CBI MARKET SURVEY

The castings and forgings market in Denmark

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Introduction
This CBI market survey provides exporters in developing countries (DCs) with information on some of the main developments in the castings and forgings market in Denmark. 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 data for the demand for castings and forgings are available, this survey puts a focus on two major end-user industries 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 for the demand for cast and forged parts in these industries.

Engineering industry
Danish production in the engineering industry increased 1.5% per year in the period 2002-2006, to almost €13 billion in 2006. The medium-sized Danish engineering industry ranked thirteenth in the EU, behind the Czech Republic and Belgium, but ahead of Hungary and Ireland. Of the main castings and forgings consuming engineering categories, "valves and taps" (+7.6% per year) and "pumps and compressors" (+5%) performed the best. The position of Denmark in the EU was especially strong in "valves and taps" (5th largest producer with 6% market share) and "electric motors, generators and transformers (6th with 6% market share).

Despite the world, EU, and Danish economic growth forecasts for 2008 (+3.8%, +1.7% and +1.4% respectively) and 2009 (+3.9%, +1.8% and +1.6%), leading to a good demand for engineering products in the country, it is difficult to predict to what extent the Danish manufacturers will benefit from this. Please also note that, although the EU is far from running the risk of recession, the EU and Danish economy are and will be clearly affected by the housing and credit crisis in the United States.

Construction industry
After a total growth of 8% in the period 2002-2005, the Danish construction industry amounted to €24.8 billion in 2005. For the period 2006-2008 it is expected that the industry will grow 5% in total to €26 billion in 2008. The medium-sized Danish construction industry ranked eleventh in the EU, behind Portugal, but ahead of Poland.

Production
In 2006, the Danish production of metal castings totalled 85,000 tonnes, a decrease of 1.9% per year compared to 2002. Nodular iron castings accounted for 50% of total production, followed by iron castings (43%) and non-ferrous castings (7%). The small Danish foundry industry ranked sixteenth in the EU, behind Portugal and Finland, but ahead of Lithuania. The few (ten large ones in 2005) Danish foundries are highly specialised, such as high pressure die casting of zinc (http://www.linimatic.dk) and the in-house casting production of Vald Birn (http://www.birn.com). Unfortunately, data of Danish forging production are not available.

However, as with the foundry industry, it can be assumed that the Danish forge industry is small.

Trends and characteristics

A major trend that influences the castings and forgings demand and production in Denmark is the growing number of innovative applications of aluminium and magnesium castings. Other trends are:

- ***Growing demand for light weight and energy-efficient applications***. 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 CO_2 and NO_x emissions has led and should lead to the increased use of energy-efficient and light weight 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.
- ***Relocation of engineering production***. In recent years, a lot of engineering production has been outsourced to low cost countries (LCCs), especially Central and East European (CEE) countries. One example was the closure of an Electrolux stove factory in 2007. So far, outsourcing often concerns labour-intensive and series production of standard products and parts that can easily be made in LCCs. Small series and prototype production remains in Denmark.
- ***Rationalisation of production***. The demand for machines and equipment will rise, since Danish producers are forced to rationalise their production in order to remain competitive. Besides, the demand for processing, food and packaging machinery will rise in the coming years, as well as the demand for construction machinery. Local producers of this kind of machinery will also benefit from this trend.

Opportunities and threats

The main opportunities and threats for developing country (DC) exporters are the following:

+ Growing construction output will lead to an increasing demand for castings and forgings.
+ Light weight products and eco-friendly and energy-efficient technologies offer good opportunities for those DC exporters that are able to supply such products.

± The growing economy is expected to drive a healthy demand for engineering products in the years to come, which could also stimulate local engineering production. On the other hand, the shift of engineering production towards LCCs may lead to a deceleration of demand growth for castings and forgings of the Danish engineering industry.

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

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.

Examples of potential trade partners

Some examples of end-users are Knerveland (http://www.kverneland.dk; agricultural machinery) and Logitrans (http://www.logitrans.dk; lifting and handling equipment). Some examples of importers of castings and forgings are Prometal (http://www.prometal.dk) and PNE (http://www.pne-teknik.dk).

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, such as valves, will be sold with a smaller margin than products that needs extra handling or even need to be stored.

Useful sources
Intermediaries in the engineering industry in Denmark can be found at the forum for distributors of semi-manufactured metal products: http://www.metalforeningen.dk, which contains a list of members. Other examples of available sources to find clients are:

- Association of Distributors of Tools and Machine Tools (VOV) - http://www.vov.dk - Click on ‘List of members’.
- Danish Chamber of Commerce - Business Contact Centre - http://bcc.hts.dk - the Chamber of Commerce can assist your company in finding a potential Danish business partner.
- Danish Chamber of Commerce / Dansk Erhverv - http://www.danskerhverv.com
- Danish Construction Association - http://www.danskbyggeri.dk – click on ‘Find medlem’ to search for companies by region (the service is only available in Danish).
- DIPP - http://www.dipp.eu - Danish Trade Promotion Agency
- Danish Supplier Network - http://www.underlev.dk
- Trade organisation of Danish steel wholesalers – http://www.staalforeningen.dk - click on 'Medlemmer' to find company details.

One example of a general source is Direct Industry - http://www.directindustry.com - you can search by product, company (‘exhibitors’) or catalogues and technical brochures. Here it is possible to get an idea of products made by West European end-users.

