Sasaya Industry Co., Ltd

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Total Technology
Uniting People with Iron

Company Profile

Sasaya Industry Co., Ltd

Iron Dreams

The history of iron began in Egypt between 3000 and 4000 BC. Since then, cast iron technology has been developed into a cornerstone of our social infrastructure with its wide range of applications.

We, at the Sasaya Industry Co., Ltd, have established an integrated system of production from 3D-based or CAD assisted design, modeling, casting, up to final machining by making full use of advanced NC and 5-Axis double-column machining center. This system is based on our vast experience and development of cast iron technology. We are constantly driven to improve and innovate technologies and equipment, tailor made to suit our clients' needs. We are focused on high quality and low cost, with dedication to providing outstanding service and delivery to our valued partners.

In our main plant, efforts have been made to achieve an Eco-friendly clean work environment. We have been awarded ISO 14001 certification and we are committed to protecting the global environment. It is our sincere intention to nurture young engineers and to challenge new technologies. Here in Tonami we are blessed with an abundance of resources to continue future development. We intend to support ever changing wants and needs of the industry through our sophisticated and diversified foundry.

Integrated production systems evolving as a whole through continual upgrades of individual processes

We have established our own integrated production system so as to implement the most efficient and effective manufacturing processes to meet the diversifying needs of a challenging market. Our objective is the constant upgrading of processes through enhancing individual processes in almost all stages of design, material and machine tooling. Our production system is the “live integrated production system” that is continually evolving.

At the commencement of production, during the designing phase, 3D/CAD is utilized to visualize the product in a three-dimensional drawing based on the client data and needs. In future, we plan to introduce software to analyze the fluidity and solidification of the material, which will help to establish a system of applying the numerical values obtained in the drawing stage into manufacturing. We will continue our quest for rapid and close communications with customers to ensure efficient solutions to any challenging obstacles. We will also present proposals as required from the field-based perspective to offer a better quality product.

❶Planning meeting
❷CAD product design
❸Wooden mold model / Foamed mold model

Skilled melting technology, Enabling stable production of materials using our unique method

Materials have wide-varying physical properties depending on application purposes and functions of individual versatile products. Materials are the central factor to govern the quality of finished products. However their mixing has often been left to well-experienced craftsmen.

In order to meet the highest standard of quality material, we have developed a unique numerical-control program for the mixing and melting technologies created from our extensive experience. On the basis of this program, we have established our own stable casting system.

For melting, a low-frequency induction furnace is used. This furnace ensures easy handling of various kinds of materials regardless of the quantity. Strict quality control of materials is guaranteed through inspection and analysis using a Spectrometer. This method is very cost effective and achieves the highest level of quality.

FC mechanical properties

Type	Symbol	As-cast diameter of sample mm	Tensile strength N/mm² {kgf/mm²}	Deflective strength		Brinell hardness HB
				Maximum load N {kgf}	Deflection mm	
Type 1	FC 100	30	100 or more {10 or more}	7000 or more {713 or more}	3.5 or more	201 or less
Type 2	FC 150	30	150 or more {15 or more}	8000 or more {815 or more}	4.0 or more	212 or less
Type 3	FC 200	30	200 or more {20 or more}	9000 or more {917 or more}	4.5 or more	223 or less
Type 4	FC 250	30	250 or more {25 or more}	10,000 or more {1,019 or more}	5.0 or more	241 or less
Type 5	FC 300	30	300 or more {31 or more}	11,000 or more {1,121 or more}	5.5 or more	262 or less
Type 6	FC 350	30	350 or more {36 or more}	12,000 or more {1,223 or more}	5.5 or more	277 or less

Remarks: The mechanical test may be omitted for Type 1 products.

FCD mechanical properties

Type	Symbol	Tensile strength N/mm² {kgf/mm²}	Proof stress N/mm² {kgf/mm²}	Elongation %	Charpy absorbed energy J {kgf・m}		(Reference) HardnessHB
					Average of three pieces	Test value of one piece	
Type 0	FCD 370	370 or more {38 or more}	230 or more {24 or more}	17 or more	13.0 or more {1.3 or more}	11.0 or more {1.1 or more}	179 or less
Type 1	FCD 400	400 or more {41 or more}	250 or more {26 or more}	12 or more	—		201 or less
Type 2	FCD 450	450 or more {46 or more}	280 or more {29 or more}	10 or more	—		143~217
Type 3	FCD 500	500 or more {51 or more}	320 or more {33 or more}	7 or more	—		170~241
Type 4	FCD 600	600 or more {61 or more}	370 or more {38 or more}	3 or more	—		192~269
Type 5	FCD 700	700 or more {71 or more}	420 or more {43 or more}	2 or more	—		229~302
Type 6	FCD 800	800 or more {82 or more}	480 or more {49 or more}	2 or more	—		248~352

Production capacity

We offer products in various weights and sizes. Please don't hesitate to contact us regarding any inquiries or requests.

