

## CBI MARKET SURVEY

## The castings and forgings market in France

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**Report summary**

This CBI market survey discusses the following highlights for the castings and forgings sector in France:

- The French engineering and construction industries are major end-users of castings and forgings. Both the French engineering industry as well as the construction industry is among the largest in the EU and is expected to show an increasing output in 2008.
- The French production of metal castings decreased slightly in the period 2002-2006, while the production of forgings increased. Both industries ranked third in the EU, far behind Germany and behind Italy, but ahead of Spain and the UK.
- France was the second largest importer of castings and forgings in the EU, behind Germany, but ahead of Italy and the UK. Between 2002 and 2006, the total import value annually increased by 9%. The country ran large trade deficits for articles of iron, steel or base metal (€1.2 billion), plastic and rubber products (€506 million), and parts of machinery, railway equipment and vehicles (€216 million).
- Between 2002 and 2006, imports from DCs annually increased by 23% in value. The total share of DCs in import value increased from 2% in 2002 to 4% in 2006. The DCs' shares in imports of parts of machinery, railway equipment and vehicles grew the fastest: from 2% to 5% in value.
- China accounted for 38% of all imports coming from DCs, followed by Turkey (13%), Tunisia (10%), Brazil (8%), Mexico (6%) and India (5%). The Chinese share of DC exports to France did not grow as fast as in the EU on average (22% compared to 57%). The DCs that saw a larger increase of their share to the country were Egypt, Sri Lanka, Mexico, Syria and Peru.
- The price pressure on components and systems as a result of strong global competition, in combination with an ongoing strong demand for engineering and construction products, has made room for an increase of sourcing in DCs. However, DC exporters are still capable of supplying the quality yet that is necessary for the EU market. Although DCs saw an increase in exports of castings and forgings to France, these parts are assembled into products that are directed to markets with lower quality standards, such as Africa and South America.

This survey provides exporters of castings and forgings with sector-specific market information related to gaining access to France. By focusing on a specific country, this survey provides additional information, complementary to the more general information and data provided in the CBI market survey 'The castings and forgings market in the EU', which covers the EU in general. That survey also contains an overview and explanation of the selected products dealt with, some general remarks on the statistics used as well as information on other available documents for this sector. It can be downloaded from <http://www.cbi.eu/marketinfo>.

**1 Market description: industrial demand and production****Industrial demand**

Because no data for the demand for castings and forgings are available, this survey puts a focus on two major end-user industries in France that offer good opportunities for developing country (DC) exporters: the engineering and the construction industry. Since both industries use many cast and forged parts and products, the production output of both industries is a good indication of the demand for cast and forged parts in these industries.

### Engineering industry

The French engineering industry is a leading end-user of metal castings, accounting for 30% of locally produced metal castings. It is also a major end-user of forgings, consuming between 10-45% of all forgings. The French production in the engineering industry grew by 4.3% per year in the period 2002-2006, totalling almost €78 billion in 2006. While production in the mechanical engineering industry grew by 6.4% per year, the production in the electrical engineering industry increased by only 1.2% per year, due to relocation of some of the production to low cost countries (LCCs). The large French engineering industry ranked third in the EU, far behind Germany and behind Italy, but ahead of the UK and Spain. Refer to Table 1.1 for more information on the market size of the several engineering categories, as well as the estimated shares of castings and forgings in these categories.

**Table 1.1 French engineering production, by category and including the share of castings and forgings, 2002-2006, € million**

	Share of castings and forgings*	2002	2006	Annual change '02-'06
<b>Total engineering</b>		<b>65,697</b>	<b>77,757</b>	<b>4.3%</b>
<b>Mechanical engineering</b>		<b>37,858</b>	<b>48,557</b>	<b>6.4%</b>
Lifting and handling equipment	10%	6,651	9,061	8.0%
Non domestic cooling and ventilation equipment	10%	5,486	5,864	1.7%
Pumps and compressors	50-70%**	4,338	4,891	3.0%
Agricultural tractors and machinery	30%	3,796	4,039	1.6%
Bearings, gears, gearing and driving elements	50%	2,497	2,963	4.4%
Machinery for mining, quarrying and construction	15-25%	2,500	2,894	3.7%
Engines and turbines	40%	2,957	2,871	-0.7%
Valves and taps	60-70%	2,307	2,722	4.2%
Machine tools, woodworking mach., welding equipm.	***	2,251	2,585	3.5%
Machinery for food, beverage and tobacco processing	25%	1,915	1,989	1.0%
Machinery for textile, apparel and leather production	60-70%	1,013	939	-1.9%
Industrial furnaces and furnace burners	10%	846	892	1.3%
Machinery for metallurgy	20-25%	320	667	20.2%
Machinery for paper and paperboard production	25%	452	444	-0.4%
<b>Electrical engineering</b>		<b>27,839</b>	<b>29,200</b>	<b>1.2%</b>
Electric distribution and control apparatus	5-10%	10,722	12,000	2.9%
Electric equipment for engines and vehicles	5-25%	4,216	4,300	0.5%
Electric motors, generators and transformers	30-40%	3,754	3,800	0.3%
Electric domestic appliances	5-25%	3,132	2,800	-2.8%
Other electrical equipment	5-25%	1,635	1,900	3.8%
Lighting equipment and electric lamps	5-25%	1,103	1,200	2.1%
Accumulators, primary cells and primary batteries	5-25%	901	900	0.0%

Source: European Union Enterprise and Industry (2007)

\* Based on estimations of industry experts and the German Foundry Association.

