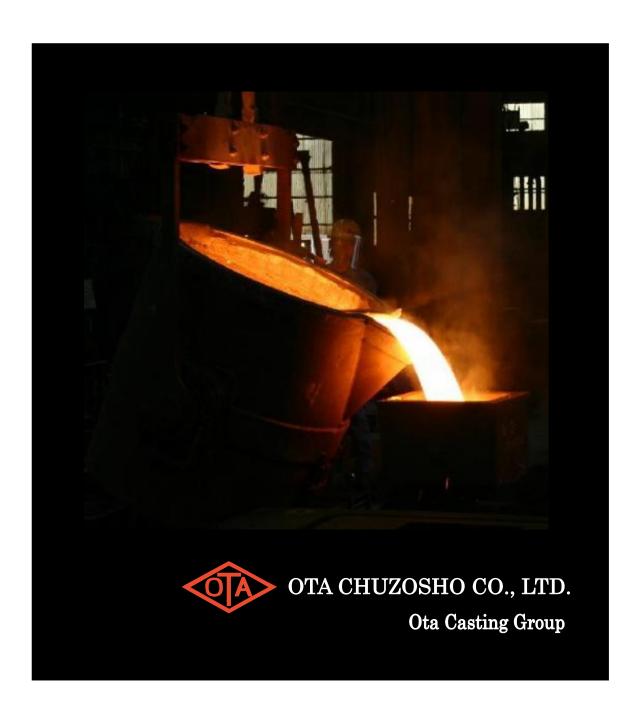
Corporate Brochure



OTA CHUZOSHO CO., LTD. has been producing a large number of high quality castings by sophisticated technical skills.

And now ... we are challenging the creation of new products and values.











Hiroshima Plant

Corporate Profile

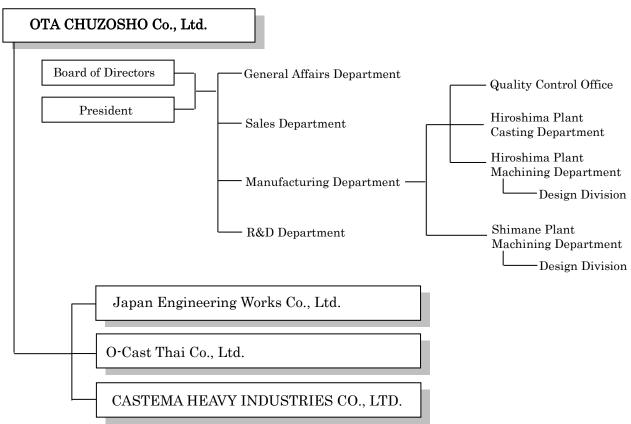


Corporate Name	OTA CHUZOSHO CO., LTD.		
Initiation	February, 1923		
Date of Establishment	March, 1948		
Capital	10 million ven		
Representative	Yoshio Ota, Representative Executive		
Employees	90	Pouring molten metal into the mol	
Annual Business	2.2 billion yen	- -	
Description of Business		ing Doeign	
Description of Dusiness			
	Pattern making, Casting, Heat treatment, Machining, Painting,		
Location	Sheet-metal processing, Plate working, 《 Head Office 》	and Assembly	
Location	3-23, Kamitenma-cho Nishi-ku Hiroshir	na 733-0021 Ianan	
	TEL +81-82-232-8271(main switchboard	_	
	E-mail info@ohtachuzousyo.co.jp	1) FAX +81 82 293 0070	
	URL www.ohtachuzousyo.co.jp		
	《 Hiroshima Plant 》		
	157-1, Moutsuna Kitahiroshima-cho Yai	nagata-gun Hiroshima.	
	731-1505 Japan		
	TEL +81-826-72-5151(main switchboard) FAX +81-826-72-5155		
	E-mail info@ohtachuzousyo.co.jp		
	《 Shimane Plant 》		
	395-2, Kamikamedani, Ohnan-cho, Ohchi-gun, Shimane 696-0024 Japan		
	TEL/FAX +81-855-83-1018		
	E-mail: ohnan@ohtachuzousyo.co.jp		
Investing Companies	O-Cast Thai Co., Ltd.		
	Japan Engineering Works Co., Ltd.		
	CASTEMA HEAVY INDUSTRIES CO.,	LTD.	
Major Customers	Mitsubishi Heavy Industries, Ltd.		
	JFE Steel Corporation		
	Nippon Steel & Sumitomo Metal Corpor	ration	
	Kobe Steel, Ltd.		
Major Banks of Account		onkawa Branch	
	Japan Finance Corporation H	iroshima Branch	
	The Shokochukin Bank H	iroshima Branch	
	SAN-IN GODO BANK H	iroshima Nishi Branch	
Major Suppliers	Tsuchiyoshi Co., Ltd.	Kusano Co., Ltd.	
	DAISEN SANGYO Corporation	Nishimura Graphite Co., Ltd.	
	MARUMOTO Steel Materials Co., ltd	•	
Affiliated Organizations	HIROSHIMAKEN CAST IRON FOUNI	DRY ASSOCIATION	
_	Janan Foundry Society Inc		
Certified Foundry	Meehanite Worldwide Corporation (MV	/C)	
_ or only	JAPAN WATER WORKS ASSOCIATION		
	NIPPON KAIJI KYOKAI (ClassNK)	•	
	DNV GL		
	American Bureau of Shipping (ABS)		
	American Dureau of Shipping (ADS)		