■Product line

Castings ····· 500t/month (FC, FCD)

Model building ··· wooden mold and styrene foam

Product weight ····· 100kg-15t

❶Low-frequency induction furnace (melting)
❷Material analysis (Spectrometer)
❸Teeming

■Principal production equipment

〈Casting〉

Low-frequency induction furnace (Fuji Electric) ··· 2 units
Self-hardening mixer (Taiyo Casting Machine) ····· 10t/H
Sand recycling equipment (including shake-out) (Taiyo Casting Machine) ··· 1 set
Dust collector (Shinto) ····· 4 units
Monorail blast (Shinto) ····· 1 unit
Product size 3600mm x 2300mm in dia.
Analyzer Spectrometer ····· 1 unit
Central cleaner ····· 1 set
Handling equipment
5t crane ····· 2 units
10t crane ····· 3 units
20t crane ····· 2 units
20/10 t crab type crane ····· 1 unit
2.8 t lifting magnet of crane ····· 1 unit
Shovel ····· 2 units
Truck ····· 2 units
Wooden mold machining tools
Planer ····· 2 units
Sawing machine ····· 2 units
Wooden mold band saw ····· 1 unit
Foam band saw ····· 1 unit
Circular sawing machine ····· 1 unit
Automatic planer ····· 1 unit
Small planer ····· 1 unit
Vertical band grinder ····· 1 unit
Automatic grinder ····· 1 unit

Flexible advanced processing
Quality formation

For machine tooling, an advanced pentahedron machining center has been introduced in line with expansion and development of our advanced NC machining center (NC lathe, etc.). Therefore, we can meet any demand for intricate work requiring high-level technology and accuracy. If any defect should be detected in the material, information is immediately fed back to the material and casting processes for improvement. Eliminating unnecessary time wasting and cost.

Organic linking of processes together in the integrated production system has assisted in the accumulation of versatile knowhow on casting processes, resulting in the enhancement of the technical capacity and reliability as a whole. We trust our unrivaled integrated production system and our expertise in the use of casting technology.

We have also been awarded ISO 9001. You can rest assured you will receive the highest quality product.

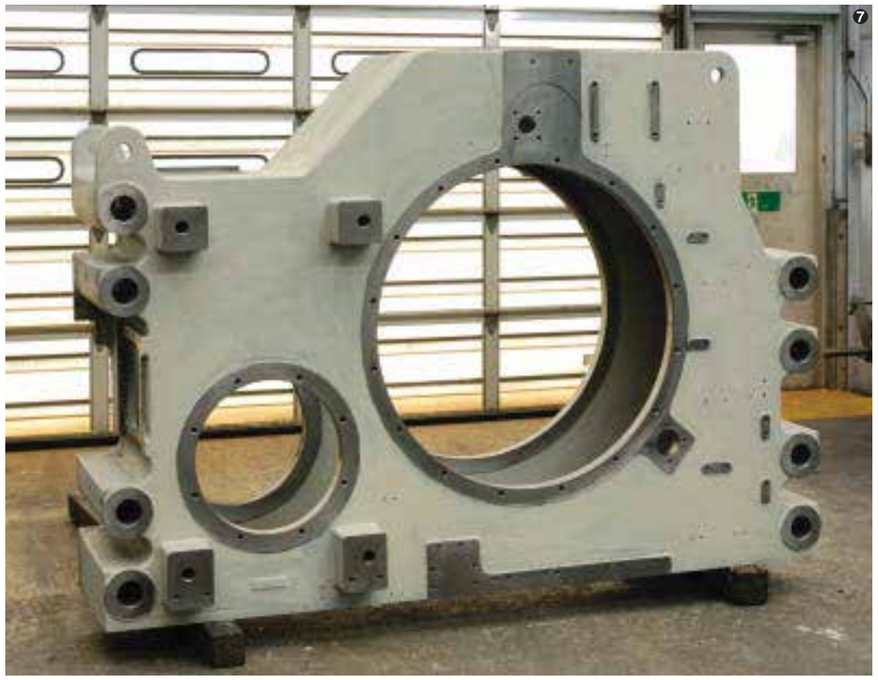
❶

5-Axis double-column machining center
(pentahedron machining tool)

❺❻5-Axis double-column machining center
❼Product example

❺

❻



❼

NC turning machine

❷

Turning center

❸

Radial drilling machine

❹

❶Product example
❷NC turning machine
❸NC turning center
❹HDR-D-2000 radial drilling machine

