

CBI MARKET SURVEY

THE CASTINGS AND FORGINGS MARKET IN FINLAND

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Introduction

This CBI market survey gives exporters in developing countries information on some main developments on the castings and forgings market in Finland. The information is complementary to the information 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 demand data for castings and forgings are available, it has been decided, in consultation with industry experts, to focus on two major end user industries in the EU that offer good opportunities for developing country (DC) exporters: the engineering and the construction industry. Since in both industries many cast and forged parts and products are used, the production output of both industries is a good indication for the demand for cast and forged parts in these industries.

Engineering industry

Finnish production in the engineering industry increased 5% in the period 2001-2005, to almost €14 billion in 2005. Mechanical engineering accounted for the major share (75%) of total engineering production and also represented the largest share (80%) by far in the use of domestically produced iron castings. The medium-sized Finnish engineering industry ranked ninth in the EU, behind Austria and the Netherlands, but ahead of Belgium and Poland. Of the main castings and forgings consuming engineering categories, "agricultural machinery" (+40%), "electric motors, generators and transformers" (+33%) and "engines and turbines" (+27%) performed well. The market position of Finland in the EU was especially strong in "engines and turbines" (5th largest producer with 7% market share), "agricultural machinery" (7th) and "electric motors, generators and transformers" (7th). Despite positive global, EU, and Finnish economy forecasts for 2007 (+3.3%, +2.0% and +2.7% respectively) and 2008, leading to a good demand for engineering products in the country, it is difficult to predict to what extent the Finnish manufacturers will benefit from this, but on the whole the Finnish industry is expected to perform well, also because of several planned large investment projects the coming years (e.g. the construction of a nuclear power station, worth € 3.0 billion). Furthermore, demand for machines and equipment will rise, since Finnish producers are forced to rationalize their production in order to remain competitive.

Construction industry

After a growth of 9.8% in the period 2002-2005, the Finnish construction industry amounted to €22.3 billion in 2005. For the period 2005-2008 it is expected that the industry will grow by 3.2% to €23 billion in 2008. The small Finnish construction industry ranked thirteenth in the EU, behind Denmark and Poland, but ahead of Sweden and the Czech Republic.

Production

The small Finnish foundry industry ranked tenth in the EU, behind Czech Republic and Sweden, but ahead of Belgium and the Netherlands. Nodular iron castings accounted for 43% of total production, followed by iron castings (35%) and steel castings (14%). In 2005, the small production of metal castings totalled 137,500 tons, an increase of 6% compared to 2001. Main

reason was a good growth in the production of nodular iron castings (+37%). The Finnish forge industry is also small; it ranked eleventh in the EU, behind Sweden, Belgium and Slovenia. In 2005, the production of forgings totalled 20,000 tons, an increase of 25% compared to 2001.

In 2005, the country was home to some more than 20 large foundries. In the period 2001-2005, the average turnover per employee increased 16% to almost €112,000 – an amount which is the sixth largest in the EU, behind Belgium and Spain, but ahead of Portugal and Slovenia. Finland is home to several companies that perform extremely well in niche markets. Examples of such companies are Alsiva - <http://www.alsiva.fi> (see textbox) and Johnson Metall Oy - <http://www.johnson-metall.fi>, which offers unique combinations, reaching from copper alloy casting to the production of finished machining parts, such as bearings. Another example is Sacotec Components - <http://www.sacotec.fi>. With a turnover of €6 million annually, of which 50% is exported, this company is the leading investment casting foundry in Finland.

Alsiva – part of the Ouneva Group – is specialised in die casting of aluminium and zinc. Partnership relationships are important to the company, which is reflected in activities from innovative planning to flexible deliveries. Alsiva's major customers operate in electrical engineering and electronics or in the telecommunications, hospital equipment and furniture industries. Alsiva's operations also encompass further machining, finishing and assembly.

The largest foundries in Finland are Peiron Oy - <http://www.peiron.com>, comprising 3 foundries, and Metso - <http://www.metso.com>. Metso is a large engineering company with in-house casting production at 2 foundries in Finland and one in Sweden. The largest customer sector for the foundries division of Metso is the heavy truck industry, but the division also supplies castings to companies in the power and transmission, machine building and off-road industries. Another foundry giant is Componenta – <http://www.componenta.com>, a Finnish conglomerate which comprises, among other things, 4 foundries in Finland (see textbox) and a number of machine shops.