Organization



[Ota Casting Group]



Japan Engineering Works Co., Ltd (100% Investing Company)

■ Japan Engineering Works Co., Ltd. is a business, production and supply base of both home and abroad for industrial machine parts, taking advantage of the regional characteristics of the eastern part of Hiroshima. It mainly sells parts for coke ovens for iron foundries.

Its cooperation with global companies can fully satisfy customers' requests for quality, delivery time and cost.

O-Cast Thai Co., Ltd. (100% Investing Company)

■ To meet customers' global procurement needs, O-Cast Thai Co., Ltd. was established as a production base in Thailand, Southeast Asia. O-Cast Thai Co., Ltd. supplies casting parts and sheet metal parts, and conducts machining of industrial machine parts with high precision under the support of skilled processing technology of OTA CHUZOSHO Co., Ltd..

It also provides value-adding processes from heat treatments to paint finish before delivering products directly to customers.

CASTEMA HEAVY INDUSTRIES Co., Ltd (100% Investing Company)

■ Following O-Cast Thai Co., Ltd., we established casting factory in Thailand in February 2016. It is possible to constant supply the high quality products to Japan and our investing company "O-Cast" under the support of skilled casting technology of OTA CHUZOSHO Co.,Ltd.

History



[Ota Casting Group]

1923	Feb.	Kiichi Ota started business
1948	Mar.	For business expansion, the conventional private operation was changed to "OTA CHUZOSHO", Private Limited company
1964	Jul.	Technical cooperation with Hitachi Zosen Corporation in T-process started
1965	Jun.	Technical cooperation with Yuka Badicshe Co., Ltd. in Full Mold Casting started
1967	Jun.	Newly established Machine Tool Department
1969	Oct.	Technical cooperation in the area of Fluid Sand Process developed in Soviet Russia started
1970	Apr.	According to the government structural improvement project, the ON Group (5 companies took part in) was formed. As one of the core companies, it formulated five-year equipment modernization project
1970	Dec.	Increased the capital to 10million yen, and the company name was changed to OTA CHUZOSHO Co., Ltd.
1973	Feb.	Yoshiaki Ota acceded to president
1975	Jan.	Obtained the plant site in Chiyoda-cho, Yamagata-gun, Hiroshima Prefecture and completed its improvement
1980	Jul.	Newly established a foundry in Chiyoda-cho
1986	Feb.	Newly established a machine tool factory in Chiyoda-cho
1989	Sep.	Additionally established a foundry
1990	Sep.	Newly established Engineering Department
1990	Dec.	Additionally established a foundry
1994	Aug.	Newly established a wooden mold workshop
1995	Jan.	Yoshio Ota acceded to president
1995	Apr.	Established an electric furnace
1997	Mar.	Additionally established a machining factory
2002	Oct.	Additionally established a foundry
2002	Oct.	Brought in trainees from Indonesia
2002	Dec.	Expanded the commercial land in Chiyoda-cho, Yamagata-gun
2003	Feb.	The 80th anniversary of business
2004	Feb.	Spun off Engineering Department and established Japan Engineering Works, Private Limited Company Newly established Kita-kyushu branch
2004	Apr.	Established O-Cast Thai Co., Ltd. Newly established a machining factory in Thailand
2005	Dec.	Newly established an office and a building for welfare
2006	Sep.	${\it Japan Engineering Works, Private Limited Company was changed to Japan Engineering Works Co., Ltd.}$
2008	Jun.	Newly established a steel metal factory, (Japan Engineering Works)
2008	Jul.	Newly established a melting workshop and installed two $5\mathrm{Ton}$ electric melting furnaces.
2010	Feb.	Closed Kita-kyushu branch and newly established branch in Fukuyama,.(Japan Engineering Works)
2012	Apr.	Moved O-cast Thai Co., Ltd and newly established steel metal factory in Thailand
2016	Feb.	$ Established\ CASTEMA\ HEAVY\ INDUSTRIES\ CO., LTD. \qquad Newly\ established\ a\ casting\ factory\ in\ Thail and$
2017	Apr.	Newly established Shimane Plant in Ohnan-cho, Ohchi-gun, Shimane Prefecture

