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EXPORT PLAN

### VIENTISUUNNITELMA

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Tämän opinnäytetyön aiheena oli laatia vientisuunnitelma. Opinnäytetyö tehtiin intialaiselle GMH Machines and Tools Pvt. Ltd yritykselle, joka valmistaa koneistettuja komponentteja teollisuuden eri aloille. Kohdeyrityksen tavoitteena on laajentaa markkina-aluettaan Saksaan ja muihin Euroopan maihin. Tässä tutkimuksessa keskityttiin kansainvälisen vientisuunnitelman laadintaan, jonka lähtökohtana pidettiin kahden erilaisen pumpun osien toimittamista kuvitteelliselle saksalaiselle asiakkaalle, analysoiden kohdeyrityksen valmiutta kansainvälistymiseen, kohdemaan liiketoimintaympäristöä ja kansainvälisen logistiikan osa-alueita kohdeyrityksen näkökulmasta.

Opinnäytetyön teoreettisessa osuudessa tutkittiin liiketoimintaympäristöön vaikuttavia tekijöitä, kansainvälistä logistiikkaa ja siihen liittyviä käsitteitä, sekä vientiprosessia. Teoreettiseen osioon sisällytettiin myös yrityksen vientihinnoitteluun vaikuttavat tekijät.

Tutkimusmenetelmäksi valittiin kvalitatiivinen metodi. Empiirinen tieto kerättiin vapaamuotoisella haastattelulla sekä huolinta-alan yrityksille lähetetyillä tarjouspyynnöillä, jotka lähetettiin sähköpostitse. Lisäksi empiiristä tietoa hankittiin useista eri lähteistä ammatillisilta Internet-sivuilta sekä artikkeleista alan lehdistä. Empiirinen osuus käsittelee aihealueita, jotka esiteltiin teoreettisessa osuudessa.

Tutkimustulokset kertoivat eri tekijöistä, jotka vaikuttavat kansainvälisen kuljetuksen kuluihin ja näin ollen yrityksen vientituotteen hinnoitteluun. Tutkimustulosten perusteella kohdeyritystä kehotettiin tarkoin tutustumaan kuljetuksista aiheutuviin kuluihin ja arvioimaan vientitoiminnan kannattavuutta.

### **EXPORT PLAN**

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The purpose of this thesis was to compose an export plan. The thesis was made for an Indian company, GMH Machining and Tools Pvt. Ltd, which manufactures machined components for various industrial sectors. The case company's objective is to expand its market area to Germany and other European countries. Thus, the main focus of this thesis was to compose an export plan which was based on the delivery of two different kinds of pump parts to a fictitious German customer by analysing the case company's readiness for internationalisation, the business environment of the target country, and different elements of international logistics from the case company's point of view.

The theoretical part of the thesis examined the forces affecting the business environment, international logistics and elements related to it, and the export process. In addition, factors affecting the export pricing decisions were also included in the study.

A qualitative method was chosen for the empirical study. The data was collected by an unstructured interview and a request for quotation sent by e-mail to five freight forwarding companies. Additionally, the empirical data was collected from various sources of professional web-sites and articles from trade magazines. The empirical part deals with the topics presented in the theoretical part.

The research results revealed different elements affecting the costs of international transportation and thus the pricing decisions of the export product. On the basis of the results, the case company was advised to carefully consider the different elements and expenses of international transportation and the profitability of potential exports.

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#### 1 INTRODUCTION

Nowadays, many Western European companies relocate or outsource their production or part of it to low wage level countries such as China or India to reach a competitive position in the domestic market. Tough competitive situation, customers' cost pressure and increasing raw-material prices in the companies' domestic market are having an obvious impact on the suppliers. To maintain a competitive position, companies have to find a way to differ from their competitors. By relocating production to low wage level countries, companies can reduce their production costs significantly and attain competitive advantage in the domestic market.

The situation is also a great opportunity for third country suppliers, if they are able to fulfil the quality requirements of the European companies, while still keeping production costs down. However, in order to provide products with a lower price compared to European competitors, the logistical costs have to be kept reasonable.

Understanding the basic elements of exporting and international logistics is crucial for companies who want to enter the foreign market successfully. Additionally, finding a reliable third party logistics company to handle the physical transportation of the goods, and being able to evaluate logistical costs are also key factors in successful internationalisation. These aspects are the theme of this thesis in the framework of an Indian precision machining company using direct exporting to enter the German market.

The case company of the thesis is GMH Machines and Tools Private Limited (referred as GMH), an Indian manufacturer of high precision components of machinery. The company was founded in 2006 and is located in Coimbatore, India. The idea of this thesis was initiated by the case company with the desire to expand its businesses to German markets. Because the thesis concentrates on the operational phases of exporting, market analysis as well as international monetary and financial systems have not been discussed in this thesis. There is a related bachelor's thesis by Eero Nikkanen (2008) from Satakunta University of Applied Sciences concentrating on marketing activities of GMH in France.

The research methodology used in this thesis is qualitative research, and the empirical information was gathered with a request for quotation, including the research questions, as well as with an unstructured interview with the case company's Managing Director which was conducted face-to-face. The thesis provides first an analysis of the company's internal environment and the German macro environment, followed by the theory of the basic elements of international logistics. These aspects form the main phases of an operational export process that need to be considered carefully.

The aim of the thesis is to provide a basis for evaluating the profitability of the case company's potential exports. The thesis also provides information for the case company on how the company should conduct its exports in future operations. Finally, the thesis attempts to provide a detailed handbook for the export of an example products.

# 1.1 Case company

GMH Machines and Tools Pvt. Ltd is an Indian company registered during the year 2006 by the founder-director who wanted to utilise his rich expertise in the field of manufacturing, metallurgy, quality control and audit functions gathered over a period of 20 years of work experience with various multinational organizations. GMH performs machining activities and stands as a supporting industry to the manufacturing units at the initial stage. The company produces high precision components of machinery pertaining to various fields of industries, such as power generation, automotive, textile, pump manufacturing, oil exploration, oil refining and heavy machining. The company's factory is located in Coimbatore, which is an industrial city in the south of India (Appendix 1). The vision of the GMH is to provide comprehensive machining services at optimum cost, lead time and assured quality.

Trigon Technology Oy is a Finnish company located in Pori, Finland. Avantika Products is an auxiliary trade mark of Trigon Technology Oy for marketing high quality machined components for several industrial sectors in Europe. The company is owned by one of GMH's shareholders. The plan is that Trigon Technology Oy will

arrange the possible marketing activities in Europe, including sending the marketing letters, and handle the follow-up phone calls, in addition to supporting GMH in other supportive introductory communication and selling processes. In this thesis the research activities have also been conducted under the name of Trigon Technology Oy.

### 2 ANALYSIS OF THE ENVIRONMENT

The basis for export activities is always in the decision for internationalisation. This decision requires a lot of background information about the export target country, as well as evaluation of the company's resources and the export eligibility of the goods. The environmental analysis should include both internal and external forces and function continually to guarantee its adequacy to support all aspects of planning. (Selin 2004, 15-16.) The purpose of the environmental analysis is to get a basic understanding of the company's current state and situation and also of the macro environmental forces that affect German foreign trade.

## 2.1 Analysing internal environment

The start-up of export activities or expansion to the new market areas requires that the company has a clear strategic plan for its international operations. The way the company operates in its domestic market is seldom suited to other market areas and that is why the company has to re-evaluate its business functions from strategic decisions and business idea point-of-view. Planning export operations requires a clear vision of the present situation and future estimates. (Selin 2004, 15) The purpose of this chapter is to analyse GMH's current resources and its readiness for exporting and internationalisation. The empirical information in this internal analysis is based on the unstructured interview (November 2007) with the Managing Director of GMH.

## 2.1.1 Company and product

The basis for a business activity is a well-designed business idea. The Business idea should be constantly reassessed according to changes. In addition, it is important to consider how the export activities are suited to it. The business idea also requires constant and regular follow-up and development.

When making the decision of exporting the company should consider the reasons and motivations that affect the start-up of exports. It is also advantageous to estimate the reasons why the export activity is really indispensable for the company. For example, often the motive for exporting arises when the company sees that due to the nature of the product, exporting is the only possibility to develop and increase company's operations, or when the company wants to evolve its business operations and keep track of product development. (Selin 2004, 16–17.)

The business concept of GMH Machines and Tools Private Limited is based on the objective to provide comprehensive precision machining solutions for its customers. The product concept of GMH is based on the idea of standing as a supporting industry to the manufacturing units at initial stage by performing machining activities. The potential categories of finished products will include automobile components, valve products, pump components, textile and other industry machinery components, and components in sectors like shipping and power generation. These products will be manufactured according to the customer's specific requirements. (GMH project report 2006; Interview, the Managing Director, 2007.)

