

Japan Foundry Society, Inc.

Trend of Investment Casting industry in Japan - Present and the Future -

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13th WORLD CONFERENCE ON INVESTMENT CASTING

Paper: M2

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13th World Conference on Investment Casting

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April 16, 2012
 Japan Foundry Society, Inc.
 Executive Director
 Yoshiharu Kakuta

1. Transition of amount of production money and weight

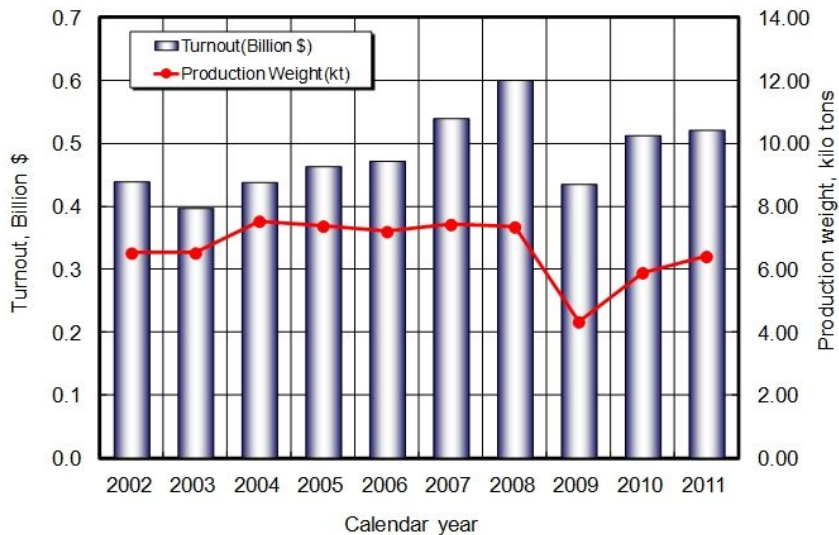


Fig.1 Transition of the turnover and production weight of investment casting

Table 1. Transition of the turnover and production weight of domestic investment casting

	(Unit)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Turnout	Billion \$	0.439	0.397	0.439	0.463	0.472	0.539	0.600	0.435	0.514	0.522
Production weight	ton	6,523	6,524	7,535	7,380	7,204	7,430	7,352	4,336	5,899	6,414

2. Transition of the turnover of each production field

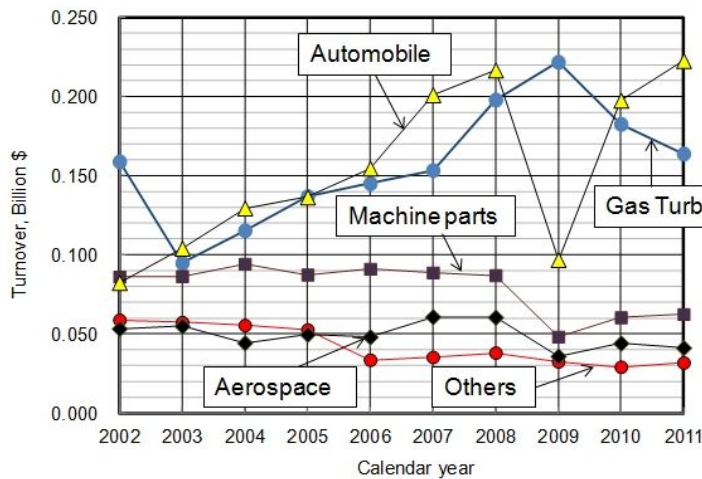


Fig.2 Trend of turnover of each field

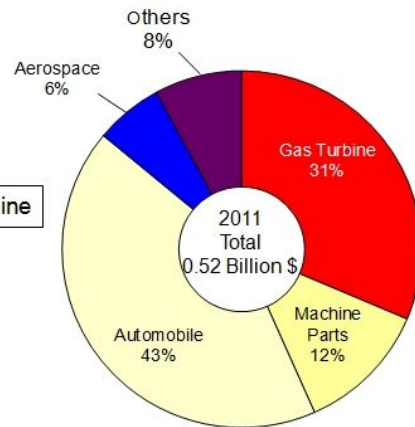


Fig.3 Sales ratio of each field in 2011

Table2. Trend of turnover of each field

Unit: Billion \$

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gas Turbine	0.159	0.095	0.115	0.137	0.145	0.153	0.198	0.222	0.183	0.164
Machine Parts	0.086	0.086	0.094	0.087	0.091	0.089	0.087	0.048	0.060	0.062
Automobile	0.082	0.104	0.129	0.136	0.155	0.201	0.217	0.097	0.197	0.222
Aerospace	0.059	0.057	0.055	0.053	0.034	0.035	0.038	0.033	0.029	0.032
Others	0.053	0.055	0.044	0.050	0.048	0.061	0.060	0.036	0.044	0.041
Total Turnout	0.439	0.397	0.439	0.463	0.472	0.539	0.600	0.435	0.514	0.522