\*\* Pumps consist for about 70% of castings and forgings, while compressors consist for about 50% of castings and forgings.

\*\*\* While machine tools have a large share of castings and forgings (40-50%), woodworking machinery (10-20%) and welding equipment (5%) have a far smaller share of castings and forgings.

As becomes clear from Table 1.1, several categories contain a relatively large production value share of castings and forgings. Of the most relevant categories, "bearings, gears and other driving elements" (+4.4% per year), "valves and taps" (+4.2%) and "pumps and compressors" (+3%) performed well. On the other hand, the production of "machinery for textile, apparel and leather production" declined (-1.9%), as well as the demand for "engines and turbines" (-0.7%). The position of France in the EU in these main castings and forgings consuming engineering categories was as follows:

- Pumps and compressors: France ranked third with 13% EU market share, behind Germany (35% EU market share) and Italy (14%), but ahead of the UK (11%) and Belgium (5%).
- Valves and taps: France ranked third with 10% EU market share, behind Germany (44% EU market share) and Italy (22%), but ahead of the UK (6%) and Denmark (6%).

- Bearings, gears, gearing and driving elements: France ranked third with 9% EU market share, behind Germany (51% EU market share) and Italy (18%), but ahead of the UK (4%) and Sweden (3%).
- Electric motors, generators and transformers: France ranked fourth with 8% EU market share, behind Spain (12% EU market share) and Italy (9%), but ahead of the UK (8%) and Denmark (6%).
- Agricultural tractors and machinery: France ranked third with 14% EU market share, behind Germany (26% EU market share) and Italy (23%), but ahead of the UK (8%) and the Netherlands (5%).
- Engines and turbines: France ranked fourth with 12% EU market share, behind the UK (18% EU market share) and Italy (18%), but ahead of Sweden (6%) and Finland (6%).
- Machine tools, woodworking machinery, welding equipment: France ranked third with 6% EU market share, behind Germany (50% EU market share) and Italy (21%), but ahead of the UK (4%) and Spain (4%).
- Machinery for textile, apparel and leather production: France ranked third with 8% EU market share, behind Germany (41% EU market share) and Italy (26%), but ahead of Belgium (7%) and the Czech Republic (5%).

The world, EU and French economic growth forecasts for 2008 (+3.8%, +1.7% and +1.6% respectively) and 2009 (+3.9%, +1.8% and +1.9%) lead to a substantial strong demand for engineering products in the country. Yet it is difficult to predict to what extent the French manufacturers will benefit, as outsourcing may also increase. However, the European Engineering Industries Association (Orgalime) does expect some growth in the French engineering production for 2008. Please also note that, although the EU is far from running the risk of recession, the EU and French economy is and will be clearly affected by the housing and credit crisis in the United States.

### **Construction industry**

The French construction industry amounted to €187 billion in 2007. The European Network for Construction Forecasting (Euroconstruct) expects a slight growth in the period 2008-2009 to €189 billion in 2009. The large French construction industry ranked fourth in the EU, behind Spain, Germany and the UK, but ahead of Italy.

### **Market segmentation**

As far as data are available, the market segmentation of some of the most important materials covered by this survey is discussed in this section.

### **Castings**

As shown by the data in Table 1.2, iron castings largely go to the automotive industry and steel castings are mainly used in the engineering industry. Please note that these data are only of domestically produced castings, as other data are not available. Although the automotive industry still represented 50% of the use of iron castings in 2005, its share decreased by 5% compared to 2001, due to a 19% decrease of iron castings produced for that industry. The same goes for nodular iron, where the share of other industries and the engineering industry grew at the cost of the automotive industry. In both cases, this was caused by the increasing use of non-ferrous metal castings for automobiles, instead of (nodular) iron castings. In the use of steel castings, the engineering industry gained more than 5% share compared to 2002 due to a absolute growth of more than 7%, at the cost of the railway – (-2%), the vehicle (-0.5%) - and other industries (-3%).

**Table 1.2 French metal casting production, by segment, 2005, shares**

	Iron	Nodular iron	Malleable iron	Steel	Copper	Other alloy	Precision castings
Automotive, cycles and motorcycles industry	50%	58.8%	53.9%	12.2%	18.3%	89.0%	77.5%
Engineering industry	28%						
• Agricultural machinery	-	10.7%	3.4%	2.1%	0.4%	0.2%	0.3%

	Iron	Nodular iron	Malleable iron	Steel	Copper	Other alloy	Precision castings
• Electrical engineering, flow meters, medical industry	-	1.5%	0.7%	0.9%	4.7%	3.0%	5.7%
• Machine tools	-	2.2%	1.6%	0.4%	1.4%	0.6%	1.6%
• Valves, pumps, industrial equipment	-	8.7%	4.3%	9.2%	44.0%	1.8%	2.3%
• Other mechanical engineering	-	4.5%	27.3%	48.8%	7.9%	0.6%	4.5%
Metal and metal-working industry	-	0.5%	0.3%	8.9%	4.7%	0.1%	2.8%
Railway industry	-	2.3%	1.2%	4.2%	2.0%	0.1%	0.0%
Shipbuilding and aerospace industries	-	2.1%	0.6%	0.8%	4.8%	0.4%	0.0%
Other*	22%**	8.8%	6.8%	12.5%	11.9%	4.3%	9.7%

Source: Les Fondateurs de France (2007)

\*Several industries and applications such as the construction industry and kitchenware.