As pump components are one major category of GMH's products, this thesis concentrates on studying the export of two kinds of pump parts, pump NRV body and pump MF 157 bowl. The details of these products can be found in chapter six. Even though the export plan of this thesis has been tailored for above mentioned products, it can be used as the basis for exporting similar kinds of products too.

GMH is currently beginning its operations in its domestic market in India, Coimbatore, where it sees to have market potential. In Coimbatore there are already few well established players in this field of industry. According to the company's project report (2006) the study and the interaction with the manufactures at Coimbatore have exposed that there is a gap between supply and demand in the area of Coimbatore. Furthermore, the added value for the industrial city Coimbatore brings the foreign automobile industries that have recently invested many new manufacturing units in Tamil Nadu, as well as the industrial hub in Hosur and numerous of casters and forgers in Kerala. At the moment the company is actively marketing its business in its domestic market to reach competitive position and make the possible customers aware of the new company. The purpose is to start the business operations in the middle of 2008. (Interview, the Managing Director, 2007) After GMH has gained success in domestic markets it will naturally facilitate its success in foreign markets. Yet, before that, the company needs to have some evidence of its successful operations in its home country.

GMH has already identified possible customer segments in European markets. This includes, for example, the German automotive industry. In Germany, the automotive industry and the mechanical engineering sectors are leading production and export industries (Wilén, 2007). The Managing Director has got several years of professional experience in manufacturing, metallurgy, quality control and audit functions with various multinational organisations. At this point GMH is already very motivated and interested in entering the German market and will start the export after it has stabilised its position in the domestic market. The aim of the exports is to increase sales by providing high quality precision machining components at a competitive price to European markets. This can be achieved by significantly lower direct and indirect costs alongside with sophisticated process management systems like Lean and Six Sigma. (Interview, the Managing Director, 2007.)

#### 2.1.2 Resources

After analysing the company's current situation and future prospects in its domestic market, and its conception and expectations concerning exporting, the company should evaluate the sufficiency of its resources that exports require. The company management has to be highly motivated for internationalisation as it requires a lot of

time, money and other resources to affiliate export activities to the company's normal business activities.

Financial resources refer to financial bases of the firm meaning profitability, good financial standing, and liquidity. Before having prerequisite for successful internationalisation, all these three basic elements of financial resources should be in a good level. The money spent for export activities often turn a profit after a prolonged time. (Karhu 2002, 20-22) In the start-up phase of exporting, all the operations incur expenses. The company should prepare itself for various costs affected by market researches, possible visits with the customers, promotional materials, trade fairs and other marketing activities, product approvals and patents, as well as labour costs of possible external consultant or employee. The more systematically the company operates from the beginning, the more profitable the operations are. (Selin 2004, 16-18.)

GMH has already invested over one million euro for its launching operations in India. These investments cover among others the recently built factory, other facilities, production machines and personnel. These have been financed by a bank loan and independent investors. As the company is only setting up its activities at the moment, it does not yet have many productive operations.

The current financial situation of the company may not be stable enough to comfortably support the exports. In addition, the case company must carefully plan the export process and its consequences, as it is difficult to evaluate the additional costs that will occur when the company is entering foreign markets. There will definitely be costs related to the physical transportation of the goods and to export and import procedures, which will be evaluated more precisely later in this thesis. (Interview, the Managing Director, 2007.)

The start-up of export operations requires also human resources. The company has to have enough know-how of international trade to handle practical details of export activities. Moreover, it is vital to estimate the sufficiency of production capacity to avoid possible inconveniences in the early stages of export operations. In addition to

analysing internal resources, the company should pay attention to evaluate its own competitiveness in foreign markets. (Selin 2004, 16–18.)

The current personnel of GMH consist of 28 people. The management committee is a team of three people: General Manager, Technical Manager, and Commercial Officer. Each machine is to be run in three shifts of three people. Additionally there will be three trainee assistants to guarantee the continuance of competent work force. The company is continuously investing in trainee programme as there is a lack of competent work force in this industry. If the exports increase company's sales, additional human resources may be needed. As the company lags the experience and resources to execute the logistical side of export, the company is planning to use a forwarding company to handle it. (Interview, the Managing Director, 2007.)

Coimbatore is well connected with port cities like Cochin, Chennai and Nagapattinam. Also well connecting roads and rails as well as an airport facilitate transportation to all industrial and commercial cities. These kinds of transportation connections play an important role when the company is planning its exports as the goods must be transported safely to the port of destination for example. (GMH project report 2006)

So far the company has invested in three machines: horizontal machining centre, vertical machining centre and quick turn nexus 150 E3. The purpose is to keep these machines working round the clock. The company has forecasted to reach the full production capacity at its third year. However, according to the Managing Director it is possible that the company is not able to produce all the components itself with these resources and therefore has to find a suitable subcontractor.

At the moment the company is planning to manage the production with these three machines it has invested in. These machines have been designed to fulfil the basic requirements of component manufacturing. The advantage of the company's competitors is that many of them have more sophisticated machines that are able to machine more complicated components. (Interview, the Managing Director, 2007) However, this kind of situation is common for a company which is just beginning its business operations.

As a competitive advantage in European markets GMH aims to provide products at optimum costs by having cheaper labour and acquiring the raw-material at a lower price. However, the company has already recognised a problem concerning the procurement of the raw-material. In India it is difficult to find a steel provider with a competitive price that fulfils the European quality standards like EN ISO 9001. In case this steel provider cannot be found in India, the company has to find one in Europe. This would mean losing the advantage of using an affordable raw-material provider. In addition, there is a lack of raw-material also in Europe. (Interview, the Managing Director, 2007.)

In order to gain the advantage of German markets, GMH has to find a logistics company that is be able to deliver the finished components to Germany with reasonable price. After all the production and transportation related costs, GMH should be able to sell its products to German customers with lower price than its European competitors.

# 2.1.3 Market entry strategy

Exporting refers to a strategy of producing products in company's home country and selling and delivering them to customers located in other country. Exporting is a strategy favored by most firms when they first internationalise. Exporting is also relatively flexible entry strategy, allowing the firm to readily withdraw in case of substantial problems in the target market. (Cavusgil, Knight & Rieseberger 2008, 411)

GMH has already decided to use exporting as its market entry strategy. The export strategy will be a form of direct exporting. The company will manufacture the products in its home country according to the customers' requirements. However, it has been planned that at least in the early stages of exports, the marketing communication activities concerning European markets will be mostly handled by the Finnish company Trigon Technology Oy, which is a company owned by one of the GMH's shareholders. The actual business negotiations will be carried out by the

GMH's Managing Director. The physical distribution of the finish products will be arranged by using a freight forwarder.

Exporting is a suitable market entry mode for GMH at this stage, when company is just beginning its internationalisation process. As the logistics side of the exports will be handled by a freight forwarder, GMH will not necessarily have to acquire additional human resources for that purposes. Furthermore, at this point, company's experience of international logistics is not sufficient to handle the logistical activities of exports without outside professionals. Through exporting, GMH is able to execute its foreign market entry with reasonable low costs, since the company does not have to invest in the target market or maintain a physical presence there. Thus, GMH can use exporting to test new markets before committing greater resources. However, there are also some drawbacks in exporting as a foreign market entry mode. Because exporting does not require GMH to have physical presence in the foreign market, company management may have fewer opportunities to learn about customers, competitors, and other unique aspects of German market. Even if it is advisably for GMH to use third party logistics services, it still requires the management of GMH to expend the time and effort to learn about the freight forwarders, documentation and new financing methods. This will of course put a strain on GMH's resources.

### 2.2 Analyzing macro environment

Before a company enters foreign market, careful research and analysis of the new environment must be conducted. A PEST analysis is an analysis of the external macro-environment that affects all firms. P.E.S.T is an acronym for Political, Economic, Social, and Technological dimensions of the operating environment. Sometimes an additional factor, legal, is also added to make SLEPT analysis. Such external factors are usually beyond the firm's control and they are sometimes presented as threats. This environmental scanning is used during analysis and control stages of exporting process. In long-term, this analysis should be done constantly. The purpose of macro-environmental analysis is to identify the possible opportunities and threats as also the other forces affecting international trade. (Kotler 2002, 151.) In the following paragraphs, the macro environmental factors affecting international business will be discussed and illustrated in the case company's point-of-view.

Though, as GMH practices export only to Germany, not all macro environmental factors have a direct impact on it. Still, the factors are discussed to formulate a general understanding of the state of economy in Germany. This information may be considered as an indirect benefit for the case company, as it could provide useful general information also for potential future purposes.

### 2.2.1 Economic forces

Countries have different political, economic, and legal systems. Skill level of population and different levels of economic development have an impact on the benefits, costs, and risks associated with doing business in different countries, the way in which operations in different countries should be managed and the strategy firms should pursue in different countries. (Hill 2005, 42-43.)

