

## Company Overview

### ITO FOUNDRY AND MACHINERY CO., LTD.

With a constant focus on innovation related to processes such as unframed and sand mold casting, as well as partially reinforced cast iron, we provide variant variable production to meet the needs of our customers.

Company Name	ITO FOUNDRY AND MACHINERY CO., LTD.
Representative	Hideyuki Ito, CEO and President
Address	3129-43 Muramatsu, Tokai-mura, Naka-gun, Ibaraki (inside Hiraharananbu Industrial Park) Tel: 81-29-306-0030 (Representative)
Employees	101 employees (as of Jan. 2023)
Production Capacity	First Factory: 800 tons Second Factory: 300 tons (monthly production, two shifts) Total 1,100 tons
Materials	FC150 – FC300, FCD450 – FCD700, heat-resistant vanadium-enhanced cast iron

Scale (units: m <sup>2</sup> )			
	First Factory	Second Factory	Total
Site Area	11,239.98	2,313.78	13,553.76
Factory	4,336.25	1,391.95	5,728.20
Warehouse	1,430.00		1,430.00
Office Building	1,180.00		1,180.00
Employee Parking Lot	1,797.00		1,797.00



### IMS Co., Ltd.

Conducting cast metal product machining with a combination of processing and equipment technical prowess. Aiming for improved customer satisfaction by providing comprehensive services from model production to machining for completed products all within the Group.

The Group achieves a comprehensive manufacturing framework for processes ranging from provision of materials to machining, inspection, and shipment. The cutting-edge machining center features a flexible production line based around NC lathes that delivers high-quality products to customers in a timely fashion. In addition, the Company also conducts technical support functions such as raw material planning and consideration (CAE analysis).

Company Name	IMS Co., Ltd.
Representative	Hideyuki Ito, CEO and President
Address	3129-13 Muramatsu, Tokai-mura, Naka-gun, Ibaraki (inside Hiraharananbu Industrial Park) Tel: 81-29-270-5201 (Representative)
Employees	32 employees (as of Jan. 2023)
Work Content	Machining, Technical support, model production and repair

Scale (units: m <sup>2</sup> )			
	First Factory	Second Factory	Total
Site Area	6,610.85		6,610.85
Factory (including office space)	1,308.69	1,118.93	2,427.62
Warehouse	278.90		278.90



### IKI CAST VIETNAM Co., Ltd.

Manufacture and sales of cast products ranging from small to large items made with self-hardening furan resin casting and metal molding using sand.

Founded in 2007 in Vietnam with joint investment from ITO TEKKO CO., LTD. with the goal of providing a stable supply of products for customers expanding overseas that wouldn't be as affected by exchange rate fluctuations. In order to make sure proper casting manufacturing takes root in the broad market of Vietnam as well, the company is putting the technology and knowledge of ITO FOUNDRY AND MACHINERY CO., LTD. (its mother company) to use and has adopted a production framework that uses the same technology as Japanese companies in order to provide products with a level of quality identical to this mother company.

Company Name	IKI CAST VIETNAM Co., Ltd.
Investors	ITO TEKKO CO., LTD., ITO FOUNDRY AND MACHINERY CO., LTD.
Address	Noi Bai Industrial Park, Hanoi, Vietnam
Production Capacity	500 tons (monthly, two shifts)
Materials	FC150 – FC300, FCD450 – FCD600
Employees	90 employees (as of Jan. 2023)
Manufactured Products	Construction machinery components, hoist components, electric car motor components, pipe materials

Scale (units: m <sup>2</sup> )		
		Total
Site Area	10,250.00	10,250.00
Building Interior	4,656.00	4,656.00



### VINA ITO Co., Ltd

Manufacture and sale of medium and large cast products using self-hardening alkali phenol casting method.

Established in 2018, started operation of the casting plant in May 2019. Operation of machining plant started in October 2023. In order to cope with environmental problems that may occur in Vietnam in the future, we have introduced a large dust collector, an Mg processing machine, and a low odor AF resin to plan the work environment. At the machining plant, we have introduced large-scale processing machines and have established a system to supply them as finished products to our customers' overseas plants.