\*\*The construction industry accounts for 8%, while other industries include also the above mentioned industries of which specific data for iron are not available.

### Forgings

Unfortunately, no segmentation data for forgings are available. However, according to industry experts, it can be assumed that the major end-user of forgings is the cars and trucks industry (40-60%), followed by mechanical engineering (5-25%) and agricultural machinery (5-20%). Other industries that may have a share of 1-10% are mining machinery, railways, aerospace equipment, construction, electrical engineering, maritime and power generation.

### Production

#### Castings

Table 1.3 shows an indication of the production of castings in France. The data have been collected by the French Foundry Association (Les Fondateurs de France) and are based on data of member companies. In 2006, the French production of castings totalled 2.4 million tonnes, a decrease of 1.1% per year compared to 2002. The production value increased slightly – by 0.6% per year - to €5.6 billion in 2006. The major cause of the decline was the failing demand for mainly non-ferrous metal castings of the domestic automotive industry. Furthermore, the French industry was also reported to have some difficulties in the export market due to competition from Central and Eastern European (CEE) countries and China, although in exports some segments performed very well in 2006 (castings for construction and hydraulic equipment). The strongest developments were recorded in the field of cast iron for hydraulic applications. In 2006, the country was home to 147 large ferrous metal foundries, down from 179 foundries in 2002. In the same period, the average turnover per employee increased by 5% per year to almost €160,000 – an amount which is the second largest in the EU, behind Germany. The large French foundry industry ranked third in the EU, far behind Germany and behind Italy, but ahead of Spain and the UK.

**Table 1.3 French production volume of castings by type, 2002-2006, 1,000 tonnes**

	2002	2004	2006	CAGR '02-'06
<b>Total</b>	<b>2,513</b>	<b>2,466</b>	<b>2,408</b>	<b>-1.1%</b>
<b>Ferrous metal</b>	<b>2,123</b>	<b>2,059</b>	<b>2,063</b>	<b>-0.7%</b>
Nodular iron	1,013	997	1,025	0.3%
Iron	988	943	922	-1.7%
Steel	115	115	117	0.4%
<b>Non-ferrous metal</b>	<b>390</b>	<b>407</b>	<b>345</b>	<b>-3.0%</b>
Light and ultra light	326	349	291	-2.7%
Copper alloy	29	27	25	-3.5%
Zinc	32	28	24	-7.4%

	2002	2004	2006	CAGR '02-'06
Other alloy	3	3	5	9.9%

Source: Committee of European Foundries Associations (2007)

In addition to Table 1.3, the group of ferrous metal castings declined by 0.9% in value in the period 2002-2006. Contrary to that trend, the production value rose by 5.6% per year in the period 2004-2006, while the volume remained virtually stable. In this period, this incongruity was mainly due to the fact that rising raw material prices were passed on to the customer in the form of price tags. The group of non-ferrous metal castings declined by 0.3% in value in the years 2002-2006. While in 2006 the share of ferrous metals and non-ferrous metals of the total production volume was 86% versus 14%, in total production value this ratio was 55:45, for a large part due to the difference in raw material prices.

### **Forgings**

Table 1.4 shows an indication of the volume of forgings production in France. In 2006, the members of the French Forging Association (AFF) produced 543,000 tonnes of forgings, an increase of 1.9% per year since 2002. The medium-sized French forge industry ranked third in the EU, far behind Germany and Italy, but ahead of the UK and Spain.

**Table 1.4 French production volume of forgings , by type, 2002-2006, 1,000 tonnes**

	2002	2004	2006	CAGR '02-'06
<b>Total</b>	<b>503</b>	<b>515</b>	<b>543</b>	<b>1.9%</b>
<b>Drop forging, press and upset forging</b>	<b>370</b>	<b>380</b>	<b>413</b>	<b>2.8%</b>
• Production of forging industry (subcontracting)	281	290	300	1.6%
• In-house production of the automotive industry	89	90	113	6.2%
<b>Cold forging</b>	<b>66</b>	<b>70</b>	<b>50</b>	<b>-6.7%</b>
• Production of cold forging industry	66	70	50	-6.7%
• In-house production of consumer industries	-	-	-	-
<b>Open die forging</b>	<b>53</b>	<b>50</b>	<b>60</b>	<b>3.1%</b>
• Ring rolling	-	-	-	-
• Other open die forging*	53	-	60	3.1%
<b>Close die forging for non-ferrous metal</b>	<b>15</b>	<b>15</b>	<b>20</b>	<b>7.5%</b>
<b>Number of forge plants</b>	<b>80</b>	<b>78</b>	<b>76</b>	<b>-1.3%</b>

Source: Euroforge (2007)

\* excluding forged steel bar, blanks and railway rolling stocks.