The macroeconomics of region in which the organization operates affects how business-to-business customers buy and consume. The macro economy of a region is the sum of all economic activity in the area and certain economic characteristics such as economic growth, unemployment rate, interest rates, and exchange rates of currency between different economies. (Vitale & Giglierano 2002, 43.)

Germany is the largest economy in Europe and the third largest in the world after The United States and Japan with the GDP of 2322 billion €in 2006. There has been a slight growth in GDP over the several years, except in the year 2006. The growth of GDP was then 2, 9%. (Wilén, 2007) The German GDP is estimated to decelerate in 2008 to 2, 1% and then slightly increase to 2, 3% in 2009. The slowdown will mainly take place in fixed investment and exports. (Economist Intelligence Unit 2007) Another economic indicator is the level of unemployment that has been relatively high over the recent years. At the end of the year 2006 the unemployment rate was 10, 8% and in 2007 about 8%. However, the Economic Intelligence Unit has predicted the decrease of unemployment rate to 7, 0% till the end of the year 2008. It is also important to notice that the level of unemployment is still significantly lower in western Germany. (Wilén, 2007)

The consumer prices in Germany have increased slightly during recent years. In 2005 the inflation was 2, 0% and in 2006 1, 7%. These light numbers has been due to the slow economic growth, slow interest rates, and the increasing level of competition among firms. (Wilén, 2007) However, in 2007 the annual inflation rate climbed to 2, 2% that is highest since 1994. The contributing factors for higher inflation rate were price increases for energy and fuel as well as for many food products. (Deutche Welle 2007)

Although the contribution of industrial sector to the German GDP has gone down from 51% in 1970 to nearly 29% today, German economy still has certain specialised sectors like mechanical engineering, electrical and electronics, automobiles, and chemical. (The Federation of International Trade Associations, 2007)

The country is heavily export-oriented. The share of foreign trade in country's GDP is more than 70%. The main export commodities include machinery, vehicles, electric & electronic equipment, and plastics. (The Federation of International Trade Associations, 2007) The export growth of Germany has recently been quite strong as demand for German goods continued to benefit from the country's focus on machinery, which is in high demand from key emerging-market economies and the oil-producing countries. However, there will be a quite sharp slowdown in 2008 as sales to the United States fall because of the stronger euro and the weaker demand. It is estimated that the imports will continue to rise steadily as the external sector, that has recently been a major contributor to growth, will no longer make a significant contribution in either 2008 or 2009. (Economist Intelligence Unit 2007) Germany mainly imports commodities such as machinery, electric & electronic equipment, mineral fuels & oils, and vehicles. (The Federation of International Trade Associations, 2007)

Global trade and international investments are the most important prerequisites for growth, employment and prosperity in Germany. However, despite the opportunities that globalisation offers for German industry, increased competition on international markets and the rapid development of technology bring challenges for country's industry as it aims to maintain and increase its leading position in important sectors. The aim of the German foreign trade policy is to maintain its position as one of the

top industrialised countries, which requires that German companies must consolidate their international competitive edge to maintaining and creating jobs in Germany. At the same time, Germany must continue to assert itself as an attractive location for foreign investors. (Federal Ministry of Economics and Technology)

On July 2007 German government approved the corporation tax reform that become effective on January 1, 2008. The goal of this reform is to establish a corporate tax system that is more competitive internationally and gives an impulse to investments in Germany. One of the most important elements this tax reform includes is to reduce the corporate tax burden by around 9 percent (from 39% to below 30%). This tax cut will also benefit small and medium-sized business enterprises. Another element of the reform is to provide incentives for investors to select Germany as a location for their investments and business. The calculations show that this tax reform will relieve the German economy. By improving its status as a fiscal location, Germany will make a big leap forward by international comparison. (Bundesministerium der Finanzen 2007)

GMH has to observe and monitor various economic indicators to formulate a general comprehension of the state of the economy in Germany. This is because, especially in industrial business-to-business markets, market development is strongly correlated to economic growth or decline. Thus the case company will be more able to understand the structures of the market and forecast their future progress. Currently, the German industrial sector is vital and especially segments related to mechanical engineering, electrical and electronics, and automobiles provide significant opportunities for high precision machining companies as well. In addition, increasing imports and the recent corporation tax reform will set up a more favourable environment for foreign companies to export and to invest directly. This may facilitate also the case company in trade with German customers.

## 2.2.2 Political and legal forces

International business is influenced by political and legal systems. A political system is a set of formal institutions that constitute a government. A legal system refers to a

system for interpreting and enforcing laws. Adverse developments in political and legal systems increase risks when doing business in foreign country. (Cavusgil & al. 2008, 160)

Political climate in different countries varies enormously and this fact leads to political risks that an organization must be aware of before expanding into new markets. These political risks can be classified into two broad categories, macropolitical and micropolitical. Macropolitical risks may have an effect on all the firms on the country, as in the case of war or sudden changes in government. Such risks may even result in expropriation or confiscation, where governments seize the assets of the company without compensation. Also higher levels of taxation or inflation potentially affect all firms, as well as security risks related to terrorism or other forms of violence. Micropolitical risks in a country are risks that affect only specific firms, industries or types of venture. These kinds of risks may occur from new regulations or taxes imposed on specific types of businesses in the country. Political aspects of external macro-environment analysis include parts such as environmental regulations, government attitudes towards foreign businesses, trade restrictions and tariffs, and political stability. (Wall & Rees 2004, 136) To manage political and legal risks, GMH should develop an understanding of the political and legal context of Germany.

The economic strategy of Germany's Federal Government is based on the existing strengths of the country as a business location. Many foreign investors regard Germany as one of the most attractive countries for business activities. The set of regulations governing business is strictly non-discriminatory against foreign businesses. The country does not either impose permanent currency or administrative controls on foreign investments. The skilled workers are well trained and highly motivated, and the professional standards of clerical, technical and managerial staff are high. Also the industrial disputes are rare. (Invest in Germany 2007a)

As Germany's political life is largely bound to EU, also business operators are subjected to various levels of laws, European Commission, individual member state and specific local regulations. Business operators have to know the different levels of laws that regulate business activities. (Kotler 2002, 167.) When exporting to

Germany, various aspects, such as customs and taxes as well as quality and environmental standards must be considered.

Sustainable development is a priority for the EU and that is why it is also important factor in Germany. It strives to achieve balance between economic, social, and environmental considerations. Standards often deal with aspects of trade, quality, health and the safety of products or processes. Standardisation has been seen as a potential tool that plays an important role in protecting the environment. It plays a crucial role in the design, manufacturing, packaging and end-of-life stages of almost any product or process. There are already many European standards that either directly deals with the environment or that take environmental aspects into account, such as standards concerning product life-cycle, test methods, technologies and management. The standards are nearly always voluntary but their use has been encouraged. European standardisation is partly based on and closely linked to international standardisation. A significant part of CEN (European Committee for Standardisation) standards are taken over from the International Standardisation Organisation (ISO). (Commission of the European Communities 2004)

The Foreign Trade Act is the legal basis for foreign trade and payment transactions in Germany. The act lays down the freedom of foreign trade and payment transaction and specifies the main restrictions. Additionally these can be restricted by legal acts of the United Nations and the EU. The Import list is a part of the Foreign Trade Act and specifies the general freedom of imports and the restrictions of imports. There are hardly any import restrictions in Germany for industrial products. However, goods imported to Germany are subjected to the same regulations concerning their fitness for sale as goods produced in Germany. Technical equipment (e.g. machines) may only be put into free circulation if they comply with the work safety and accident prevention regulations. Therefore, it is essential for foreign manufacturers and suppliers to comply with the legal provisions, technical regulations and quality marks, which apply to their products. The most important issuing body for technical regulations in Germany is the Deutsches Institut für Normung, DIN (German Standards Institute). (German Business Directory)

Customs procedures in Germany are governed by the laws of the EU and the Federal Republic of Germany. Basically, the customs law in the EU is completely harmonized in the form of a customs code. This customs law is legally binding on all member states. Goods that are imported outside the EU countries into the customs area of the Community must undergo customs clearance. (German Business Directory)

Even if GMH is not establishing its facilities in Germany, it has to be aware of the political and legal forces that regulate international trade. As Germany is politically very stable, there are hardly any serious political risks that GMH should be concerned of. However, GMH has to be familiar with all regulations made on international, EU or national levels that affect the company's exports to Germany. High precision machining industry in Germany is one of the most developed in the world. Meeting the quality standards and technical regulations concerning products and raw-materials is crucial for GMH if it desires to enter the German market. In Germany, environmental protection is also highly developed and both individual consumers and industrial buyers highly value companies with protective environmental policies. One additional important aspect to consider before GMH exports to Germany is the environmental standards that regulate the packaging of the goods.