In recent years, Componenta made heavy investments in upgrading the operations of the entire supply chain: casting, machining, pre-assembly, heat treatment, surface treatment and delivery. As a result of the strong price pressure of the heavy truck sector due to intense competition in that sector – especially for high volume products from LCCs – Componenta's foundries were forced to specialize and to improve productivity in high volume production. This resulted in one of Componenta's foundries (Karkkila) now being the most modern foundry in Northern Europe. The automated moulding line, the new melting furnace and automatic pouring machine create the potential for efficient production and a diverse product range. Although the Karkkila foundry recorded a heavy operating loss (-€7 million) in 2005 as a result of interruptions in operating the foundry's process equipment and poor standard of internal quality, the goal is to significantly improve delivery reliability, internal and external quality and production efficiency. The ultimate goal is to improve Karkkila's result and achieve a positive operating result no later than in 2007, and to reach the level for operating profit of the Componenta group's best foundry units (10%) in 2008. For the whole group, the company's strategy until 2010 – based on the mission "Casting Future Solutions" – is to produce added value with high quality solutions for casting, machining and surface treatment, advanced design and through close partnerships with the customers. The companies strategic goal is to become market leader in advanced cast components in Europe by 2010.

Trends

Some major trends that influence the castings and forgings demand in Finland are:

- Many industries will benefit from a growing number of innovative applications of aluminium and magnesium castings.
- Due to the growing care for the environment, in several industries – for example the power generation industry – the search for energy efficiency and the limitation of CO₂ and NO_x emissions has led and should lead to the increased use of energy-efficient applications such

as electric variable speed drives and energy-efficient engines, turbines, motors and generators. As a result, prospects for cast and forged parts in such applications are bright.

- In recent years, a lot of engineering production has been outsourced to low cost countries (LCCs), especially Central and East European (CEE) countries. So far, outsourcing often concerns labour-intensive and series production of standard products and parts that can easily be made in LCCs.

Opportunities and threats

- + Growing engineering and construction markets will lead to an increasing demand for castings and forgings in the next few years.

Useful sources

- Association of Finnish Marine Industries - <http://www.marineindustries.fi>
- Confederation of Finnish Construction Industries - <http://www.rakennusteollisuus.fi>
- Technology Industries of Finland - <http://www.techind.fi> also includes the Finnish Foundry Group.

2. Trade: imports and exports

Imports

In 2005, Finland's imports of castings and forgings totalled €2.9 billion (1.6 million tons). The country was a small importer, ranking fifteenth in the EU behind Denmark, Hungary and Portugal, but ahead of Slovakia, Ireland and Greece. In line with the market trend for most of the product groups, total Finnish imports showed an increase in value (23%; partly caused by the increasing raw material prices; refer to Section 4) in the period 2001-2005, but a decrease in volume (-14%). The product group shares were as follows:

- Iron and steel products (29%)
- Parts of machinery, railway equipment or vehicles (29%)
- Articles of iron, steel or base metal (18%; strongest growth in the period under review)
- Plastic and rubber products (11%)
- Copper and zinc products (6%)
- Light and ultra light products (6%; second strongest growth in the period under review)

The DC's share in imports in 2005 was 3%, with China being the most important DC supplier (2%), followed by Brazil, India and Turkey. The DC's share was the largest (8%) for articles of iron, steel or base metal – with China being the largest DC supplier (7%) – followed by light and ultra light products (4.4%). Articles of iron, steel or base metal also showed the best growth of the DC share compared to 2001. Among the DCs that saw the largest increase in exports to Finland were Vietnam, India, Brazil, China, Indonesia and Croatia.

Exports

Total Finnish exports increased in value (43%), but decreased in volume (-14%) in the period 2001-2005. With a total export value of €5.6 billion (2.8 million tons) in 2005, Finland was a medium-sized exporter in the EU, behind Sweden, the Czech Republic and Poland, but ahead of Denmark, Slovakia and Hungary. Unfortunately, the value of re-exports is unknown, as Eurostat does not allow such detailed analysis.