Company Name	VINA ITO Co., Ltd.
Investors	ITO FOUNDRY AND MACHINERY CO., LTD.
Address	Vietnam, Ha Nam Province, Dong Van 3 Industrial Park
Production Capacity	700 tons (monthly)→future 1,000 tons
Materials	FC150 – FC300, FCD450 – FCD700
Employees	85 employees (as of Jan. 2023)
Manufactured Products	Construction machinery components

Scale (units: m <sup>2</sup> )			
	First Factory (Casting plant)	Second Factory (Machining factory)	Total
Site Area	30,097.00		30,097.00
Factory (including office space)	4,690.00	3,780.00	8,470.00



<http://www.itofound.co.jp>



“Tradition × Innovation”

This is a certain kind of casting that only we can do.

# C O R P O R A T E G U I D E ITO FOUNDRY & MACHINERY



ITO FOUNDRY & MACHINERY CO., LTD.



There's a kind of manufacturing  
that's essential to society.

Since the Company's founding in 1946, we have cast various components for large machines used in construction and industrial applications.

By incorporating our proprietary cutting-edge technology into the casting method of manufacturing, which has a history spanning millennia, we carry out manufacturing in a way that no other company can.



Innovation always  
accompanies history.

- Single-heating system for partially-reinforced cast iron
- 3D CAD casting simulation
- MKS-160 briquette machine
- CHT-970 horizontal split automatic molding machine
- BUYMASTER heavy item handling robot
- Workflow management system
- WMW20 teaching mixer
- Mg wire processing equipment



Greetings from the representative  
Aiming to be a 100-year company!  
We will contribute globally!

Thank you very much for your continued support. Since our establishment in 1946, we have inherited casting technology, which is the origin of manufacturing. As the material manufacturer, also known as an upstream industry, we make full use of our technology and are involved in industries that are indispensable to modern society, such as construction machinery, industrial machinery, and railway vehicles. In recent years, in order to survive in the rapid global competition, our company has been working hard on global production/integrated production, and we provide machined finished products from Japan and Vietnam to meet the needs of customers in each region. All of our employees will continue to work together to build a development/production system that meets diverse market needs. We also promise that we will take on various initiatives as an environmentally friendly company so that all of our stakeholders can live even happier lives. We look forward to your continued support.

ITO FOUNDRY & MACHINERY CO.,LTD  
Hideyuki Ito, CEO and President

Attention to detail supported by over 70 years of history.



We have the knowledge for  
improving our capabilities.

- Company quality control presentations
- Excellent Improvement Proposal Competition
- Participating in the All-Komatsu Skills Competition
- Participating in the Katsuta National Marathon
- In-house study meetings



Frameworks for  
achieving habitual safety.

- Safety and Health Competition
- Pointing and Calling Competition
- Company President safety patrols
- Shaved ice in summer
- Evacuation drills
- AED training course



Taking pride in  
our achievements.

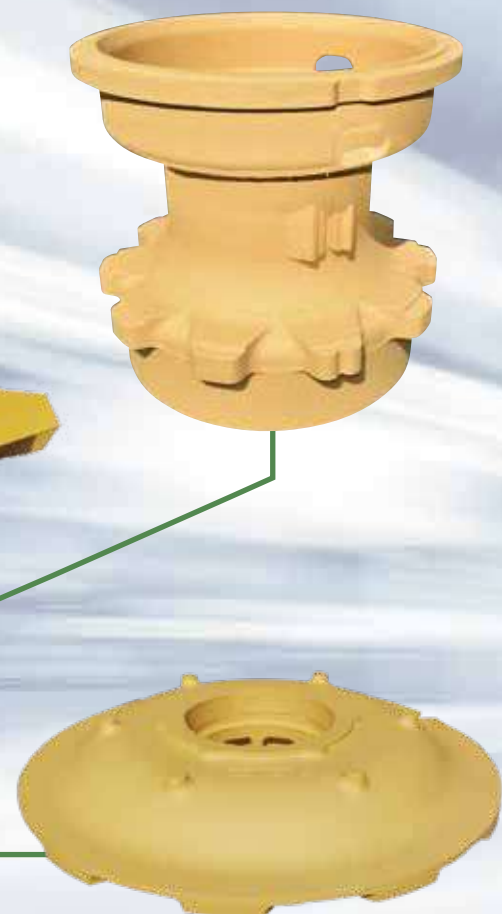
- Regular environmental measurement
- Radiation measurement (once every two weeks)
- Odor measurement (once every two weeks)
- Cleaning the area around the Company (once per week)