## 2.2.3 Technological and infrastructural forces

Technological innovation and the capacity to sustain a technological lead are crucial to success in the competitive environment, for both companies and countries. Social, cultural and political factors in national environments can have an influence on the creation and adoption of technological know-how. The analysis of technological forces considers elements such as Research and Development activity, automation, quality of infrastructure, technological innovation, technology incentives, education and training, and the rate of technological change. (Morrison 2006, 350.)

Research and development are vital for the future of the German economy and society. Therefore the Federal Government is continuing to pursue the goal to invest

at least three percent of the gross domestic product in research and development in the future. Also investments in education and training are required in order to maintain the competitiveness of the German economy in the international market for technology goods. Innovations in information and communication technology and the use of these innovations in knowledge intensive services (e.g. logistics) have been the driving forces of the development of productivity and also a mainstay of growth. (Egeln et al. 2007, 3, 8.)

According to the World Economic Forum's (WEF) Global Competitiveness Report 2007-2008, Germany is the global leader in terms of infrastructure and business sophistication. Based on the sophistication of company operations and the quality of the national business environment, Germany was in the second place in terms of overall business competitiveness. (Invest in Germany GmbH 2007b) Germany's central geographical position at the core of the European Union and its highly developed infrastructure also attract international enterprises to locate their business activities in Germany. Germany is bordering nine European countries and it can be seen as the continent's commercial hub, where all trans-European paths meet. There are more goods passing through Germany than through any other country in Europe. Germany's central location means easy and fast access to other European countries. Germany has also one of the most advanced transportation networks in Europe. Both rail and road densities are double the EU average. Also a number of international airports establish an excellent interconnection to all over the world. A well-trained workforce and stable political and economic environment make Germany the favourable base for both European and global logistics operations. (Invest in Germany GmbH 2007c)

Based on the technological and infrastructural analyses, the case company will be able to benefit from Germany's efficient infrastructural and transport network. There should be no problems regarding the transportation, though they must still be carefully planned. The constant technological innovation and development enable the continuous development of the machining market and makes it an attractive market sector. However, the high level of technology and the even more increasing level of automation set challenges for GMH, as German customers require even more technologically developed solutions.

### 2.2.4 Social and cultural forces

Culture is an environmental variable that affects all international and export marketing activity. The socio-cultural environment has an influence on the behaviour of customers who comprise market as well as the managers who plan and implement export marketing programs. Socio-cultural characteristics of industrial buyers are affected by external stimuli factors that influence the buying decision process. These factors include such things as material culture, language, religion, education, values and attitudes, social organization, and political-legal structure. Even if the cultural distance of the foreign markets is not great from company's domestics markets, the cultural environment should be carefully analysed and managed to avoid possible problems and negative profits. (Albaum, Strandskov & Duerr 1998, 69-79.)

Managers need to develop understanding and skills in dealing with other cultures. Culture matters in international business in various areas such as developing products and services, interaction with foreign business partners, selecting foreign distributors, business negotiations, dealing with customers, preparing for trade fairs and preparing promotional materials. Managers also have to acquire factual and interpretive knowledge about the other culture. They should avoid cultural bias and engage in critical incident analysis. This involves being culturally aware, not making value judgements and selecting the most likely interpretation of foreign behaviours. Managers should develop cross-cultural skills, including a tolerance for ambiguity, perceptiveness, valuing personal relationships and being flexible and adaptable. (Cavusgil & al. 2008, 153-154.)

There is a very close business relationship between the government and the business community in Germany. The German government has made a major investment in business which has lead to many regulations. The business culture is greatly affected by the attitudes and policies adopted by the federal government. Thus, most aspects of German living and working are defined through laws, rules, and procedures and these are evident in all economic, political and social spheres. Following rules is a fundamental characteristic of German business culture that can be recognised in low degree of flexibility and spontaneity.

Decision making in many German companies is cautious, containing many fall back positions, contingency plans, and alternatives. Objective facts are considered essential rather than intuition and well-developed personal networks. The decision making process is orderly, organised and logical. After a decision has been made, the Germans stand firmly behind it and implement it quickly and efficiently.

German companies usually have a board of directors which runs the company. Below this ruling board, the company is organised in a strict vertical hierarchy that is well-defined and strictly observed. Germans value highly technical and factual expertise, and thus, the heads of companies are often engineers or economists who are very loyal to their products and their employees. Clear responsibilities and distinctions between roles and departments are also evident.

German business communication style is direct and seemingly confrontational. Openly-expressed criticism should not be considered as personal disapproval. They also highly value outspoken communication and punctuality in all areas of business and interaction. (Communicaid 2007)

Owing to the earlier work experiences with German companies, the Managing Director is already aware of the basics of German business culture and culture in general. In GMH's case, the way the company conducts business negotiations and deals with its customers plays an important role in GMH's success in German market. Thus, GMH has to keep in mind Germans' requirements and expectations for high quality products and services. After successful business negotiations, GMH must be able to operate according to the contract. As Germans respect punctuality, GMH should ensure production and delivery of the goods as stated in the contract. Being a reliable supplier is important at this stage, as GMH is a newcomer in the German market and competition is hard.

### 3 EXPORT PROCEDURE AND INTERNATIONAL LOGISTICS

The success or failure of the export business of a firm depends entirely upon securing orders from buyers, delivering products in good condition at the correct time and receiving payment. This is dependent of the correct handling of export procedures. (Albaum et al. 1998, 477.) Export procedure in this thesis refers to the different phases of implementing and handling the export operations, whereas export process is a much wider perspective, including phases when the company starts examining the possibilities of the target country, analyzing its own resources and planning the export operations. During export procedure all documents and procedures must be carefully followed in order to avoid violations of the laws of the countries involved and refusal of the financial organizations to honor demands for payment (Albaum et al. 1998, 477). The purpose of this chapter is to discuss the successive steps and documents involved in the export procedure. The emphasis of the discussion is in the logistical phases of the export procedure, including transportation, customs and documentation for example. Issues relating to financing and payment are only presented shortly as they are not included in the topics of this thesis. The overall export procedure is illustrated below:

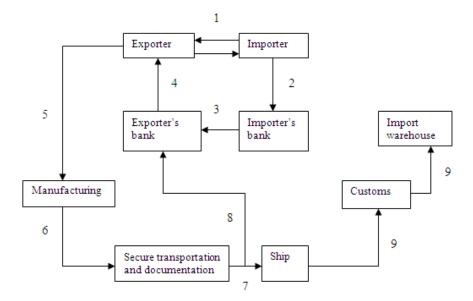


Figure 1: The export procedure

The first phase refers to the actual sale transaction. In this phase a price quote, usually in a form of a proforma invoice, has been presented to indicate the terms that

(Source: Albaum et al. 1998, 478)

have been proposed. After that the seller receives the purchase order from the buyer. In many cases a purchase order, pro forma invoice, or order acknowledgment may serve in place of a formal sales contract. A proforma invoice indicates the terms that have been agreed upon or are proposed. It gives a close approximation of the weights and values of the shipment to be made. However, it is not used for payment purposes. After buyer has accepted proforma invoice or the parties have agreed the contract of sale, the buyer arranges financing through his bank and the buyer's bank sends letter of credit, that is the most used form of payment. When the seller's bank receives the letter of credit, it notifies the seller. As the financing and payment issues have been cleared, the seller produces or acquires the goods. The seller also arranges the transportation and documentation, either itself or through a freight forwarding company. In the seventh phase the seller ships the goods to the buyer and after that, presents the documents to bank for payment. Finally, the goods have been cleared through customs and delivered to the buyer's warehouse. (Albaum et al. 1998, 478-481.)

# 3.1 International transportation

Managing logistics in the export trade is crucial because shipping costs and shipping efficiency will affect the competitiveness of the transaction. International transport transactions impact directly on key sale contract elements such as price, delivery time and the risk of loss or damage. Smaller traders often rely on international freight forwarders as they do not usually have specialized logistics departments. Finding the optimal mode of transport can have a huge influence on whether the export is a success or a failure. Smaller traders often delegate this analysis to a freight forwarder, but the trader itself should also have a sufficient understanding of transport to be able to supervise and evaluate the performance of forwarders. (Astrup et al. 2003, 235-236; Cook, Alston & Raia 2004, 9.)

When planning export, traders should take into consideration the following basic elements of transport management. Transport service providers often charge lower freight rates for large and regular cargo shipments. Consequently, exporters should seek to ship larger volumes at a time if possible. When choosing the mode of transport, traders should avoid evaluating the different modes purely according to

freight rates because packing and packaging costs also vary according to the mode of transport. Improper packaging often results in higher rate of damage of goods. Often the transport costs may play a significant part of the total cost of the product. The price that is quoted to the importer is linked to the particular Incoterm chosen and how much of the corresponding transport required must be covered by the exporter. (Astrup et al. 2003, 235-238)

The speed of delivery is an element of transport management that can be seen as a crucial competitive factor. In addition to delivery time, traders must pay attention to reliability and evaluate the frequency of late or delayed shipments. The various transport modes also entail different procedures for customs clearance, which may have an incidence on transit time. (Astrup et al. 2003, 236-238.)