3 Trade: imports and exports

Imports
In 2006, Denmark was a medium-sized importer of castings and forgings, ranking twelfth in the EU, behind the Czech Republic and Sweden, but ahead of Hungary and Portugal. Between 2002 and 2006, the total import value annually increased by 12% to €6.9 billion (4 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: 30% of total. Annual increase in import value of 17%.
- Parts of machinery, railway equipment and vehicles: 25% of total. Annual increase in import value of 7%.
- Articles of iron, steel or base metal: 19% of total. Annual increase in import value of 12%.
- Plastic and rubber products: 11% of total. Annual increase in import value of 8%.
- Light and ultra light products: 9% of total. Annual increase in import value of 9%.
- Copper and zinc products: 5% of total. Annual increase in import value of 25%.

Between 2002 and 2006, imports from DCs annually increased by 28% in value. Compared to 2002, the total share of DCs in import value increased from 2.1% to 3.5% 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 0.9% to 2.6% in value.
- Plastic and rubber products: growing from 0.7% to 1.4% in value.
- Articles of iron, steel or base metal: growing from 4.7% to 8.6% in value.
- Iron and steel products: growing from 1.2% to 1.7% in value.
- Light and ultra light products: growing from 3.9% to 4.8% in value.
- Copper and zinc products: declining from 3.1% to 1.7% in value.

China accounted for 65% of all imports coming from DCs, followed by Turkey (7%), India (7%), Mexico (5%), Indonesia (4%), and Thailand (3%). The Chinese share of DC exports to Denmark did not grow as fast as in the EU on average (27% compared to 57%). The DCs that saw a larger increase of their share to the country were Mexico, Peru, Kazakhstan, Indonesia and Thailand.

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

Exports

In 2006, Denmark was a medium-sized exporter, ranking thirteenth in the EU, behind Poland and Finland, but ahead of Slovakia and Hungary. The total export value of Denmark showed an annual increase of 11% in the period 2002-2006, totalling €5.1 billion in 2006. Exports consisted of:

- Parts of machinery, railway equipment and vehicles (41%; €2.1 billion; +11%).
- Articles of iron, steel or base metal (20%; €1 billion; +6%).
- Iron and steel products (17%; €865 million; +24%).
- Plastic and rubber products (11%; €559 million; +8%).
- Light and ultra light products (10%; €526 million; +7%).
- Copper and zinc products (1%; €52 million; +12%).

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

Opportunities and threats

+ In 2006, Denmark was a net-importer, running trade deficits for all product groups.
+ The total import value of all product groups increased in the period 2002-2006.
+ The Chinese share of DCs' exports to Denmark did not increase as fast as in the EU on average (27% compared to 57%). Several DCs saw a larger increase of their share.

± The DC share of total imports grew by 73%, which was slower than in the EU on average.

- The import share of DCs was 3.5% in 2006, far below the EU average (8.2%).
- China accounted for 65% of all imports coming from DCs. This was a much higher share than in the EU on average (39%).

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
- Understanding Eurostat: Quick guide to EasyComext - http://epp.eurostat.ec.europa.eu/newxtweb/assets/User_guide_Easy_Comext_20080117.pdf

4 Price developments

One of the major trends that affect the costs and revenues of Danish castings and forgings production is price pressure, which results in importers/agents and OEMs as well as their suppliers continuing their search 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 3.5% in the period 2000-2005. In 2006, there was some price pressure relief, which can be seen from the fact that prices increased by more than 10% compared to 2005.

As in other EU countries, the industry had to deal with increasing raw material and energy prices as well as with the fact that Denmark is the country with the highest wage costs in the EU metal industry (€28.32 per man-hour in 2005), ahead of (former West) Germany and Finland. Danish 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 more information on trends related to price developments.

Useful sources

- CAEF Eurofoundry - http://www.caef-eurofoundry.org
- 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 import prices.
- London Metal Exchange – http://www.lme.co.uk

5 Market access requirements

As a manufacturer in a developing country preparing to access Denmark, you should be aware of the market access requirements of your trading partners and the Danish government.
For information on legislative and non-legislative requirements, go to 'Search CBI database' at http://www.cbi.eu/marketinfo, select castings and forgings sector and Denmark in the category search, click on the search button and click on market access requirements.

Detailed 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

Information on doing business, such as approaching potential business partners, building up a relationship, drawing up an offer, handling the contract (methods of payment, and terms of delivery) and cultural differences can be found in CBI's export manuals 'Export Planner', 'Your image builder' and 'Exporting to the EU'. These can be downloaded from http://www.cbi.eu/marketinfo - go to search publications. Beside a number of sources already mentioned in previous sections, other useful sources that contain market information and information on doing business in Denmark are trade fairs, associations and magazines:

Trade fairs

There is one relevant trade fair in Denmark, which is Effektiv Produktion – http://www.fagmesser.dk/effektivproduktion, held biennially in October, even years. Visiting trade fairs in neighbouring countries may be a good option as well. The Hannover Messe - http://www.hannovermesse.de is the largest engineering trade fair in Europe, held in Hannover, Germany every year. This fair is also home to a large section on castings and forgings. One example of a relevant fair in Sweden is Elmia Subcontractor - http://www1.elmia.se/subcontractor. Please refer to Auma (http://www.auma.de) and EventsEye (http://www.eventseye.com) to find more information on relevant fairs.

Trade associations

- Confederation of Danish Industries (DI/FEM) – http://www.di.dk – also represents also the building materials (http://bi.di.dk) and the castings and forgings industry.
- Danish Maritime - http://www.danishmaritime.org

Other relevant trade associations are mentioned in Section 2 under useful sources.

Trade press

Some relevant Danish magazines are:

- Dansk Teknisk Tidsskrift – http://www.teknisk.dk
- Ingeniøren - http://ing.dk
- Jern- og Maskinindustrien / Proces-Teknik - http://www.proces-teknik.dk
- Maskin Aktuelt and Teknisk Nyt - http://www.techmedia.dk
- Metalbladet – http://www.danskmetal.dk is a magazine of the Danish Steel Association

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