As shown by Table 1.4, in the period 2002-2006 drop forging, press and upset forging grew by 2.8% per year, as did open die forging (+3.1% per year). Cold forging declined (-7% per year on average), although in the period 2002-2004 it slightly increased. As total production increased by 1.9% per year in the period 2002-2006, the decreasing number of factories of AFF members since 2002 (-1.3% per year) implies a growing output per factory (+3.2% per year).

### **Interesting players**

The largest French ferrous metal foundries are:

- Manoir Industries - <http://www.manoir-industries.com> - also large production of forges
- Howmet - <http://www.howmet.com>
- Feursmetal - <http://www.feursmetal.fr> - part of the AFE group
- Hachette Et Driout – <http://www.ahd.fr>
- Metaltemple - <http://www.metaltemple.fr> – until 2008 part of the Teksid group, but resold to the former owner B4 Italia (<http://www.b4italia.com>).

**Investment in local production** - One French foundry that made the news in 2007 was L'Armoricaïne de Fonderie (<http://www.la-fonte-ardennaise.com>). This company announced that it would invest €15 million in its French foundry. With these investments, the company

plans to increase its production output from 22,000 tonnes per year to 36,000 tonnes. In 2007 the company employed 210 workers and its major products were spheroid graphite cast iron and bainitic cast iron safety brakes for vehicles such as public work machinery, heavy lorries and agricultural machinery. Industry experts mentioned that the company was forced to make these investments as a result of increasing cost price reduction demands from its automotive customers.

While L'Armoricaine de Fonderie got the opportunity to invest, other foundries were given up by their mother companies. One example is the foundry Grandry à Sablé, which was sold by its former holding company CF2M to the Farinia Group. This foundry is specialised in spheroid graphite castings, and produces hydraulic parts of very high quality for construction machinery of Caterpillar and Poclair.

The major French non-ferrous metal foundries are:

- Favi Le Laiton Injecte - <http://www.favi.com> - copper die casting
- Bronze Alu - <http://www.bronze-alu.fr>
- PCC France - <http://www.pccstructurals.com/locations/france>

**Non-ferrous metal foundries still face problems** as a result of the increasing raw material prices. In January 2008, the Rencast foundry group (<http://www.rencast.com>) was placed in bankruptcy, following large losses in 2007 as a result of shorter payment times, imposed by its suppliers. It happened despite of filled order books and the support of its large automotive customers (PSA, Renault, Jteck and others). The Rendac group produces more than 18 million aluminium parts for the automotive industry per year (35,000 tonnes/€166 million), and employs 1,200 workers in several foundries in France, and one in Tunisia. It is among the top 5 of European die casters.

The largest French forges are:

- Aubert Et Duval - <http://www.aubertduval.fr> - member of Eramet
- Gevelot Extrusion - <http://www.gevelot.fr>
- Forges De Courcelles - <http://www.forges-courcelles.fr>
- Ascoforge Safe - <http://www.ascoforge-safe.com>

### Trends in demand and production

The major trends that influence the casting and forging demand and production in France are:

- **Growing number of innovative applications of aluminium and magnesium.** This trend is expected to continue, as the automotive industry seeks new ways to save weight and gain fuel efficiency and performance. Moreover, other segments will benefit from these experiences.
- **Care for the environment has become a strategic political issue.** In the power generation industry, the search for energy efficiency and the limitation of CO<sub>2</sub> and NO<sub>x</sub> emissions – which is sometimes called the “Kyoto Effect” – has led and should lead to the increased use of electric variable speed drives. The engines, turbines, motors and generators markets will also show good growth due to the Kyoto effect. As a result, prospects for cast and forged parts in such applications are bright.
- **French industry benefits from cheap labour supply in Central and Eastern European countries.** The transformation of Central and Eastern European (CEE) countries into market-oriented economies is beneficial to the French engineering, foundry and forge industry. A division of labour has arisen that enables French firms to utilise a cheap labour supply to improve price competitiveness in international markets. Especially for end-products that face quick price erosion, the price pressure on components leads to relocation of production. One example of a French foundry that started production in CEE, is the AFE group. Since 2001, this group (<http://www.afe.fr>) has a foundry in Slovakia, equipped with modern heat treatment and finishing facilities for all types of cast steel components.

- **Outsourcing to LCCs continues to increase.** In recent years, a lot of engineering production has been outsourced to LCCs and many multinationals already have their own subsidiaries in LCCs. So far, outsourcing often concerns large volumes of labour-intensive and standard products and parts that can easily be made in LCCs. Industry experts expect the trend to continue even more in the future, which may lead to a deceleration of demand growth for castings and forgings in the French engineering industry.
- **French companies import castings and forgings from DCs, but often not for engineering products destined for the EU market.** Also in France, engineering companies have been looking for new sources of castings and forgings. Because of the strong demand for their products, they have started to differentiate their sourcing policy. Although no company will admit officially that there are castings and forgings imported from DCs, several French companies have started to do so. The castings and forgings they source from DCs, are imported to France and assembled into the final product. However, in several cases these final products are directed to markets with lower quality demands, such as Africa and South America. For the products for the European market, these companies continue to use castings and forgings from Europe, since the strict quality demands of EU customers.