# 3.1.1 Containerized and multimodal transport

Multimodal transport involves a sequence of different modes of transport- e.g., the goods are first transported by road from seller's premises to the port of shipment, then transported by ship to the port of destination, and finally by road or rail to the buyer's premises. (Astrup et al. 2003, 109) Although not all containerized transport is multimodal, they are often inter-related. When, as commonly, goods move from seller to buyer through two land legs and one sea leg, the advantages of using the container become evident. Not only is the container transferred easily from one leg to another, the risks of damage and theft are also reduced.

As with traditional cargo shipments, container shipments are frequently arranged by freight forwarders. There is a distinction between shipments that fill a full container load (FCL) and shipments for less than a full container load (LCL). In the case of LCL shipments, the goods are delivered to a container terminal, where the cargo is grouped together with other cargo sufficient to stuff a container. At a destination terminal, the cargo is unloaded from the container and broken down into separate consignments. (Astrup et al. 2003, 258-259.)

The Twenty-foot Equivalent Unit (often TEU) is an inexact unit of cargo capacity often used to describe the capacity of container ships and container terminals. One 20 feet ISO container equals 1 TEU and one 40 feet ISO container equals two TEU. (Astrup et al. 2003, 257; Suomen kuljetusopas) The most frequently used container sizes have been presented in Appendix 2.

## 3.2 Freight forwarder

An international freight forwarder acts as an agent for the exporter in moving cargo to an overseas destination. These agents are familiar with the import rules and regulations of foreign countries, the export regulations of the government, the methods of shipping, and the documents related to foreign trade. Freight forwarders assist by advising such things as freight costs, consular fees, and insurance costs. They can also recommend the degree of packing, find the best cargo vessel company, and arrange for containerization. Their activities also include quoting shipping rates, booking cargo space, and providing other information. These private service companies are very valuable for firms as they can handle everything from the factory to the final destination, including all documentation, storage, shipping insurance, as well as routing the cargo at the lowest customs charges. In some cases a freight forwarder can also act as a carrier if it handles the carriage of the goods with its own vehicles.

Very often companies contact their freight forwarder before sending the final price quotation to customer. The freight forwarder can provide information on marine insurance, ocean freight costs, forwarder's fees, duty charges and consular invoice fees for example that need to be added to the manufacturer's price. (Cavusgil & al. 2008, 81; Nelson 1999, 97-98) When contacting the freight forwarder the company should give the information concerning the mode of transportation, destination, quantity, packaging method, possible frequency and terms of delivery and payment. The more detailed the inquiry is, the more accurately the price of transportation can be estimated. (Selin 2004, 137-138.)

There are several points that the company needs to take into consideration when choosing a freight forwarder. The quality of the freight forwarder and the delivery of

the international services they provide can have a huge effect on export operation. They must also be managed and treated as partners with mutual goals and common direction to benefit from the partnership.

Freight forwarders vary from one another in skills, capability, and delivery of services. Some of the forwarders are specialists on certain trade routes, specific commodities, degree of value-added services etc. To determine if the freight forwarder is suited to company's needs, the company should set up selection criteria, that reflects the company's needs. Very often a small company may require the freight forwarder to execute the whole export process including all the documentation, packing, transportation, customs clearance etc.

Pricing can vary among different forwarders. In some situations, it may be impossible to estimate the costs exactly, but in most cases a forwarder is able to provide a fairly accurate estimate. Two basic elements of a freight forwarder's charges are fees and carrier costs.

The effectiveness of the forwarder will partially depend on how the exporter manages this valuable vendor relationship. The forwarder should be viewed as a partner who can be part of or comprise the company's entire logistics management team. When used effectively, the forwarder can maximise profit, mitigate risk, and spearhead you into successful exporting. (Cook et al. 2004, 9-13.)

### 3.3 Freight rates

The pricing of sea transport services, usually in combination with land transport services, is dependent of the forces of supply and demand, but the factors affecting supply and demand are maybe more complicated than in most other industries. The demand for a particular international transport service mode is derived from the demand for the commodities carried.

Rate making has changed significantly in recent years as a result of the development of multi-modalism. The rate is no longer based on one carrier on a port-to-port basis. Nowadays it also involves two or three carriers providing door-to-door service that

embraces two or more forms of transport. Developing a multi-modal rate may be quite complex and involve a range of parties. It is important to note that tariff charged for consignment do not only comprise sea transport and inland transport freight. There are also a number of other elements involved in freight that are described in the following: (1) Tariff cargo rate refers to the port-to-port shipment of containers, Ro/Ro vehicles and general cargo in the case of maritime transport. Another element is (2) Freight forwarder's commission that usually amounts between 2, 5 and 5 per cent of the total freight account. (3) The customs clearance charge is usually based on the local port authority tariff. These charges vary between import/export, commodity type, quantity, and the degree of customs physical examination of the consignment. The actual presentation of the goods to customs and their ultimate clearance will usually be undertaken by the freight forwarder acting behalf of his client. (4) Customs duty and value added tax will vary according to commodity specification and applies to imported consignments. (5) Disbursements comprise a variety of items including freight services, telephone calls, E-commerce messages, currency surcharges, fuel surcharges, security cost, etc. Also (6) cargo insurance premium, (7) delivery/collection charge as well as (8) transshipment costs, (9) handling costs and (10) documentation charges are elements involved in freight. In addition, there is a (11) wharfage charge that is raised by the port authority for cargo transhipment. In case the cargo has been detained at sea port for longer periods than prescribed, (12) demurrage will be charged. This kind of delay may be due to wrong presentation of customs clearance documents for example. Furthermore, there are possible (13) cargo dues that are costs raised by the port authority for goods passing over the quay. (Branch 2006, 157-163.)

The amount of freight is most commonly calculated according to either the weight or volume (e.g., per ton or cubic metre), of the cargo, whichever is most favourable for the carrier. Commonly, the carrier will provide alternative freight rates based on standard ratio between volume and weight. If the goods exceed the ratio of volume to weight the freight is charged according to volume and vice versa. Other possibilities to calculate the freight are per unit or parcel, or relative to the value of the cargo. (Astrup et al. 2003, 254.)

#### 3.4 Incoterms

The purpose of Incoterms is to provide a set of international rules for the interpretation of the most commonly used trade terms in foreign trade. Incoterms are internationally standardised "trade terms", which enable exporters to quote prices that clearly allocate the costs and risks of international transport between seller and buyer. Also insurance responsibilities and customs formalities are covered by Incoterms. Incoterms help to avoid or at least reduce considerable different interpretations of such terms in different countries. The scope of Incoterms is limited to the matters relating to the rights and obligations of the parties to the contract of sale with respect to the delivery of goods sold. (Räty 1999, 6; Selin 2004, 151.)

There are several factors affecting the selection of the Incoterm adapted in the trade practice between the buyer and the seller. One basic factor is the profitability. For example other party may have more know-how and experience to arrange the transportation or it may have long-term and affordable contract with a forwarding company and is therefore able to arrange the transportation more cost-effective way. Another factor affecting the choice of the Incoterm can be buyer's or seller's business strategy. Many companies may want to arrange the transportation itself as they are aware of its benefits. For instance, the freight costs as well as forwarding and insurance conditions become smaller as the amount of shipments increase. Also cost awareness is remained and increases along operations. In addition the general trade practices of the target country may affect the choice of the Incoterm. (Selin 2004, 152-153.)

Incoterms are classified into four main categories which stipulate the risk transfer and whether or not the exporter is required to clear goods for export, to carry out customs formalities and to pay duties, taxes or other charges. These four groups are summarised below:

E-terms: The goods are placed at the buyer's disposal on the seller's premises or another named place (e.g. a warehouse or factory).

F-terms: The buyer is responsible for the cost and risk of the main international

carriage.

C-terms: The seller pays for the main international carriage, but does not bear

the risk during the carriage.

D-terms: The seller bears all costs and risks related to transport up to the

delivery point at the agreed place, which may be in the buyer's

country or at the buyer's premises.

These four groups consist of 13 Incoterms, which represent the amount of responsibility of both buyer and seller when the goods are moved from the seller's premises to the buyer's premises. EXW (EX Works) is the Incoterm, which represents the minimum obligation of the seller. The other extreme is the Incoterm DDP (Delivered Duty Paid), which represents the maximum responsibility on the part of the seller, with delivery generally at the buyer's premises. In between these two extremes there are 11 other Incoterms that represent a range of options for the division of costs and risks between the parties. (Astrup et al. 2003, 99-100.)