Hiroshima Plant



Site 52,800 m² Casting Section 5,882 m² Wooden Storage 5,083 m² Machine Tool Section 1,680 m² Office and Recreation Facilities 700 m² Outdoor Crane Yard 2,850 m²

Casting Capacity FC, FCD, FCH, Ni-Resist

Max. 15t

Min. 10kg

Casting Process Self-hardening furan resin casting molds

 $Gas\ hardened\ water\ glass\ CO_{2}\ casting\ molds$

Main Products Printing Machine Frame, Bed

Ship Engine, Shaft Baring

Machine Tool Column, Bed
Injection Molding Machine Platen, Bed

Coke Oven Furnace Cover, Frame and Rim

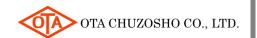
Transport Equipment Press Die Generator Case, Bed

Compression Machine Parts Case, Bed, Tube



Pouring molten metal out of the furnace

Hiroshima Plant



■Casting Department Equipment

Mixer	(TAIYO MACHINERY)	20 t /H	3 units
Mixer	(TAIYO MACHINERY)	10 t /H	1 unit
5 t high frequency furnace	(INDUCT)	2500kw/H	2 units
Furan sand collecting	(CASTINGMACHINE KIYOTA)	20 t /H	1 unit
Hanger Shotblasting machine	(SINTO KOGIO)	3,500×3,500×7,000mm	2 units
25 t chassis-type annealing furnace	(KRC)	6,000×3,000×2,500mm	1 unit
Painting booth	(ARIMA)	3,500×10,000mm	1 unit
Burring robot	(YAMAZAKI KOGYO/Industry)	3,500×12,000mm	1 unit
Emission of light analyzer	(SPECTRO A.I)	SPECTROMAXx	1 unit
Materials analyzer	(DOLPHIN)	<u> </u>	1 unit
Hydraulic universal tester	(TOKYO SHIKENKI)	${\rm AY\text{-}300SIV}$	1 unit
Simulation soft	(IBARAKI HITACHI JYOUHOU SERVICE)	ADSTEFAN	1 unit
Digital ultrasonic test instrument	(RYOUDEN SYOUNAN ELECTRONICS)	UI-25	1 unit
Magnetic particle flaw detectors	(EISHIN KAGAKU)	HANDY MAGMA	2 units
Hand grinder	(NEW ALLOY)	_	1 unit
Metal graphic microscope	(YAESU KOUGAKU)	BMI	1 unit
Shore durometer	(TOKYO SHIKENKI, etc.)	SH-D	3 units
Rebound durometer	(GE)	Dyna MIC DL	1 unit
Globular judgement soft	(INOTEC)	QCD-VPU200	1 unit
Wooden form manufacturing			1 unit
Can manufacturing equipment			1 unit
Crasher Machine, Shearing machine	(TOYO PRESS INDUSTRY, etc.)	700 t etc.	5 units
Propane gas bulk facilities	(CHUGOKU KOGYO)	$3,000 \mathrm{kg}$	1 unit
Truck scale	(Mitsubishi Steel Mfg.)	40 t	1 unit
Shovel lift	(Komatsu, TOYOTA)	7 t etc.	6 units
Over-head crane	(Mitsubishi Electric)	20 t	4 units
Over-head crane	(Mitsubishi Electric)	15 t	2 units
Other cranes			24 units
Metal frame (the greatest dimension)		4,000×4,000×1,600mm	2 units
		$2,000\times8,500\times1,000$ mm	5 units