### Opportunities and threats

Trends and market developments offer opportunities and threats to exporters. A given trend can be a threat to some and an opportunity to others at the same time. The following trends should, therefore, always be analysed in relation to your specific circumstances. The main opportunities and threats for DC exporters are the following:

- + Growing engineering and construction markets lead to an increasing demand for castings and forgings.
- ± The price pressure on components and systems (refer to Section 4) as a result of strong global competition, in combination with an ongoing strong demand for engineering and construction products, has made room for increased sourcing in DCs.
- ± Rising demand for innovative applications of aluminium and magnesium, although this will be at the expense of ferrous metal castings.
- Often, DC companies are still not capable of supplying the desired quantity.
- Shift of engineering production towards LCCs, which may lead to a deceleration of demand growth for castings and forgings of the French engineering industry.

Refer to Section 7 of the CBI market survey covering the EU market for more information on opportunities and threats.

### Useful sources

- European Foundry Association - <http://www.caef-eurofoundry.org>
- European Network for Construction Forecasting - <http://www.euroconstruct.org>
- European Union Enterprise and Industry - <http://ec.europa.eu/enterprise>
- Federation of National Forging Associations - <http://www.euroforge.org>
- French Forging Association (AFF) - <http://www.fim.net>
- French Foundry Association (Les Fondateurs de France) - <http://www.fondeursdefrance.org>

## 2 Trade channels for market entry

### Trade channels

The most common trade channels for DC exporters are direct sales to end-users, trade via traditional importers, supply agents, traditional agents, or subcontracting by EU foundries or forges. Although there are several options, supplying directly to end-users has some advantages and could be one of the most interesting trade channels, because there is a larger chance of a long-lasting relationship. DC exporters should therefore put efforts into building up supplier relationships with end-users. Refer to the CBI market survey covering the EU market for a detailed explanation of relevant trade channels in this market. Some examples of companies in France that may be interesting to DC exporters are:

- Agco - <http://www.agcocorp.com> - production; agricultural machinery

- ALSTOM Power Turbo machines - <http://www.alstom.com> - production; energy equipment
- Claas Renault Agriculture - <http://www.claas.com> - production; agricultural machinery
- CMF - <http://www.cmf-groupe.com> - production; greenhouse construction
- GE Energy Products France SNC - <http://www.ge.com/fr> - production; energy equipment
- Honda Europe Power Equipment - <http://www.honda-fr.com> - production; engineering products
- Irrifrance Industries - <http://www.irrifrance.com> - production; irrigation installations
- John Deere - <http://www.deere.com> - production; agricultural machinery
- KSB SAS - <http://www.ksb.fr> - production; valves and pumps
- Kuhn - <http://www.kuhn.fr> - production; agricultural machinery
- Tecumseh Europe - <http://www.tecumseh-europe.fr> - production; compressors

### Price structure

It is very difficult to give a general idea of the price structure in this industry, as prices and margins differ to a great extent. They may depend on size of the order, length and type of distribution chain, terms of delivery, added value / finishing and materials concerned. Bearing this in mind, some rough indications of margins in the chain could be given. Agents work with margins between 3-7%, for importers this is 15–35%. The margin depends on the level of care and attention an intermediary has to give to the process. Products that do not need much extra care, like finished and ready-to-use products as valves for example, will be sold with a smaller margin than products that need extra handling or even need to be stored.

### Selecting a suitable trading partner

There are many ways to find potential trading partners in France. The following country-specific websites may be very useful to find potential French trade partners:

- ABC Direct - <http://www.abc-d.fr> – company database with a focus on France.
- Association of Mechanical Transmissions Industries - <http://www.unitram.org> - manufacturers can be selected by product.
- Axes Industries - <http://www.axesindustries.com/index.asp/lang/uk> - database containing French industry suppliers, among which are suppliers of engineering parts and products.
- 'Commercial route' site provides a list of sites where agents can be found - <http://www.laroutedescommerciaux.com> - click 'sites utiles'.
- Federation of French Commercial Agents - <http://www.comagent.com>
- French Association for Manufacturing Technologies - <http://www.symop.com/english> - members can be found by category.
- French Chamber of Commerce - <http://www.acfci.cci.fr>
- French High-precision Mechanics Association - <http://www.mhp-france.com> - click on 'Adherents'.
- Hydraulics & Pneumatics - <http://www.unitop-france.com> - click on 'Adherents'.
- Juridical information about commercial agents - <http://www.acojur.com>

Refer to Section 6 for main sales promotion tools.

## 3 Trade: imports and exports

### Imports

In 2006, France was a large importer of castings and forgings, ranking second in the EU, behind Germany, but ahead of Italy and the UK. Between 2002 and 2006, the total import value annually increased by 9% to €33.2 billion (21.3 million tonnes) in 2006. The increase in value was partly caused by the increasing prices of raw materials (refer to Section 4). The product group shares were as follows:

- Iron and steel products: 33% of total. Annual increase in import value of 14%.
- Parts of machinery, railway equipment and vehicles: 26% of total. Annual increase of 2%.
- Articles of iron, steel or base metal: 16% of total. Annual increase in import value of 10%.
- Plastic and rubber products: 11% of total. Annual increase in import value of 6%.
- Light and ultra light products: 8% of total. Annual increase in import value of 10%.
- Copper and zinc products: 5% of total. Annual increase in import value of 23%.

Of all intra-EU imports a very small part may be re-exports, but the exact value of re-exports is unknown because Eurostat does not allow for such detailed analysis.