Incoterms FCA, CPT, and CIP were specifically developed for containerized and multimodal transport. These terms can be thought of as the containerized/multimodal equivalent of FOB, CFR, and CIF. The importance of using these newer Incoterms is linked to questions of insurance cover and division of costs. Since container shipments are frequently taken over by the carrier at the shipper's premises or at container terminals which are remote from the port of departure, it does not make sense to divide risk and therefore, insurance coverage at the ship's side, as is done under FOB, CFR and CIF. With regard to costs, a shipper who hands the goods over to the carrier at the shipper's premises will prefer not to absorb the costs all the way to the ship's side, and will therefore prefer FCA to FOB. (Astrup et al. 2003, 257-258.)

The Incoterm CPT "Carriage paid to..." means that the seller delivers the goods to the carrier nominated by him but the seller must in addition pay the cost of carriage necessary to bring the goods to the named destination. This means that the buyer bears all risks and any other costs occurring after the goods have been so delivered. The risks are transferred to the buyer at the point when the goods have been delivered to the first carrier. The seller is also obliged to clear the goods for export. The CPT term is suitable for all modes of transport, including containerization and intermodal transportation. (Hörkkö et al. 2005, 432; Räty 2006, 62-63.)

When incorporating Incoterms into a contract, traders should link their contracts to Incoterms by explicitly referring to "Incoterms 2000". In the absence of the specific reference to Incoterms the trader may lose the right to apply Incoterms to the contract. (Räty 1999, 111.)

#### 3.5 Customs

International trade transactions always involve at least two customs clearances, one upon export and one upon import. Upon export, an export license is commonly required in the case of sales of politically or strategically sensitive goods, such as exports of arms or weaponry, chemicals or high-technology goods. (Astrup et al. 2003, 269.)

Upon import, duties and taxes will be payable. The choice of Incoterm determines whether the exporter or importer is responsible for export or import clearance. The clearance responsibility includes 3 components: (1) the responsibility to obtain necessary licenses and fill out forms and declarations; (2) the responsibility to pay official duties and taxes; and (3) the assumption of the risk that customs clearance may be physically or legally impossible. (Astrup et al. 2003, 269-270.) As referred to above in the chapter of freight forwarders, traders often rely on forwarding companies or customs brokers who act as the agent of the exporter in their dealings with customs authorities.

### Amount of Duty

The tariff rates for goods imported outside the European member states into the Customs Union area varies depending on the type and origins of the imported goods. Customs officers will verify the declared value of the goods, since duty is often

calculated as an ad valorem percentage. Products imported from non-EU countries to Germany are subject to customs duties only when and where the product first enters the EU. After that there are no more payments or checks. (Astrup et al. 2003, 270; Invest in Germany)

The import levies like customs duty and VAT are specified in the customs tariffs. The basis for calculating the amount of customs duty is the customs value that is derived from the so-called transaction value. This is the selling price, which may be added by all transport, insurance, loading and handling costs up to the point of entry of the goods into the customs area of the EU, provided these costs are not already included in the price (cif value). (Astrup et al. 2003, 270; German Business Directory)

Goods that are imported from non-EU states are liable to import VAT. The rate of the import VAT is 19 % and is paid to the customs authority. The import turnover tax is charged on the duty paid value of the import article plus a customs duty. If the import company resells the goods, the import turnover tax can be deducted as input tax by the tax authority. In this kind of a case it is required that the company has the necessary import documents with customs proof of payment. (Invest in Germany)

In most countries, goods are classified into various categories under the Harmonised Commodity Description and Coding System promulgated by the World Customs Organization. Under this goods are classified into more than 5000 separate categories identified by a specific code. A particular piece of merchandise may fall between two official customs designation and traders will understandably wish to have applied to designation with lower duty. In the event of disputes, the trader will have the right to appeal the customs ruling to a specialised legal tribunal. (Astrup et al. 2003, 270-271)

### Country of Origin

The amount of duty assessed will depend on the country of origin. Certain European or Mediterranean countries have customs agreements with the European Union such that imports and exports are imposed duty at preferential rates. Also under the United

Nations' Generalized System of Preferences (GSP), many developed countries have granted preferential of free entry to imports from developing countries.

This leads to the important question of the origin of export goods. This origin is determined and documented by a certificate of origin, which is procured from, and stamped by, a chamber of commerce or other official export agency. The question becomes complex in the case of manufactured products, the components of which may not come from countries accorded preferential status. There are two criteria for deciding whether a particular product meets the origin requirement for preferential status: a process criterion and a percentage criterion. Under the process criterion, the finished product will generally be accepted for preferential rates if it falls into a different product category than the components. Under the percentage criterion, a minimum of 35% to 50% (depending on the importing country) of the component of the final product must come from the country accorded preferential status. (Astrup et al. 2003, 271-272.)

#### **Bonded Warehouses**

A bonded warehouse is authorised to store imported goods without payment of duties for a given period of time. The proprietor of the warehouse must provide a bond to the customs authorities in order to cover any potential liability for duties. These bonded warehouses enable the inspection of the goods buy the importer or her customers, before paying the duty. Another advantage is that the goods assessed as having high duties, payment of the duty can be delayed, enabling the importer to save the interest value on the amount of the duty throughout the period of storage. (Astrup et al. 2003, 272.)

### 3.6 Packaging and marking the cargo

Packaging is an important issue to consider in international logistics because it is instrumental in getting the merchandise to the ultimate destination in a safe, maintainable, and presentable condition. Packaging that is adequate for domestic shipping may be inadequate for international transportation because the shipment will be subject to the motions of the vessel on which it is carried. Transfer of goods

among different modes of transportation also increases stress in international shipping. The goods must be protected against stresses such as acceleration, retardation, centrifugal forces, vibrations, dropping impact, and rolling which are only some of the stresses found in international transportation. (Czinkota, Rivoli & Ronkainen 1992, 433-437.)

In addition to stresses that transportation causes in international shipping, there are also other factors influencing the nature of packaging in international consignment that need to be considered. When designing the nature of packaging, the shipper should consider the value of the goods as high-value consignment usually attracts more extensive packing than low-value merchandise. If packing is inadequate, there can be problems in carriers' liability and adequate cargo insurance coverage. (Branch 2006, 183)

Packaging decisions must also take into account differences in environmental conditions, for example climate that may vary enormously during long-distance transportation. Special provisions may be required to prevent the goods against damages that may result from very humid or particularly cold climate for example. The weight of packaging and must also be considered as it may have an influence on cost of shipping, especially in airfreight. At the same time packaging material must be sufficiently strong to permit stacking in international transportation. (Czinkota et al. 1992, 433-437.)

The shipper must pay sufficient attention to the instructions provided by the customer for packaging. The customer may require for example a certain weight limit or specific package dimensions. These limitations often reflect limitations in transportation or handling facilities at the point of destination. Intermodal containers offer one solution to the packaging problem in international logistics as they often offer greater safety from pilferage and damage. Overall, careful attention must be paid to international packaging as the customer expects the merchandise to arrive on time and in a good condition. (Czinkota et al. 1992, 433-437.)

Associated with packaging is the marking of cargo. Basically, the export shipping mark and number is vital in the correct identification of the shipment regardless of

the transport mode. Marking must be simple, easily identifiable and not masked with irrelevant information or old markings.

Marks and numbers are the only common identification factor of any particular consignment after it has been packed for despatch. This detail is shown in invoices, customs documents, bills of lading, insurance certificates and delivery notes. If the mark is interpreted wrongly on any of these documents, it is possible that misdelivery or loss of the goods will occur. The marks or numbers must be shown clearly and indelibly on all the packages by means of stencil or secure tie-on labels. In addition to the mark, all goods should be labelled by the supplier showing the ship-berth, dock and loading brokers and sender's name and address.

In some trades, the practice is to give the dimensions of the package in meters which may be used in assessing the freight. It is also desirable that the foregoing markings should be portrayed on three faces of the package – side, end and top- with all markings clearly shown using large, clear lettering. All of the above criteria of cargo marking can be applied to other international transportation distribution modes such as air freight, road haulage and containerization, but it must be remembered that they vary by individual trade and circumstance. It is also important to notice that the cargo markings should correspond exactly with those on the bill of lading or other consignment note.

To facilitate handling and to overcome differing language problems a recognised international marking symbol code is used (e.g. "this way up"). These are accepted by the International Standards Organization and must be printed on the exterior of the packing. The shipper must also make sure that the consignment is adequately labelled giving the delivery address details. All these export shipping marks forms the principal identification for the movement of the goods. (Branch 2006, 200-201.)