Hanger Shot blast



25 t chassis-type annealing

Hiroshima Plant



■ Machining Department Equipment

Five-faced processing machine	(SHIN NIPPON KOKI TMS35VM)	$3{,}500{\times}20{,}000\mathrm{mm}$	1 unit
Five-faced processing machine	(O-KUMA MCR-A5CII)	3,000×8,000mm	1 unit
Five-faced processing machine	(O-KUMA MCR-A5CII)	$2,000 \times 5,000 \text{mm}$	1 unit
Five-faced processing machine	(O-KUMA MCR-A5C)	$2,500 \times 4,000 \text{mm}$	1 unit
Five-faced processing machine	(O-KUMA MCR-A5C)	$2,000 \times 5,000 \text{mm}$	1 unit
Five-faced processing machine	(KOTOBUKI INDUSTRIES KMC10)	1,400×3,600mm	1 unit
Shape processing machine	(SHIN NIPPON KOKI RB-2N)	$1,600 \times 2,850 \text{mm}$	1 unit
NC turning center	(O-M MACHINERY Ltd. VTLex 2500)	$2,500\varphi(3,000\varphi)$	1 unit
NC turning center	(O-M MACHINERY Ltd. Neo80)	$1,600\varphi(2,000\varphi)$	1 unit
NC turning center	(O-M MACHINERY Ltd. Neoa-16EX)	$1,600\varphi(2,000\varphi)$	1 unit
Turning lathe	(O-M MACHINERY Ltd. TMD25/35)	$2,500\varphi(3,300\varphi)$	1 unit
Turning lathe	(O-M MACHINERY Ltd. TX13)	$1,300\varphi(1,600\varphi)$	1 unit
Turning lathe	(O-M MACHINERY Ltd. TX16)	$1,600\varphi(2,000\varphi)$	1 unit
NC boring machine	(TOSHIBA BTD-200QH)	1,200×1,500mm	1 unit
Machining center	(ENSHU VMC650)	650×1,300mm	1 unit
Machining center	(ENSHU VF CENTER)	400×560mm	1 unit
Machining center	(OKK VM53R)	600×1,000mm	1 unit
Machining center	(OKK VM43R)	400×800mm	1 unit
Lathe	(Dainichi D1-1M, TAKISAWA TE60-12 etc.)		4 units
Radial boring machine	(O-KUMA)	2,000mm	1 unit
Radial boring machine	(OGAWA IRON WORKS etc.)	1,700mm	2 units
Layout machine	(Tokyo Boeki)	3,500×8,000mm	1 unit
Painting Booth	(OTA CHUZOSHO CO., LTD.)	3,000×8,000mm	1 unit
Ceiling crane	(Mitsubishi Electric)	10 t	1 unit
Ceiling crane	(Mitsubishi Electric)	5 t , etc.	2 units
Ceiling crane	(Mitsubishi Electric)	2.8 t	2 units

■Design Division Equipment

- •CAD/CAM (SPACE-E Hitachi Zosen Corporation)
- ·CAD (Pro CAD)

· 3DCAD TOPSolid (Kodama Corporation, Ltd.)	2units
$\operatorname{SolidWorks}$	1unit
CADMister (UEL Corporation)	1unit
·2DCAD CADMAC (CADMAC CO., LTD.)	1unit
\cdot 3D Printer (MUTOH INDUSTRIES LTD.)	1unit
·3D Handy Scanner (CREAFORM)	1unit



Turning lathe



Five-faced processing machine

Shimane Plant



Site $66,000 \text{ m}^2$ Plant area $5,000 \text{ m}^2$ Wooden Storage $5,083 \text{ m}^2$

Description of Business Design (CAD·CAM), Machining
Main Products Press Mold for Automobile

■Machining Department Equipment

Five-faced processing machine	(O-KUMA MCR-A5CII)	$2,500 \times 4,000$ mm	1 unit
Five-faced processing machine	(O-KUMA MCR-A5CII)	2,000×4,000mm	1 unit
Machining center	(OKK VM53R)	600×1,000mm	1 unit
Machining center	(OKK VM43R)	400×800mm	1 unit
Ceiling crane	(Mitsubishi Electric)	5t	2 units

■Design Division Equipment

	2units
(Kodama Corporation, Ltd.)	2units
(UEL Corporation)	1unit
(Kodama Corporation, Ltd.)	1unit
(Kodama Corporation, Ltd.)	1unit
(UEL Corporation)	1unit
	(UEL Corporation) (Kodama Corporation, Ltd.) (Kodama Corporation, Ltd.)