**Table 3.1 Imports by and leading suppliers to France, 2002 - 2006, share in % of value**

Product	2002 € mln	2004 € mln	2006 € mln	Leading suppliers in 2006 (share in %)	Share (%)
Total	17,745	21,573	26,658	Intra-EU : Germany (24), Belgium (18), Italy (13), Spain (7), UK (5)	82
	5,013	4,259	4,362	Extra-EU ex. DC : USA (8), Switzerland (2), Japan (1), Canada (<0.5), Taiwan (<0.5)	13
	579	797	1,280	DC : China (2), Turkey (1), Tunisia (<0.5), Brazil (<0.5), Mexico (<0.5), India (<0.5), South Africa (<0.5), Morocco (<0.5), Egypt (<0.5), Bahrain (<0.5)	4
Iron and steel products	6,244	8,457	10,502	Intra-EU : Belgium (35), Germany (22), Italy (12), Spain (7), UK (4)	95
	282	253	282	Extra-EU ex. DC : Switzerland (1), USA (<0.5), Russia (<0.5), South Korea (<0.5), Japan (<0.5)	3
	77	109	216	DC : Mexico (1), Brazil (<0.5), Tunisia (<0.5), China (<0.5), South Africa (<0.5), Trinidad and Tobago (<0.5), India (<0.5), Morocco (<0.5), Iran (<0.5), Turkey (<0.5)	2
Parts of machinery, railway equipment and vehicles	4,087	4,318	4,952	Intra-EU : Germany (22), Italy (11), Belgium (6), UK (4), Spain (4)	62
	3,464	2,886	2,844	Extra-EU ex. DC : USA (25), Switzerland (2), Japan (2), Canada (1), Norway (1)	33
	171	232	347	DC : China (2), Tunisia (1), Brazil (1), Turkey (1), Morocco (<0.5), India (<0.5), Mexico (<0.5), Vietnam (<0.5), South Africa (<0.5), Malaysia (<0.5)	5
Articles of iron, steel or base metal	2,744	3,535	4,251	Intra-EU : Germany (25), Italy (19), Belgium (11), Spain (8), UK (4)	83
	567	478	491	Extra-EU ex. DC : USA (4), Switzerland (2), Taiwan (1), Japan (1), Liechtenstein (<0.5)	9
	193	282	402	DC : China (5), Turkey (1), Tunisia (1), India (<0.5), Brazil (<0.5), Croatia (<0.5), South Africa (<0.5), Malaysia (<0.5), Morocco (<0.5), Vietnam (<0.5)	8
Plastic and rubber products	2,458	2,814	3,151	Intra-EU : Germany (27), Italy (18), Belgium (13), Spain (7), UK (6)	87
	364	353	353	Extra-EU ex. DC : USA (3), Switzerland (3), Japan (1), Singapore (<0.5), Taiwan (<0.5)	10
	54	78	106	DC : China (1), Turkey (1), India (<0.5), Tunisia (<0.5), Thailand (<0.5), Morocco (<0.5), Brazil (<0.5), Argentina (<0.5), Croatia (<0.5), Malaysia (<0.5)	3
Light and ultralight products	1,594	1,697	2,359	Intra-EU : Germany (25), Spain (12), Italy (11), Belgium (10), UK (9)	85
	272	226	309	Extra-EU ex. DC : Switzerland (5), USA (4), Russia (1), Hong Kong (<0.5), Japan (<0.5)	11
	55	61	122	DC : Turkey (1), Bahrain (1), China (1), South Africa (1), Morocco (<0.5), Mauritius (<0.5), Lebanon (<0.5), India (<0.5), Croatia (<0.5), Colombia (<0.5)	4
Copper and zinc products	618	753	1,444	Intra-EU : Germany (36), UK (15), Italy (15), Belgium (11), Spain (5)	89
	64	63	83	Extra-EU ex. DC : Switzerland (2), USA (1), Japan (1), Taiwan (<0.5), South Korea (<0.5)	5
	28	34	88	DC : Egypt (1), Turkey (1), China (1), Peru (1), Iran (1), India (<0.5), Tunisia (<0.5), Chile (<0.5), Vietnam (<0.5), Thailand (<0.5)	5

Source: Eurostat (2007)

### **Imports from DCs**

Between 2002 and 2006, imports from DCs annually increased by 23% in value. Compared to 2002, the total share of DCs in import value increased from 2.5% to 4.1% in 2006. The DCs' shares in imports of some product groups showed better growth compared to other product groups, as can be seen below:

- Parts of machinery, railway equipment and vehicles: growing from 2.3% to 4.9% in value.
- Iron and steel products: growing from 1.2% to 2.0% in value.
- Plastic and rubber products: growing from 1.9% to 2.9% in value.
- Light and ultra light products: growing from 2.8% to 4.4% in value.
- Articles of iron, steel or base metal: growing from 5.3% to 7.6% in value.
- Copper and zinc products: growing from 3.9% to 5.4% in value.

China accounted for 38% of all imports coming from DCs, followed by Turkey (13%), Tunisia (10%), Brazil (8%), Mexico (6%) and India (5%). The Chinese share of DC exports to France did not grow as fast as in the EU on average (22% compared to 57%). The DCs that saw a larger increase of their share to the country were Egypt, Sri Lanka, Mexico, Syria and Peru.