3. Transition of production weight of each field

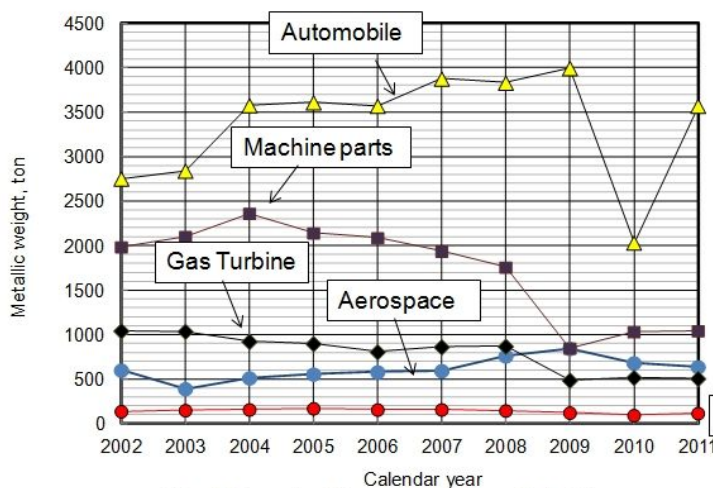


Fig.4 Trend of turnover of each field

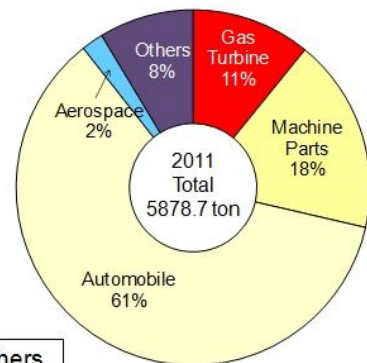


Fig.5 Sales ratio of each field in 2011

Table3. Trend of turnover of each field

Unit: ton

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gas Turbine	601	392	514	556	581	594	759.7	844.1	682.1	638.3
Machine Parts	1986	2102	2361	2143	2088	1937	1759.2	846.5	1030.9	1043.6
Automobile	2754	2842	3577	3610	3570	3877	3831.6	3995.5	2033.4	3571.5
Aerospace	139	151	159	172	158	159	147.4	123.6	95.3	118.2
Others	1043	1037	924	899	807	863	868.9	488.1	518.7	507.1
Total Turnout	6523	6524	7535	7380	7204	7430	7366.8	6297.8	4360.4	5878.7

4. Feature of Japanese market

- (1) High import rate and about 50% of domestic market
 - ① In medical equipment, 90% is imports.
 - ② In the aircraft and the gas turbine, 70% is imports.
- (2) A high performance product is developed as a high cost country.
 - ① Production price rate:
1990 - 2009 4JPY/g – 10JPY/g
2.5 times
 - ② Gas turbine: 2009 - 2002 1.4 times (amount of money)
 - ③ Automobile: 2011 - 2002 3.8 times (amount of money).
- (3) Efficient productive system
 - ① Mass production system of high performance product
 - ② high-mix low-volume production system

5. Demand trends in the future

Table 4 Growth rate from 2012 to 2017

Sectors	2017/2012
Automotive turbocharger	1.5-2 times
Gas turbine	50% increase
Medical equipment	50% increase
Aerospace	2 times
General machine	Imports increase
Nuclear power	Decrease

6. Summary

- ① The sum of sale proceeds of the wheel for the turbo-charger of the car and the gas turbine for power generation comes almost 73% from sale proceeds of all Investment Castings.
- ② After 2010, it decreases by appreciation of the yen though Lehman shock and the great earthquake are overcome, and the supply chain was maintained.
- ③ The market cultivation to the energy field and the medical-related area is necessary in the future.
- ④ Correspondence of cost of raw materials to sudden rise:
Development of zircon sand substitute

It reports by "Result and practical use situation of the development of the mold making technology for the precision cast goods upgrade" of T2 on April 17.

(room A 9:30~10:00)