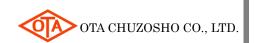


Five-faced processing machine O-KUMA MCR-A5C II $2{,}500{\times}4{,}000\text{mm}$



Five-faced processing machine O-KUMA MCR-A5C II $2{,}000{\times}4{,}000$ mm

Investing Company





Japan Engineering Works Co., Ltd.

J. E. W.

Business, Production, Supply Base

Attaching importance to the regional characteristics as a member of OTA CASTING GROUP, Japan Engineering Works Co., Ltd. carries on business at home and abroad, produces and supplies industrial machine parts. High-precision large-size cast metal and large-size machining parts produced in the consistent production system for design, first-rate manufacturing systems (casting, plate working, machining) and overall assembly which are one of the characteristics of OTA CHUZOSHO Co., Ltd. - include not only furnace covers, furnace frame or peripheral devices for coke ovens, but also a great deal of products for use in iron foundries, chemical plants and so on, are shipped out to both domestic and overseas plants, and thus Japan Engineering Works Co., Ltd. has successfully extended the reach of its business operations.

As for maintenance activities, Japan Engineering Works Co., Ltd. positively makes improvement, and recommends high-quality and high value-added products to meet the needs of customers. It strives to become a company that cares about people and the environment, pouring efforts into a cooperative system of global environment conservation, raising awareness of problems for ever and a day, and renewing efforts to serve the industrial society.

Date of Establishment February 23, 2004 Capital 3 million yen

Representative Yoshio Ota, Representative Executive

Number of employees

Location 《 Head Office 》

3-23, Kamitenma-cho, Nishi-ku, Hiroshima, 733-0021 Japan

TEL +81-82-232-8271 FAX +81-82-293-0070

E-mail honsha@jeworks.co.jp

《 Fukuyama Branch 》

4-9-3, Hikino-cho Fukuyama-shi Hiroshima, 721-0942 Japan

TEL+81-84-945-7882 FAX +81-84-945-7883

E-mail fukuyama@jeworks.co.jp

《 Chiyoda Plant 》

157-1, Moutsuna Kita-Hiroshima-cho Yamagata-gun Hiroshima, 731-1505 Japan

TEL+81-826-72-5153 FAX +81-826-72-5163

chiyoda@jeworks.co.jp

Description of Business Manufacture, Supply and Sale of Casting parts and Sheet metal parts for Steel Works

Design, Manufacture, Supply and Assembly of Industrial machine parts

Main Products Coke oven equipment parts (Furnace cover, Furnace frame, Protection plate)

> (Seal plate, Small cover component, Mouse, Coke oven incidental equipment parts

> > Charging door, Frame, Flue metal parts)

(Furnace hole parts, Heat and abrasion resistant liner)



Full View of Coke Oven

Investing Company





O-Cast Thai Co., Ltd.

Overseas Production Base

By introducing the world-class production engineering and quality control engineering of Japan to Thailand, it is possible to enhance international competitiveness. Moreover, in addition to the integrated system for production including design, manufacture (casting, plate working, machining) and overall assembly conducted in Japan, this newly established overseas production base enables customers both at home and abroad to make a broad choice of quality, delivery date and cost.

Date of Establishment April 11, 2004 Capital 93.2 million THB

Representative Yoshio Ota, Chairman of the Board of Directors

Number of Employees

Head Office/Plant 150/72 Pinthong 2 Industrial Estate Moo.9, Nongkham, Sriracha,

Chonburi 20230 Thailand

TEL +66-(0)38-347-096~7 FAX +66(0)38-347-098

E-mail o_cast_thai@yahoo.co.jp

Description of Business Machining, Sheet metal processing, Supply and Procurement of Casting and Assembly

Available Services Ship machinery parts (Beds, Shaft bearings, Oil collars, Special bolts)

Printing machinery parts (Frames, Beds, Shaft bearings, Cases, Covers, Pins)

Injection molding machines parts (Beds, Platen, Cases, Covers)

Iron manufacturing machine parts (Spring cases, Pressure shafts, Shaft bearings)
Machine tool parts (Frames, Beds, Columns, Shaft bearings)

Wire Bonder parts (Base, Small parts)



Head Office/Plant

Investing Company



Head Office/Plant



CASTEMA HEAVY INDUSTRIES CO., LTD.