### 3.6.1 Wood packaging material in international trade

The EU has set the phytosanitary measures for all wooden packaging material that is used with the import of goods into the EU from the third countries. The full title of

this international standard ISPM 15 is "Guidelines for regulating wood packaging material in international trade". The standard was endorsed by the Interim Commission on Phytosanitary Measures in March 2002. After that, few amendments have been made. The legislation was developed to protect the EU and to reduce the risk of introduction or spread of quarantine pests associated with wood packaging material (including dunnage), made of coniferous and non-coniferous raw wood. The directives require heat treatment or fumigation and marking of wooden packaging materials (including for example packing cases, boxes, crates, drums and similar packings, pallets, box pallets and other loader boards).

The mark shown below certifies that the wood packaging material that bears the mark has been subjected to an approved measure. The mark should at minimum include (1) a symbol, (2) ISO two letter country code followed by a unique number assigned by the The National Plant Protection Organization (NPPO) to the producer of the wood packaging material, who is responsible for ensuring appropriate wood is used and properly marked, and (3) IPPC abbreviation for the approved measure used (heat treatment, HT or methyl bromide fumigation, MB). (International Plant Protection Convention 2002)

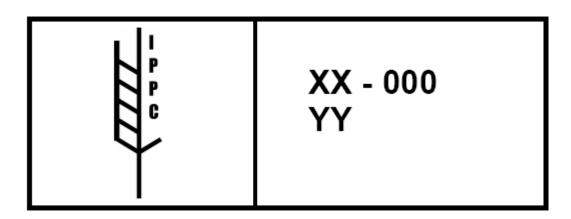


Figure 2: Symbol for wood packaging material (Source: International Plant Protection Convention)

#### 3.7 International transport documentation

A good comprehension of the various documents involved in processing the export consignment is an important part of export practice and management as incorrect documentation creates export problems. Failure to have the relevant documentation correctly completed results in delay in payment for goods, loss of goodwill between buyer and seller and late delivery of the merchandise for example. Successful international trade is only realised through execution of documentation with a zero error rate to avoid delays in customs clearance and extra charges to shipper due to payment delays and extra bank charges. (Branch 2006, 352.)

The required documentation in export transaction is dependent on the merchandise in the shipment and its destination. The exporter should also pay attention to the correct number of documents that are required during export process. To ensure that required documentation is completed accurately and to avoid and minimise problems that may occur, exporter should consider using freight forwarders that are specialised in handling export documentation. (Czinkota et al. 1992, 429.)

## 3.7.1 The key contracts related to export transactions

The central export contract is the contract of sale that specifies the price, quantity, products, delivery and payment terms. The parties of this contract are the seller and the buyer. A broker or an agent may act for seller or buyer in this basic framework. The contract of sale is the "master" contract ruling the export transaction, because other contractual arrangements, such as transport, insurance and payment, should always accord with its provisions. For those reasons a precise contract of sale that deals with all these above mentioned key elements should be negotiated. (Astrup et al. 2003, 43.)

Freight forwarding contract is a contract between the client and the forwarding agency. The contract specifies the obligations of both parties. The contract covers the carriage of goods from a specific place to another place as well as possible activities connected with the carriage of goods e.g. documentary, customs clearance, warehousing, insurance of the goods, and other logistical services. The client undertakes to pay remuneration to the freight forwarder. Often some general terms of contract are also applied as a part of the contract. At the point when the contract has

been formed, the relationship between the client and the forwarding agent becomes formal. (Hörkkö et al. 2005, 25-26.)

Another basic contract is the contract of carriage, which is formed between the shipper and the carrier. The carrier may act through an agent or broker. The contractual terms and conditions of transport contracts are generally found in a transport document known as a bill of lading (or a sea waybill, air waybill, data freight receipt, cargo quay receipt, etc.)

International payment mechanisms generate another series of contractual agreements. For instance, a letter of credit, is based on an underlying contract of sale, which requires that the buyer then form a contractual agreement with its bank, and in the case of confirmed credit, requires that the confirming bank irrevocably undertake to pay the beneficiary under the credit and that a further contract is formed between the issuing bank and confirming bank.

International shipments of goods are usually insured through insurance contract between the insurer and the seller or buyer. When the seller is obliged under the sales contract to procure insurance, it is important that the conditions and insured amount under the policy be in accord with the conditions of the contract of sale. Sellers under CIF Incoterms 2000 in particular, have to be aware of requirements imposed by Incoterms 2000 as regards the minimum insurance coverage which need to be procured for the buyer. (Astrup et al. 2003, 43-45.)

## 3.7.2 Shipping documents

Shipping documents refers to the documents that permit an export cargo to be moved through customs, loaded aboard a carrier, and shipped to its destination.

### *The bill of lading*

The bill of lading (the "B/L") is a central document in export transaction that links the contract of sale, the documentary payment contracts, and the contract of carriage.

The marine bill of lading provides the documentary basis for traditional maritime shipments and it is issued by the transport carrier (such as a freight forwarder). There are three basic functions of B/L: the first function of B/L refers to the right to physical delivery of the goods. In addition the B/L is also a negotiable instrument because it can be endorsed affecting ownership of the goods that are actually being carried. As another function, the B/L evidences the contract of carriage. It has to contain the full terms of the contract of carriage either explicitly or by reference to another document. Furthermore, the B/L functions as a receipt evidencing the delivery of the goods for shipment. It confirms whether goods matching the contract description have been received in good condition.

One of the disadvantages associated with the use of the traditional negotiable marine B/L arises when multimodal or combined transport is used as marine B/L is not well suited to it. This marine B/L does not cover the transport operations from seller's premises to the port of shipment and from the port of discharge to the buyer's premises. Only a multimodal transport B/L can cover these transport operations also. This kind of B/L is used when at least two different forms of transport are used. It serves as a receipt for delivery of the goods but it does not necessarily evidence that the goods have been shipped "on board". Instead, the receipt refers to receipt of a container in a container handling terminal. (Astrup et al. 2003, 246-251.)

#### Commercial invoice

The commercial invoice is a bill for the goods sold. It should comprise all essential information concerning the sale, including a precise description of goods, address and identity of exporter and importer, and delivery and payment details. In many countries it is used as the basis for calculating import duties by customs authorities. (Astrup et al. 2003, 246-247.)

#### Consular invoice

Some countries require an invoice on an official forms for all imported goods. These invoices are generally purchased from the country's local consulate in the exporter's country. (Astrup et al. 2003, 247.) When required, it is in addition to a commercial

invoice and must conform in every respect to that document as well as to the bill of lading and any insurance documents. The purpose of the consular invoice is to allow clearance of a shipment into the country that requires it. (Nelson 2000, 112-115.)

## Inspection certificate

Inspection certificate verifies that the quality, quantity or specifications of the shipped goods are in conformity with the sales contract. It is most often conducted by an independent agency. (Astrup et al. 2003, 247.)

## Certificate of origin

A certificate of origin may be required for making use of foreign trade benefits, like applying preferential tariff rates. It is usually issued by a local chamber of commerce, establishing the country where the merchandise was produced or manufactured. (Grafers & Schlich 2006, 125.)

### Insurance certificate

An insurance certificate is a proof of type and amount of insurance coverage and identifies the merchandise in terms of packages and markings. (Nelson 2000, 115.)

#### Packing list

A packing list accompanies the shipment and describes the cargo in detail. It includes weights, volumes, contents, serial numbers and any other data peculiar to the shipment. (Nelson 2000, 118.)

### Export license

Export license is an official permit issued by an agency of the exporter's government, without which the goods cannot be exported. Some countries require all exporters to obtain an official government export license. (Astrup et al. 2003, 247.) Usually they apply for products that a government wants to control closely for either

strategic or economic reasons. Certain weapons, technologies, and high-tech products often require special export licences. (Nelson 2000, 115.)

### 3.8 Pricing the export product

Defining the price for export product is often very difficult in early stages of export process, because the exporter may not have a clear picture of costs associated with different operations. There are many factors influencing the pricing decision and most of them have already been explained more detailed in earlier sections of this thesis.