### Exports

In 2006, France was a large exporter, ranking third in the EU, behind Germany and Italy, but ahead of Belgium and the UK. The total export value of France showed an annual increase of 7% in the period 2002-2006, totalling €32.6 billion in 2006. Exports consisted of:

- Iron and steel products, accounting for 35% of total exports (€11.4 billion). Annual increase in export value of 10%.
- Parts of machinery, railway equipment and vehicles, accounting for 29% of total exports (€9.5 billion). Annual increase in export value of 2%.
- Articles of iron, steel or base metal, accounting for 13% of total exports (€4.2 billion). Annual increase in export value of 5%.
- Plastic and rubber products, accounting for 8% of total exports (€2.7 billion). Annual increase in export value of 7%.
- Copper and zinc products, accounting for 8% of total exports (€2.5 billion). Annual increase in export value of 22%.
- Light and ultra light products, accounting for 7% of total exports (€2.3 billion). Annual increase in export value of 9%.

Probably a very small part of exports consists of re-exports to other EU countries, but the exact value of re-exports is unknown because Eurostat does not allow such a detailed analysis.

### Opportunities and threats

- + France was the second largest importer of castings and forgings in the EU in 2006. The country was a net-importer of castings and forgings, running trade deficits for articles of iron, steel or base metal (€1.2 billion), plastic and rubber products (€506 million), parts of machinery, railway equipment and vehicles (€216 million) and light and ultra light products (€103 million).
- + The total import value of all product groups increased in the period 2002-2006.
- + The Chinese share of DCs' exports to France did not increase as fast as in the EU on average (22% compared to 57%). Several DCs saw a larger increase of their share.
- ± The import share of DCs was 4.1% in 2006, below the EU average (8.2%). The growth of the share was 66% in the period 2002-2006, which was slower than in the EU on average (81%).
- ± China accounted for 38% of all imports coming from DCs. This was a slightly lower share than in the EU on average (39%).
- France ran trade surpluses for copper and zinc products (€118 million) and iron and steel products (€1.8 billion).

### Useful sources

- EU Expanding Exports Helpdesk - <http://exporthelp.europa.eu> → go to: trade statistics
- Eurostat - official statistical office of the EU - <http://epp.eurostat.ec.europa.eu> → go to 'themes' on the left side of the home page → go to 'external trade' → go to 'data - full view' → go to 'external trade - detailed data'.

- Understanding Eurostat: Quick guide to EasyComext - [http://epp.eurostat.ec.europa.eu/newxtweb/assets/User\\_guide\\_Easy\\_Comext\\_20080117.pdf](http://epp.eurostat.ec.europa.eu/newxtweb/assets/User_guide_Easy_Comext_20080117.pdf)

#### 4 Price developments

Major trends that affect the costs and revenues of French castings and forgings production are price pressure, increasing raw material and energy prices and high wage costs:

- Prices and margins are and will continue to be under pressure. Global competition has placed severe pressure on the prices and therefore margins of intermediate goods in the supply chain. Therefore, importers/agents and OEMs as well as their suppliers keep on looking for opportunities to reduce costs of parts. This can be best seen from the fact that the price of imports of the product group 'parts of machinery, railway equipment and vehicles' decreased by 7% per year between 2002 and 2006.
- In recent years, rapidly increasing prices of among others, plastics, aluminium, steel and scrap steel, have caused problems in the industry, although French producers have tried to translate soaring raw material prices into material-cost surcharges as soon as possible.
- The rapid increase in electricity prices in France has affected the competitiveness of the industry as far as those price increases were higher than in other regions. Especially commodity production was badly hit by the high energy costs, as their prices are set globally and therefore increases in energy costs that occur solely in France can not be passed on to the customers without significant losses in their market share.
- Wage costs still account for a large share of the average production costs in the industry. In 2006, France ranked fifth in the EU with regard to wage costs per worker man-hour (€31.28), less expensive than Germany and Denmark but more expensive than Luxembourg and the Netherlands.

Please refer to the CBI market survey covering the EU market for castings and forgings for a detailed explanation on these major trends.

#### Useful sources

Sources of prices include, among other things:

- CAEF Eurofoundry - <http://www.caef-eurofoundry.org>
- Eurofer – <http://www.eurofer.org/statistics/scrap.htm>
- European Engineering Industries Association – <http://www.orgalime.org>
- London Metal Exchange – <http://www.lme.co.uk>
- Eurostat - official statistical office of the EU - <http://epp.eurostat.ec.europa.eu> - by comparing import value and volume, it is possible to get an idea of development of import prices.

#### 5 Market access requirements

As a manufacturer in a developing country preparing to access France, you should be aware of the market access requirements of your trading partners and the French government.

Requirements are demanded through legislation and through labels, codes and management systems. These requirements are based on environmental, consumer health and safety and social concerns. You need to comply with EU legislation and have to be aware of the additional non-legislative requirements that your trading partners in the EU might request.