Newly Overseas Production Base

Following O-Cast Thai Co., Ltd., we established casting factory in Thailand on February 2016. It is possible to constant supply the high quality products to Japan and our investing company "O-Cast" under the support of skilled casting technology of OTA CHUZOSHO Co.,Ltd.

We can produce consistently from casting to processing in Thailand just like in Japan by producing together with O-cast Thai Co., Ltd., and we enables customers both at home and abroad to make a broad choice.

Date of Establishment January 14, 2013 Initiation February 12, 2016

BOI July 8, 2013 Capital 104 million THB

Representative Yoshio Ota, Chairman of the Board of Directors

Number of Employees 30

Head Office/Plant 110/10 Moo.5, T. Makhamku, A. Nikompattana Rayong 21180 Thailand

TEL +66-(0)38-949-372~5 FAX +66(0)38-949-376

E-mail castema_ota@yahoo.co.jp

Description of Business Casting, Heat treatment, Painting and Assembly

Quality of Material FC, FCD, FCH, Ni-Resist

Available Services Parts for Printing Machine, Ship, Machine Tool,

Injection Molding Machine, Coke Oven,

Transport Equipment, Generator and Compression Machine

Casting Capacity 400 t / Month Max. 5 t Min. 10 kg Casting Process Self-hardening furan resin casting molds

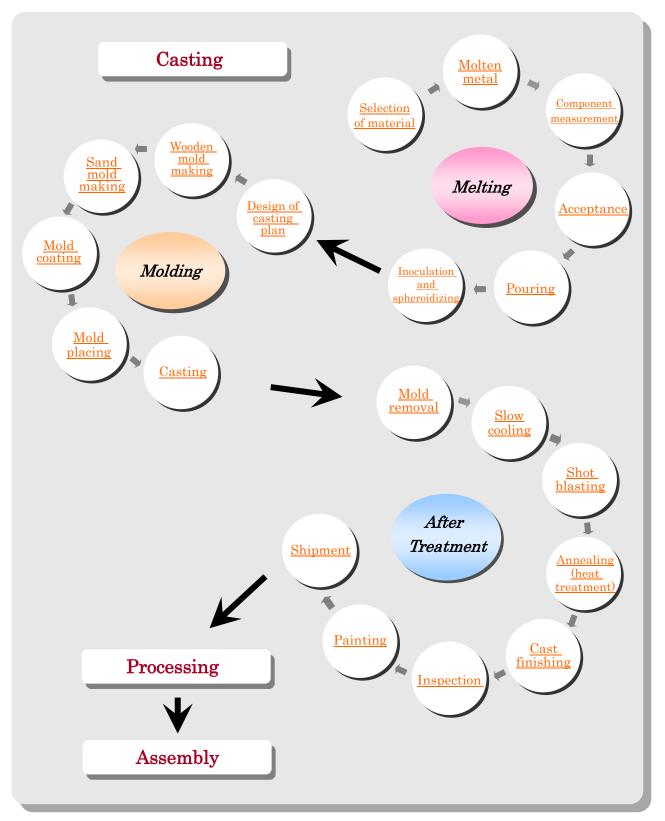
■ Equipment

Mixer	(TAIYO MACHINERY)	20t/H	1 unit
Furan sand collecting	(CASTING MACHINE KIYOTA)	15t/H	1 unit
Hanger Shotblasting machine	(SINTOKOGIO)	1,500×1,500×2,500mm	1 unit
2Tons high frequency furnace	(KITASHIBA ELEVTRIC)	1,400kw/H	1power to 2units
CE meter	(NAKAYAMA)	_	1 unit
Forklift	(TCM)	2.5t / 3t	1 unit / 1 unit
Over-head crane	(Mitsubishi Electric)	10t / 5t / 3t	3 / 3 / 7 units
Metal frame	3,000×2,000 / 2,600×1,800 / 2,000×1,500 / 1,800×1,200		
(the greatest dimension)			

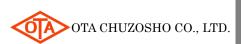
Casting Process

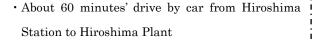


■ By the integrated system for production including machine design, wooden mold manufacturing, casting heat treatment, painting, machining, assembly, inspection and after-sales service, we have achieved high quality, quick delivery and low cost.



