subsidiary

Company name	RK ENGINEERING CO.,LTD.
President	小林 三郎(SABURO KOBAYASHI)(President of NIPPON KYOHAN KOGYO CO.,LTD.)
Address 〈Office • Factory〉	Land Plot CN3.2K, Dinh Vu Industrial Zone,Dong Hai 2 Ward, Hai An Dist., Hai Phong, Vietnam Tel: +84-31-326-0715~8 Fax: +84-31-326-0719
Established	April 14, 2011
Operation started	April 2012
Paid-up Capital	US\$ 5,663,000
Investment ratio	NIPPON KYOHAN KOGYO CO.,LTD. 100%
Business	Manufacturing and sale of pressure vessel, head plate, industrial furnace, refractory, burner, etc.
Site area	15,000 m <sup>2</sup>
Factory area	5,300 m <sup>2</sup>
Employees	106



# ロザイ工業株式会社 ROZAI KOGYO KAISHA,LTD.

会社設立 金 資代 本表 員 内容 本 社	1947年8月1日 96,000,000円 代表取締役 社長執行役員 小林太郎 245名 工業炉設備・環境設備の設計・製作・施工 燃焼機器の設計・製作、耐火物・機能材料の製造 〒550-0015 大阪市西区南堀江1丁目2番14号 電話:06(6534)3611(代表) FAX:06(6531)2043 E-mail:rinfo@rozai.co.jp URL: http://www.rozai.co.jp	Establi Paid-u The M Employ Busine Head ( Phone E-mail
	UNE · IIIIp.//www.iozai.co.jp	URL :

# 日本鏡板工業株式会社 NIPPON KYOHAN KOGYO CO.,LTD.

会社設立 資 本 金	1965年2月1日 90,000,000円	Estab Paid-
代表者	代表取締役社長 小林三郎	The N
従業員数	120名	Empl Busir
事業内容	各種鏡板・圧力容器・マンホールカバーの製造	DUSI
	金属プレス曲げ加工全般	
	化工機設備の製造	Head
本 社	〒555-0012 大阪市西淀川区御幣島6丁目12-22	
	電話:06(6472)4772(代表) FAX:06(6477)1430	Phon
	E-mail: info-s@nkweb.co.jp	E-ma
	URL : http://www.nkweb.co.jp	URL

# ロザイ工業株式会社 上海駐在員事務所

12.1	2020年7月1日	Estab
代表者	権永吉	The N
事業内容	工業炉設備・関連部品・耐火物の中国国内営業と市場調査	Busin
本 社	〒314000 浙江省嘉興市南湖区亜欧路851号45-806室	Head
	電話:(86)185 0167 6318	пеаи
	E-mail:guan@rozai.cn	Phon
	URL : http://www.rozai.cn	E-ma

# 炉赛亿(大連)耐火材料有限公司 ROZAI (DALIAN) CERAMICS CO.,LTD.

会社設立	2011年2月25日	E
资 木 仝	US\$1.000.000	P
		Т
役 員	董 事 長 小林太郎	
	総 経 理 小林洋介	
	副総経理 金谷雅勝	В
事業内容	耐火物・機能材料の製造	D
	耐火物製品の中国国内販売・海外輸出販売	
	耐火物関連の設計・施工	н
本 社	大連市開発区得勝街道得勝村工業園1号	
平 11	八庄巾册光区付册闰垣付册门工术图15	
	電話: (86)411-87214180 FAX: (86)411-87214184	_
	E-mail : info-dalian@rozai.cn	P
		_

# ROZAI (THAILAND) CO.,LTD.

会社設立	2013年2月20日	E
資本金	2,000,000バーツ	F
代表者	小林太郎	Ī
事業内容	工業炉を主とする産業機械及び耐火物の	E
	販売・技術サービス提供・施工	
本 社	246 Times Square Building 15-03	ł
	Sukhumvit Rd., Between Soi 12-14,	
	Klongtoey, Bangkok 10110 Thailand	
	電話:(66)83-615-9028 FAX:(66)2-653-0899	F
	E-mail : info-th@rozai.co.th	E

lished : August 1st, 1947 up Capital : \96,000,000 Management : Taro Kobayashi President & CEO oyees : 245 ness : Design, manufacture, installation of industrial furnace and environmental control system, Design and manufacture of combustion equipment, Manufacture of refractories and functional materials Office : 2-14, 1-chome, Minamihorie, Nishi-ku, Osaka, Japan 550-0015 e: (81)6-6534-3611 FAX: (81)6-6531-2043 ROZA ail : rinfo@rozai.co.jp http://www.rozai.co.jp OSAKA- IAPA

ablished : February 1st, 1965 d-up Capital : \90,000,000 Management : Saburo Kobayashi President oloyees : 120 iness : Manufacture of various types of tank head, pressure vessel and manhole cover, Metal press-bending, Manufacture of chemical engineering machine ad Office : 12-22, 6-chome, Mitejima, Nishiyodogawa-ku, Osaka, Japan 555-0012 ne : (81)6-6472-4772 FAX : (81)6-6477-1430 ail : info-s@nkweb.co.jp : http://www.nkweb.co.jp



### ROZAI KOGYO KAISHA, LTD. Shanghai Sub-Branch

ablished : July 1st, 2020 Management : QUAN YONG JI iness : Business and marketing of industrial furnace, associated components and refractory d Office : No.851 Yaou Road, Jiayuan-Oriental City 45-806, Jiaxing city, Zhejiang Province, China ne : (86)185 0167 6318 ail : quan@rozai.cn URL : http://www.rozai.cn

Established : February 25 2011 Paid-up Capital : US\$1,000,000 The Management : Taro Kobayashi Chairman Yosuke Kobayashi President Masakatsu Kanaya Vice President Business : Manufacture of refractories and functional materials, Domestic sale and export & sale of refractory products, Design and installation of refractories and related products Head Office : No.1, Industrial Estate, Desheng Village, Desheng Street, Dalian Development Area, Dalian, P. R. China Phone : (86)411-87214180 FAX : (86)411-87214184 E-mail : info-dalian@rozai.cn

Established : February 20th, 2013 Paid-up Capital : THB2,000,000 The Management : Taro Kobayashi President Business : Sales, technical service offer and construction of the industrial machinery and refractories, mainly involving the industrial furnace. Head Office : 246 Times Square Building 15-03 Sukhumvit Rd., Between Soi 12-14, Klongtoey, Bangkok 10110 Thailand Phone : (66)83-615-9028 FAX : (66)2-653-0899 E-mail : info-th@rozai.co.th