Opportunities and threats

- + Reasonable import share for DCs
- + Total import value increased in recent years
- + Increasing share of DCs in total imports
- Imports from China grew fast and represented a considerable share of DC imports

Useful sources

- EU Expanding Exports Helpdesk - <http://export-help.cec.eu.int>
- Eurostat – official statistical office of the EU - <http://epp.eurostat.cec.eu.int>
- Trade associations mentioned in Section 1.

3. Trade structure

The most common target groups for DC exporters are Original Equipment Manufacturers (OEMs), subcontractors of OEMs, agents, importers and foundries or forges. Although there are several options, supplying directly to OEMs and subcontractors of OEMs 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 supplier relationships with OEMs and subcontractors of OEMs in the EU. By working together, DC exporters have the best chances in succeeding as they are able to offer more added value products to EU customers. Some examples of (subcontractors to) OEMs in Finland are Hiab (<http://www.hiab.com>; lifting and handling equipment) and Valtra (<http://www.valtra.com>; tractors). Other examples of end users in Finland are the multinational companies ABB (<http://www.abb.com>; engineering products), Kone (<http://www.kone.com>; elevators and escalators), Nikotron (<http://www.nikotron.fi>; machinery), Ponsse (www.ponsse.com; forest machinery) and Wartsila (<http://www.wartsila.com>; engines and other engineering products).

Please refer to the CBI market survey covering the EU market for castings and forgings for a detailed explanation on the trade channels in this sector.

4. Prices

One of the major trends that affect the costs and revenues of Finnish castings and forgings production is price pressure, which results in importers/agents and OEMs as well as their suppliers continuing looking for opportunities to reduce cost prices of parts by 10-30%. This may be underlined by the fact that prices in the engineering industry increased only 6.4% in the period 2000-2005. In the meanwhile, the industry had to deal with increasing raw material and energy prices as well as with the fact that Finland is the country with the third highest wage costs in the EU metal industry (€26 per man-hour in 2005); only the wages in Denmark and West Germany were higher. Finnish producers have tried and will try to translate increasing production costs into surcharges as soon as possible, although success depends on the supplier relation and the kind of product. The larger a supplier or the smaller a customer, the larger the negotiation power of a supplier. Moreover, the less the product is a commodity product, the larger is the negotiation power. 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

- CAEF Eurofoundry - <http://www.caef-eurofoundry.org>
- European Engineering Industries Association (Orgalime) – <http://www.orgalime.org>
- London Metal Exchange – <http://www.lme.co.uk>

5. Market access requirements

Manufacturers in developing countries should be aware of the market access requirements of their trading partners and the country 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. For more information go to 'Search CBI database' at <http://www.cbi.eu/marketinfo>

6. Business practices

The subject of business practices is concerned with finding prospects and with sales promotion tools, like trade press and trade fairs.

Finding prospects

There are many ways to find potential business partners in Finland. Some examples of available sources, beside the ones already mentioned in Section 1:

- Direct Industry - <http://www.directindustry.com>
- Europages – <http://www.europages.com>
- Kellysearch - <http://www.kellysearch.com>
- Kompass – <http://www.kompass.com> (mostly fee based, but the free part is useful too)
- Technology Industries of Finland: list of members at <http://www.techind.fi/english/jasenet.php>
- Thomas Global Register Europe - <http://www.trem.biz>

For more details about how to search some of these databases, please refer to the CBI Export Manual 'Digging for Gold'. Also refer to CBI's Export Planner (<http://www.cbi.eu>), an export manual that provides information on the different steps to be taken during the export process to the EU market.

Trade magazines

Some relevant Finnish magazines are:

- Scandinavian Journal of Metallurgy - http://www.business-magazines.com/prd551053.php?siteid=global_BMS_product
- Metalliteknikka (metalworking, aluminium) - <http://www.talentum.fi>

Trade fairs

Visiting and participating in a trade fair abroad 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.

Since there are no relevant trade fairs in Finland, visiting trade fairs in neighbouring countries such as Elmia Subcontractor in Sweden (<http://www.elmia.se/subcontractor>), or the German fairs Hannover Messe (subcontracting; <http://www.hannovermesse.de>) Casttec (<http://www.casttec.de>), Euroguss (<http://www.euroguss.de>) or Newcast (<http://www.messe-duesseldorf.de/newcast>) may be a good option.

This survey was compiled for CBI by Facts Figures Future in collaboration with Kommanet.

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