Map to Hiroshima Plant







To Hamada To Miyoshi

R - 433 R - 261

To Miyoshi

Hiroshima Plant

To Kake Hiroshima-kita IC

To Iwakuni Seifu-shinto IC

To Iwakuni Hiroshima IC

Expressway(4)

Nishi-hiroshima Sta.

Head Office

To Mihara

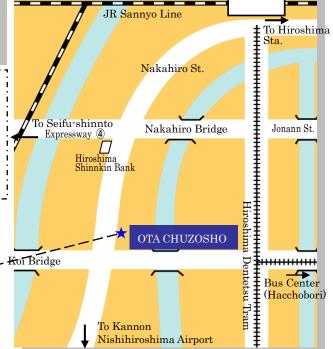
Hiroshima Sta.

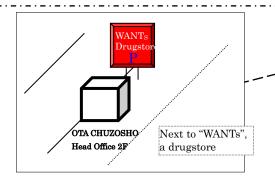
Hiroshima Sta.

Head Office

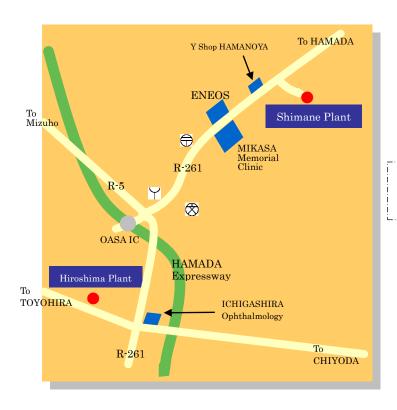
 About 50 minutes' drive by car from Head Office to Hiroshima Plant

- ·About 15 minutes' drive by car from Hiroshima Station
- ·About 5 minutes' drive by car from Yokogawa Station
- ·About 8 minutes' drive by car from Nishihiroshima Station
- ·About 15 minutes' walk from Tokaichi Tram Stop
- ·About 3 minutes's walk from Kamitennma-cho Bus Stop



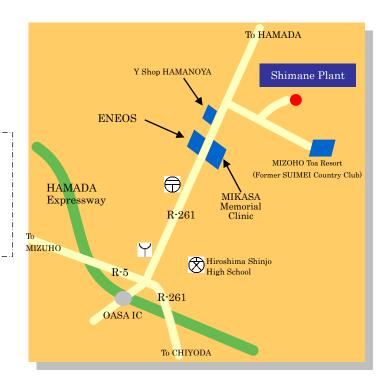


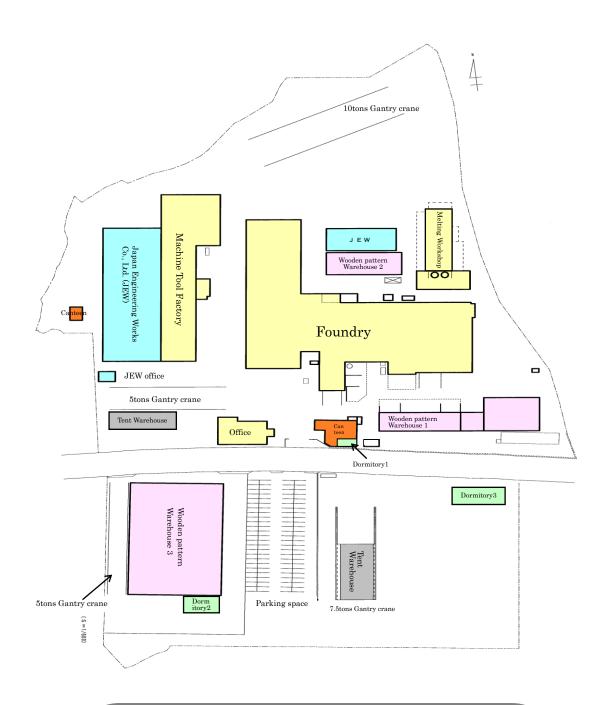
Map to Shimane Plant



 About 25 minutes' drive by car from Hiroshima Plant

- About 60 minutes' drive by car From Hiroshima Station
- About 10 minutes' drive by car from OASA IC





Ota Casting Group

www.ohtachuzousyo.co.jp



OTA CHUZOSHO CO., LTD.



Japan Engineering Works Co., Ltd.



O-Cast Thai Co., Ltd.



CASTEMA HEAVY INDUSTRIES CO., LTD.