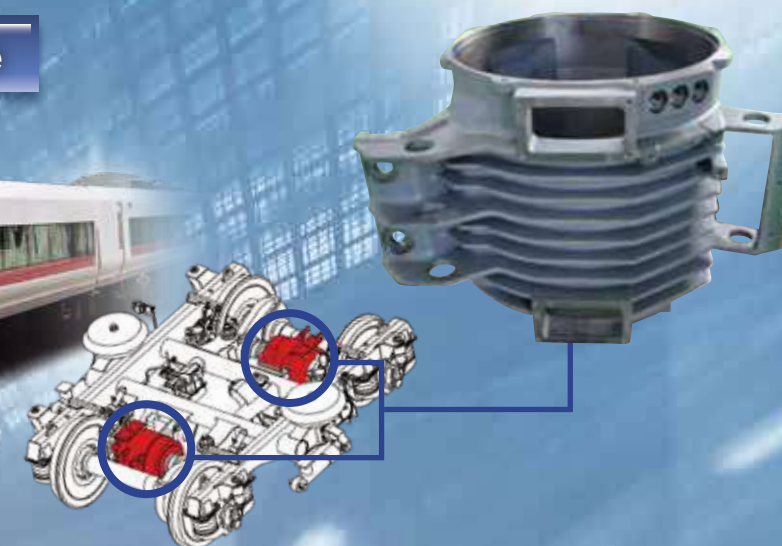


Taking pride in manufacturing products  
no one else can.