#### Useful sources

- For information on legislative and non-legislative requirements, go to 'Search CBI database' at <http://www.cbi.eu/marketinfo>, select castings and forgings and France in the category search, click on the search button and click on market access requirements.
- Additional information on packaging can be found on the ITC website on export packaging: <http://www.intracen.org/ep/packaging/packit.htm>
- Information on tariffs and quota can be found at <http://exporthelp.europa.eu>

## 6 Doing business

General information on doing business like approaching potential business partners, building up a relationship, drawing up an offer, handling the contract (methods of payment, and terms of delivery) can be found in CBI's export manuals 'Export Planner' and 'Your image builder'.

### Sales promotion

For DC exporters, trade press, trade fairs and website promotion are among the most important promotional tools; they are briefly discussed below. For more information, also refer to CBI's Export Planner and Your Image Builder – <http://www.cbi.eu>, as well as the CBI market survey covering the castings and forgings market in the EU.

### Trade fairs

Visiting and participating in a trade fair in the EU can be an efficient tool to communicate with prospective customers. It provides more facilities for bringing across the message than any other trade promotional tool. It can also be an important source of information on market development, production techniques and interesting varieties. Beside Midest, which is the most important trade fair, other relevant trade fairs are also listed in Table 6.1. Find more trade fairs at <http://www.eventseye.com> and <http://www.auma.de>, or at country-specific sites such as <http://www.salons-online.com/approche/?approche=sect>, <http://www.parisregion-tradeshows.com> and <http://www.foiresalon.com>.

**Table 6.1 Trade fairs of castings and forgings in France**

Trade fair	Products	Website	Frequency, Date and Location
Chaudronnerie (ESOPE)	Boiler making, sheet-iron works, pipes, techniques of assembly and welding	<a href="http://www.chaudronnerie-expo.com">http://www.chaudronnerie-expo.com</a>	triennially, October, Paris, next event: 2010.
Elec	Electric engineering	<a href="http://www.interclimaelec.com">http://www.interclimaelec.com</a>	biennially, even years, February, Paris
Industry Paris	Industrial design and industrial production	<a href="http://www.industrie-expo.com">http://www.industrie-expo.com</a>	annually, March, Paris (even years) or Lyon (uneven years)
Stim-Expo	Technical innovations and solutions	<a href="http://www.stim-expo.com">http://www.stim-expo.com</a>	annually, March, Lyon
Midest	Industrial subcontracting	<a href="http://www.midest.com">http://www.midest.com</a>	annually, November, Paris

Source: AUMA, Eventseye (2008)

### Trade press

An interesting story on your company or new product introduction will boost the company's image. In that respect, building up contacts with the trade press will be helpful and should be used whenever possible. The magazines with global coverage may present country-specific information:

- Foundry Trade Journal - <http://www.foundrytradejournal.com>
- Incast - <http://www.investmentcasting.org/incast.asp>
- Metalforming - <http://www.metalformingmagazine.com>
- MetalMag (metal in construction) - <http://www.metalmag.com>

Furthermore, some relevant French magazines are:

- Industries & Techniques - <http://www.industries-techniques.com>
- La Forge - [http://www.euroforge.org/page/forging\\_magazines.html](http://www.euroforge.org/page/forging_magazines.html)
- Le Magazine de Metallurgie – <http://www.metallurgie.enligne-fr.com>
- Usine Nouvelle – <http://www.usinenouvelle.com>

**Website promotion**

These days, it is an absolute must to have a professional website, which is aimed at your main target groups. Make it interactive and promote it in the right way. More information can be found in the CBI Export Manual 'Website Promotion', available at - <http://www.cbi.eu/marketinfo>.

**Business culture**

Cultural awareness is a critical skill in securing success as an exporter. Information on cultural differences in the EU can be found in Section 3 of CBI's export manual 'Exporting to the EU'. These manuals can be downloaded from <http://www.cbi.eu/marketinfo> - go to search publications. Furthermore, refer to Kwintessential for practical tips on business culture and etiquette in France: <http://www.kwintessential.co.uk>. Click on 'Country Profiles' at the section 'Intercultural resources and tools' and click on 'France'.

**Other useful sources**

Beside a number of relevant sources already mentioned in previous sections, other useful sources that contain market information and information on doing business in France are:

- Association for Pumps and Compressors - <http://www.scc-france.com>
- Association of International Enterprises in Mechanics and Electronics – <http://www.ficime.fr>
- Federation of Mechanic Industries - <http://www.fim.net>
- French Association of Internal Combustion Engine Manufacturers - <http://www.scmci.fr>
- French Construction Federation - <http://www.ffbatiment.fr>
- French Foundry Research Institute – <http://www.ctif.fr>
- French Ministry of Economy, Finance and Industry - <http://www.industrie.gouv.fr>
- French Pump, Compressor and Valve Industry Association – <http://www.profluid.org>
- French Shipbuilders Association - <http://www.cscn.fr>
- French Textile Machinery Manufacturers Association - <http://www.ucmtf.fr>
- French Titanium Association - <http://www.titane.asso.fr>
- French Tractors and Agricultural Machines Manufacturers Association - <http://www.sygma.org>
- French Trade Association for Pumps and Valves - <http://www.afpr.fr>
- Industry Portal – <http://www.machine-outil.com>
- Metalworking and Engineering - <http://www.gimef-france.com>
- National Federation of Public Works - <http://www.fntp.fr>
- Technical Centre for Mechanics Industries – <http://www.cetim.fr>

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