Multitasking CNC lathe

❽

❾

❽Product example
❾CNC lathe

■Principal production equipment

〈Machining tool〉

Turning machine, OM made ·····NC 1 unit
Table diameter ·····2,500¢
Maximum working outside diameter ···4,000¢
Maximum working height ·····1,600mm
Maximum working weight ···20,000kg
Turning machine, OM made, universal type ···1 unit
Table diameter ·····2,500¢
Maximum working outside diameter ···4,000¢
Maximum working height ·····1,600mm
Maximum working weight ···20,000kg
CNC turning center ·····1 unit
NEO・-20 type OM made
Table diameter ·····Φ2,000mm
Maximum working outside diameter Φ2,400mm
Maximum working height ·····1,500mm
Maximum working weight ···15,000kg
ATC tool housing capacity ···18 pieces
Ogawa-made radial drilling machine ···1 unit HDR-D-2000
5-Axis double-column machining center ···1 unit
MCR-B II type (pentahderon machine tool) Okuma made
Table size:Width x length ·····2,500×4,800mm
Maximum distance from the table to the spindle end···3,050mm
Maximum deadweight ·····33,000kg
ATC tool housing capacity·····100 pieces
Planer···1 unit Table length 6,000mm x width 2,000mm
Maximum working height ·····1,800mm
Maximum working width ·····2,200mm
Multitasking CNC lathe M132 x 400 type···1 unit
Dainichi Kinzoku Kogyo made
Swing on bed ·····1,320mm
Swing on carriage ·····900mm
Maximum working length ·····4,000mm
Four-claw chuck ·····Φ1,000
Tool head type ·····1V12 angle
Lathe···1 unit Swing on bed·····1,000mm
Maximum working length ···5,000mm
Handling equipment 15t crane·····3 units

〈Others〉

Weighing machine truck scale 40t ·····1 unit

Challenging the immense possibilities of iron and supporting manufacturing in Japan and all over the world

Outline of the Company

Name of the Company	Sasaya Industry Co., Ltd	
Address	Main Office 241-2, Kitsunejima, Tonami City, Toyama Prefecture 939-1346 Tel:0763-32-6600 Fax:0763-32-6602	
	Kosugi Office 2602, Sanga Imizu City, Toyama Prefecture 939-0341 Tel:0766-56-1411	
	Shinminato Office 1-16-44, Shoseimachi Imizu City, Toyama Prefecture 934-0001	
Lot area of main office, plant		
	Main office lot area	12,171㎡
	Casting plant	2,194㎡ (Total floor space)
	Machine plant	1,152㎡ (Total floor space)
	Wooden mold plant	131㎡ (Total floor space)
	Main building office	670㎡ (Total floor space)
	Kosugi Office	52,456㎡
	Shinminato Office	6,386㎡
	Company residence (Kosugi)	3,305㎡
Foundation	October 1, 1919	
Capital	\70 million	
Executives	President & CEO	Takayoshi Sasatani
	Senior Managing Director	Kazuhiro Sasatani
	Managing Director	Shinji Nakai
	Director	Shigeru Nobuta
	Director	Hironobu Tanii
	Director	Yasushi Kawakita
	Auditor	Kunio Oshida
Employees	57	

History

1919 Founded as Sasaya Chuzo Tekkosho in Shinminato, Toyama Prefecture
1935 Started production of ingot cases in line with mechanical castings
1943 Designated plant by Air Headquarters, started manufacturing surface plates for aircrafts
1944 Organization incorporated
1945 Plant designation by the Air Headquarters canceled.
Started production of ingot case and commercial mechanical castings
1961 New 72,000 m2 plant site south of Kosugi Station for quality improvement, efficiency increase, cost reduction, and augmentation of transport capacity
1968 New wooden mold plant constructed
1969 New machine plant constructed
1971 New casting plant No.2 constructed, in which the high-frequency induction furnace was introduced
1975 Cupola dust collector installed to prevent pollution
1980 Self-hardening furan mold building line installed in the casting plant No.2 for labor saving
1981 Furan mold building line also provided in the casting plant No.1 to establish a totally furan-based system
1982 Machine plant No.2 newly constructed (700 m²) Large planer, turning machine, and other machining centers installed
1987 Operated the giant three-dimensional Landsborough's Maze
1989 Furan foundry facilities updated
1990 New health building constructed
1996 Constructed new Tonami plant. Low-frequency induction furnace introduced
Environmentally friendly lot secured to prevent adverse impact on the environment
Commercial building constructed on the site of the old main office building as well as the land was leased to Heiwado Co., Ltd.
2006 Added the mechanical plant
2007 Added the large NC machining center (pentahedron machining tool)
Awarded ISO 14001 certification
2009 Awarded ISO 9001 certification

Alpha Plaza (Heiwado) Kosugi
(Opened in November 1996)