Construction machinery components



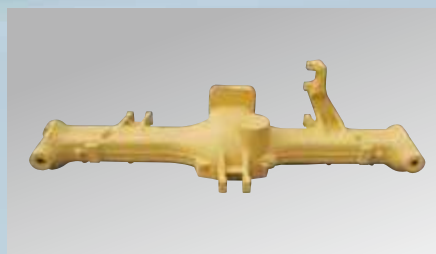
Motor frame for railroad use



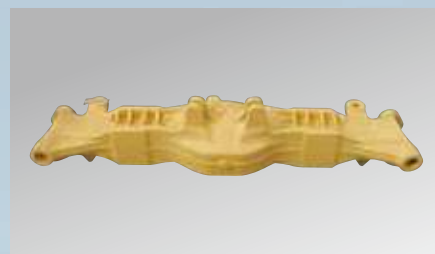
Ship deck machinery components



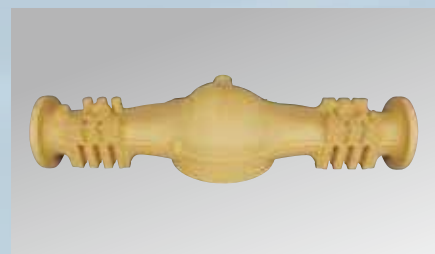
Major Products



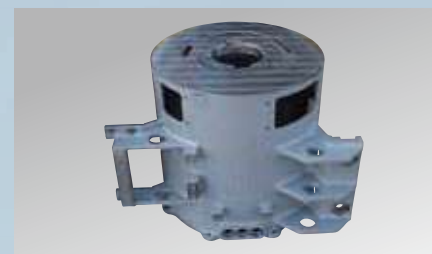
AXLE HOUSING



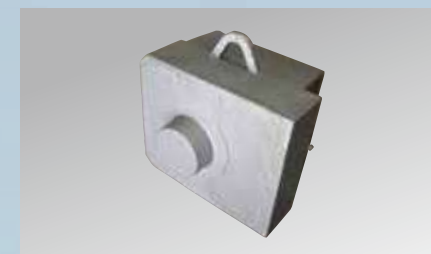
AXLE HOUSING



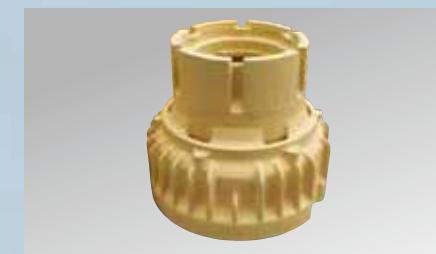
AXLE HOUSING



STATOR FRAME



BACK HEAD



HUB



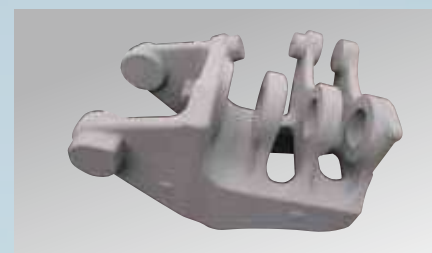
AXLE HOUSING



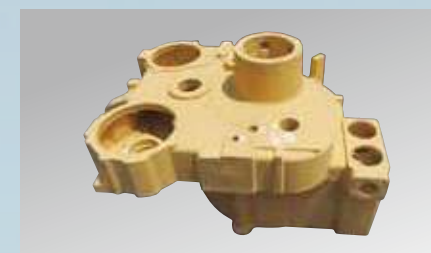
SWING SUPPORT



STATOR FRAME



BOOM BRACKET



MISSION CASE



REAR HUB



ITO FOUNDRY &  
MACHINERY Factory

Flow of manufacturing

Plan design



The process of carrying out the various planning and design elements related to casting. Important for ensuring that no defects arise from the solidification and shrinking within the casting mold.

Equipment information

Main production equipment

Machinery	Manufacturer	Number of units
2t high-frequency induction furnace	KITASHIBA ELECTRIC CO., LTD.	3 foundations
Hitachi, Ltd.		35 foundations
Overhead traveling crane	Nipponhoist Corporation	4 foundations
Sand recovery, regeneration equipment (3S = 7.5t)	SINTOKOGIO, LTD.	1 set
Sand recovery, regeneration equipment (2S = 3t)	TAYO MACHINERY CO., LTD.	1 set
Pneumatic conveyor	SINTOKOGIO, LTD.	1 set
7t shakeout machine	SINTOKOGIO, LTD.	1 set
5t shakeout machine	TAYO MACHINERY CO., LTD.	1 set
Mold drying furnace	Aoki SEIKAN KOGYO Co., Ltd.	1 set
20t/10t teaching mixer	SINTOKOGIO, LTD.	1 foundation
20t long arm mixer	SINTOKOGIO, LTD.	1 foundation
20t long arm mixer	TAYO MACHINERY CO., LTD.	1 foundation
10t mixer	SINTOKOGIO, LTD.	2 foundations
5t mixer	SINTOKOGIO, LTD.	1 foundation
5t mixer	TAYO MACHINERY CO., LTD.	1 foundation
Crane type shot blast	SINTOKOGIO, LTD.	4 foundations
Annealing furnace	Aoki SEIKAN KOGYO Co., Ltd.	2 foundations
Drying casting drying equipment	Aoki SEIKAN KOGYO Co., Ltd.	1 unit
Bi-master	TAGAMI EX CO., LTD.	1 unit
Barinder	KOYAMA CO., LTD.	1 unit
Cold box molding machine	FOUNDRY CO., LTD.	1 unit
Flaskless casting equipment (line)	SINTOKOGIO, LTD.	1 set
Die cutting reversing machine	SINTOKOGIO, LTD.	1 unit
Mold mating reversing machine	SINTOKOGIO, LTD.	1 foundation
Frame reversing machine	Nippon RADLE INDUSTRY Co., Ltd.	3 units
ITO molding equipment (line)	Aoki SEIKAN KOGYO Co., Ltd.	1 set
Main coating equipment	Kao-Quaker Company, Limited	1 set
TOCHU CORPORATION		4 sets
Band saw (large and small)	DAITO SEIKI CO., LTD.	2 units
Screw compressor (37 kW × 4 units, 22 kW × 1 unit)	Hitachi, Ltd.	5 units
Mg wire processing equipment	Toyo Denka Kogyo Co., Ltd.	1 unit

Etc.

Model making business



Model creation



The process of creating a model for copying the product shape to a sand mold. We usually use wooden models for this process.

Main inspection equipment

Machinery	Manufacturer	Number of units
Light emission analysis device	SHIMADZU CORPORATION	1
OBLF		1
30t amsler testing machine	MAEKAWA TESTING MACHINE MFG. Co., Ltd.	1
Charby impact testing machine	ITANI KOKU MFG. CO., LTD.	1
Various brinell hardness testers	TOKYO KOKI	4
Ultrasonic flaw detector and magnetic flaw detector	Tetsu Electronics Laboratory, Taiyo Pro co., Ltd.	3
CE Meter	Nakayama Co., Ltd.	3
CE Meter (ATAS-W)	NOVA CAST	1
Metallographic microscope and endoscope	Olympus Corporation	Each one
Three dimensional measuring instrument	Mitutoyo Corporation	2
KEYENCE		1
Bridged type three dimensional measuring machine	Mitutoyo Corporation	1
3D Scanner	CREAFORM	1
Automatic polishing machine	IMT	1

Etc.

Teaching Mixer



We implemented robotics and IoT in our sand mold creation processes with automation as our goal. By saving operations for different casting products and playing them back through the mixer arm (teaching and playback), variation in the operations performed has been eliminated. At the same time, wasted material has been reduced, stable quality has been maintained, and equipment operation ratios have improved. In addition, we are organizing the accumulated data based on various conditions and analyzing it to pursue further optimization.

Molding



Sand and self-hardening alkali phenol resin are kneaded together, inserted into the blank, and hardened.

Pouring



Melted materials are poured into the mold.

Material melting



Scraps, the main materials used, are melted in an electric furnace. Through this dissolving process, the material components are measured, and adjustments are made as necessary.

Emission analyzer



Chip briquettes



Sand reuse equipment

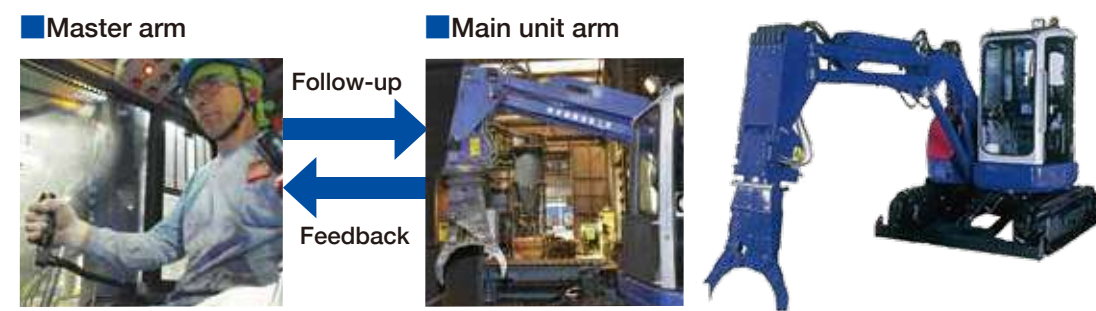


Frame removal



When the iron has cooled and hardened, this is the process of breaking down sand mold and removing the product. The sand on the product surface is also carefully removed.

BUYMASTER heavy item handling robot



Three dimensional measuring machine business



Machining



Machining is carried out as necessary in accordance with the product specifications.

Quality inspection



Inspections are performed using both the coordinate measurement machine and the human eye, and the product accuracy is confirmed down to the micro level.

Briquette machine



In the machining process, approximately 10% of the material is ground away (as shavings). A briquette machine (pressure device) pressurizes these shavings, forming them into solid masses which can be reused for casting. Approximately 120 tons of these metal shaving scrap materials are reused per year. This machine is a major contributor to both quality improvement and cost cutting.

List of IMS processing equipment

Type	Equipment manufacturer	Equipment type	Table size (Palette size)	Number of ATC	Number of APOs
Turning center	Toshiba machine	TMD-13S	φ1600	60 (turning 20, Milling 40)	2
Five-axis composite working machine	Yamazaki Mazak	e-1060N 8/II	φ1250	80	2
Turning center	Toshiba machine	TMD-13S	φ1600	60 (turning 20, Milling 40)	2
Horizontal machining center	Makino Milling Machine Co., Ltd.	A100E	□1000	90	2
Gear Shapers	Mitsubishi Heavy Industries, Ltd.	SC100CNC	φ1400	-	-
NC hobbing machine	Mitsubishi Heavy Industries, Ltd.	GB100CNC-5	φ770	-	-
Horizontal machining center	Makino Milling Machine Co., Ltd.	MCB1210-A60	□1000	60	2
NC vertical lathe	OKUMA Corporation	ZSP-V920EX	φ710	24	-
NC vertical lathe	OM MFG CO., LTD.	VTL915	φ915	16	2
Horizontal machining center	DMG MORI CO., LTD.	NH8000	□800	60	5
NC vertical lathe	OM MFG CO., LTD.	VTL1600	φ1600	16	2
Horizontal machining center	NISATA MACHINE TECHNO CO., LTD.	HN80-D	□800	62	2
NC vertical lathe	OKUMA Corporation	V100R	φ900	12	-

IMS





## Colleagues pass on techniques, mutually improving each other's skills.

### We cherish gratitude and humility

It has been nearly 10 years since I joined the company as a new graduate, and I feel that I have grown under the guidance of many people. Now I think and act on my own and face my work. I received various educational opportunities and was able to improve my skills. I want to continue to do my best every day without forgetting my ambition and gratitude.



2015 fiscal year hire  
Hayao Ikeda

### Building relationships of trust through speedy handling

I get a real sense of trust every day in my face-to-face meetings with customers. In the same way, communication with the people working on the factory floor manufacturing products is something I always want to pay close attention to. I hope to continue carrying out my duties with good footwork and a fast pace.



2010 fiscal year hire  
Daiki Fujita

### Precisely because I'm used to the job, I change my perspective

I joined this company partly because one of my college professors introduced me to it, and... my introduction to the world of working adults was a tough one. After starting here, I worked on all aspects of the manufacturing process from product inspections to shipping, and now I'm already in my 15th year. Precisely because I'm used to the job now, I sometimes change my point of view and discover new things, and I continue to learn every day.



2008 fiscal year hire  
Takumi Kikuchi

### Moving forward with friends

Even though we make the same products day in and day out, if we are not careful, defects will appear, and I feel the difficulty of manufacturing. I am moving forward every day to create good things with our colleagues! I want to create a workplace that is loved by customers.



2012 fiscal year hire  
Yutaro Hirose

### The joy of knowledge transforming into results

In order to start work in Japan, I met the world of casting while attending a Japanese language school. Unlike the first image, which is a traditional manufacturing method, I am delighted with manufacturing using advanced knowledge and technology. Now I want to make better products by making use of the results of joint research at university and the knowledge I learned.



2007 fiscal year hire  
Ngo Nhu Hoang

### Work is 80% planning

When I first joined the company, I learned a lot from watching the craftsmen at work. Even now, as I learn all kinds of things from various training sessions, I hope the younger employees will watch me and learn a lot from that. Work is 80% planning, and I'm doing my best to make sure I'm thoroughly prepared in advance.



2002 fiscal year hire  
Yoshimi Kanazawa

### Actions that meet customer expectations

I jumped into machining work, which is a completely different field, from my previous job in sales, but now I am working in a position of responsibility. Every day, I look over the machining schedule, think about how to move the machine to get things done on time, and the sense of accomplishment I feel when I am able to meet the customer's expectations is priceless. The sparkling water I drink when I get home that day is special.



2016 fiscal year hire  
Yoichiro Niikuni

### Aiming for a fun working environment

I try to "enjoy" rather than "work hard" in my work. I am thinking about how I can work efficiently and enjoyably within a limited amount of time. As general affairs, we will provide support so that all employees can create an environment where they can enjoy working.



2018 fiscal year hire  
Yukiyo Hiruta

## The development of casting techniques is our history.



**2023**

May: Established VINA ITO second plant  
June: Koji Ito became Chairman of the Board, Hideyuki Ito is appointed CEO and President

**2019**

May: Started operation of VINA ITO  
June: The Minister of Economy, Trade and Industry commends "300 small and medium-sized enterprises and small businesses".

**2017**

February: IMS Second Factory established  
June: Model creation in-house operations started

**2018**

April: Established VINA ITO (Dong Van 3 Industrial Park, Ha Nam Province, Vietnam)

**2014**

March: Solar power generation business (300 kW) launched

**2016**

April: DNV GL ship classification factory certification acquired  
December: ITO Co., Ltd. merged with ITO FOUNDRY & MACHINERY CO., LTD.

**2013**

May: Operations started at IMS Co., Ltd.

**2012**

October: IMS Co., Ltd. founded as an affiliated company

**2009**

January: Awarded the Ibaraki Industry Grand Prize Award for the 2008 fiscal year

**2008**

May: IKI CAST VIETNAM Co., Ltd. (Hanoi) established, production started  
July: Recognized as one of the "300 Energetic Small to Mid-Sized Manufacturing Companies of 2008" by the Minister of Economy, Trade and Industry

**2006**

February: Painting factory added on  
June: ITO Co., Ltd. founded as an affiliated company

**2007**

March: Operations started at ITO Co., Ltd.  
April: ISO14001 certification acquired

**2005**

May: ISO9001 certification acquired  
July: Second manufacturing factory added on

**2003**

April: New factory operations started in Tokai-mura

**February 1946**

ITO TEKKO CO., LTD. founded solely by Kohei Ito

**October 1995**

Koji Ito appointed as Representative Director

**April 1961**

Kohei Ito appointed as Executive Chairman, Shoichiro Ito appointed as Company President

**June 1999**

Patent application for spheroidal graphite cast iron product manufacturing method submitted