The basis for defining export price is the price of the product without the value added tax (VAT). In addition, the export price should contain the following costs and expenses: (1) Additional costs of human resources occur in case the company invests in export training of the personnel or employs additional human resources specialised in export operations. (2) Packaging may also incur additional expenses as export packaging requires more features and durability compared to domestic packaging. Depending the Incoterm applied, the exporter may have to pay the (3) transportation costs. The actual transport costs should be defined in advance or alternatively the Incoterm should be chosen so that the buyer handles the transportation himself. The Incoterm also partly defines (4) the insurance responsibilities. The exporter may be required to arrange the transportation insurance at its own cost. The companies using (5) a freight forwarder have to consider also the expenses that result from its services. Some technical products or machines may require special approval in its target country. That is why the costs and the expenses of (6) the third party inspection services has to be added in the final price. Moreover, depending on the trade terms, the exporter has to estimate the (7) financing requirements. Different financial arrangements incur additional expenses and interests payable that need to be included in the price. (8) Terms of payment and credits may also cause additional costs to the company. The company should find the optimal payment method with the best credit terms. In international trade, there might also be (9) risks related to currency exchange rates. The current value of USD is concerning and the potential risk should not be neglected. There might naturally be (10) other additional costs related to different operations that are negotiated with the buyer, for example. (Selin

2004, 165-166.) Moreover, there may be costs derived from the Bunker Adjustment Factor (BAF) and the Currency Adjustment Factor (CAF). The bunker adjustment factor is a surcharge raised by shipping lines to take into account the fluctuations in the price of marine fuel. The currency adjustment factor (CAF) refers to an adjustment to the shipping line's freight tariff which takes into account the variances between the currencies in which freight is billed. (Fennoscandia Chartering)

In the early stages of export process, it is difficult to be aware of all the costs and expenses that the different export operations incur. It is recommended to follow and record those expenses carefully so that it benefits the future cost estimates. (Selin 2004, 168.)

#### 4 RESEARCH PROBLEMS AND CONCEPTUAL FRAMEWORK

### 4.1 Research problems

The purpose of this study is to compose an operational export plan for an Indian company, GMH Machines And Tools Private Limited, for the German market. The thesis attempts to identify the characteristics of the German business environment and the different phases of international logistics. The study also attempts to provide a detailed handbook for the export of pump parts to a German customer.

Although GMH is a recently founded company and is currently starting its operations in its domestic markets in India, it has already started to examine its possibilities to enter foreign markets. The main research problems thus are:

What are the phases of international logistics that the company faces in its export?

What are the elements that create the expenses of export?

How should the company conduct its export operations?

#### 4.2 Research objectives

As the first research problem is to study the different operational phases of international logistics, the research objectives therefore include understanding international transportation in general and the role of a freight forwarder in a company's exports. As Incoterms, customs clearance, documentation and packing requirements are also an important part of international logistics, they are also included in the objectives.

As the second research problem is to identify the different elements of exportation that incur expenses, the research objectives also include creating a comprehension of the amount of the different costs that also need to be considered when pricing the export product. Additionally, the study attempts to provide an indication of the profitability of the case company's potential exports.

The third research problem attempts to provide detailed guidelines for the case company to arrange the export operations; the objectives therefore also attempts to develop a handbook for the company's exports to Germany. The plan attempts to outline the different steps providing instructions and proposals for executing the phases of export.

## Conceptual framework

The conceptual framework is based on the figure by Erica Selin (2004, 104) describing different phases of export process. The first phase of the process, business opportunity, refers to the identification of potential international markets. GMH has already identified Germany as a potential market area and therefore this phase has not been discussed in this thesis. The second phase, called analysis, attempts to analyse the company's current resources and readiness for internationalisation. This phase also includes the identification of opportunities and threats of the macro environment and understanding the country's external forces that affect international

trade. The process continues with the planning phase when the company decides the market entry strategy and identifies the actions that must be conducted before starting the actual export operations. In the implementation phase the company selects the possible freight forwarder to handle the physical transportation of the goods and other operations of the international logistics, e.g. documentation and customs clearance. These three phases, analysis, planning, and implementation, formulate the operational phases of this export process that are studied in this thesis. Finally, based on these phases, the researcher attempts to provide a handbook that describes in detail how the case company should conduct the export of pump parts. At the bottom of the figure, monitoring and control refer to the importance of constantly evaluating and controlling the export activities in every phase of the process. However, as these are not included in operational phases of the export process, they are not discussed in much detail in this thesis.

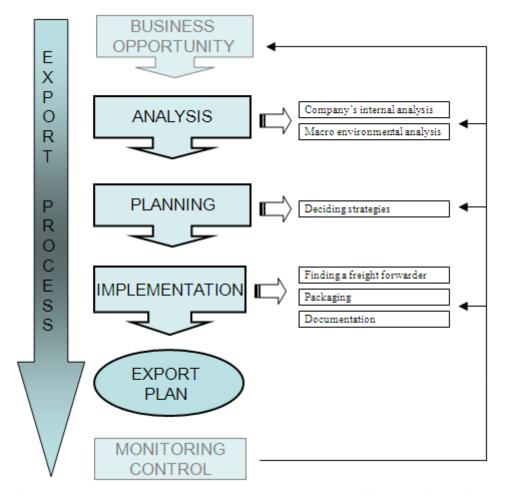


Figure 3: Conceptual Framework: Export Process (Based on a figure by Erica Selin 2004)

#### 5 RESEARCH METHODOLOGY

Methodology refers to the way in which the researcher approaches the problem and the way the research is conducted. The most used research methods are qualitative and quantitative ones.

The purpose of the qualitative research is to understand and interpret, rather than explain the specific event or situation. In qualitative research the researcher aims to create a comprehensive conception of a particular phenomena or situation. The goal is to understand those being studied from their perspectives. (Hirsjärvi, Remes & Sajavaara 2004, 155; Koivula, Suihko & Tyrväinen 2003, 31.)

Qualitative research usually requires a strong theoretical base. Without the proper theory, it will easily become a conception that is based on either the personal intuition or opinion. Qualitative research is suitable for developing working habits or finding alternative courses of actions. (Koivula et al. 2003, 22, 31.)

Quantitative research differs from qualitative research from its numerical and statistical approach. Qualitative data are based on meanings expressed through words. They result in the collection of non-standardised data that require classification and are analysed through the use of conceptualisation. (Saunders, Lewis & Thornhill 2003, 378, 406.) Quantitative researchers are looking for patterns in events and the relationship among variables. The data for quantitative analysis can be collected and coded at different levels of numerical measurement. (Saunders et al. 2003, 368.)

Case study is a form of a qualitative research that focuses on producing detailed and intensive data of the research object. In case study, it is important that the data being analysed form an entirety, a comprehensive unique case. (Eskola & Suoranta 2005, 65; Hirsjärvi & al. 2004, 123.) This thesis is conducted in the form of a case study attempting to provide detailed information on the case company's export operations.

#### 5.1 Qualitative data collection

Qualitative data is often collected through various methods, such as interviews, focus groups, intensive interviews, participant observations, and collection of oral histories and field notes. The two primary types of interview methods are structured interview and unstructured interview. The structured method means that the interviewer has determined the questions and the answer categories in advance. (Eskola & Suoranta 2005, 15, 86.)

The informal conversational interview is the most open-ended approach to interviewing. It is also called an unstructured interview. Unstructured interviews are in depth interviews without any set format, but in which the interviewer may have some key questions formulated in advance. The strength of the informal conversational method resides in the opportunities it offers for flexibility, spontaneity, and responsiveness to situational changes and individual differences. A weakness of the informal conversational interview is that it may require a lot of time with preparation and pulling together and analysing data. (Patton 2002, 342-343)

The method for gathering the data for internal analysis in this thesis was conducted by using unstructured interview (Appendix 3). It was carried out personally face-to-face in December 2007. The information was recorded by taking notes with the help of a third participant, Eero Nikkanen from Satakunta University of Applied Sciences, who also made an interview with the Managing Director. The purpose was to conceptualise the current situation of the company. This kind of interview ensured that the researcher understood the whole situation and all the technical issues and was able to pose more detail questions if necessary. This ensured also the utilization of interviewee's expertise at its best, as the researcher probably could not have been able to set the subjects and limits of the interview correctly to get best possible answers.

The method for gathering the data for conducting the exporting handbook was carried out by sending a request for quotation (Appendix 4) to freight forwarders to create a comprehension of the amount of the different costs of transporting and forwarding the goods to the named destination. All the freight forwarders were asked

to send their quotations for the same products and requirements. Sampling method used in this thesis is purposive sampling. The freight forwarders were selected according to the case company's needs and requirements.

### 5.2 Validity and reliability

It is important to evaluate the reliability and validity of the research. The reliability refers to the confirmation that the procedures of the research inquiry can be repeated by other researchers achieving similar findings. Reliability is thus often linked with repeatability. Another conception referring to the evaluation of the research is validity. Validity is the ability to measure the relevant issues, in other words those that were initially intended. Sometimes respondents may have misunderstood the questions, resulting that the answers are not valid for the intended purposes.

Reliability and validity are often linked to the quantitative research and there are different views whether they are suitable for evaluating the qualitative research. However it is important to somehow assess the reliability and validity of every research. In qualitative research the reliability can be increased by describing precisely how the research is conducted. This should be taken into consideration in every stage of the research process. (Hirsjärvi & al. 2004, 213-214.)

Reliability in this research is based on asking for the same information from each freight forwarder. Each freight forwarder was sent a request for quotation with the same information, requirements and questions. As this thesis is based on qualitative research and is a form of a case study, the reliability might be somewhat difficult to evaluate. However, to increase reliability of this thesis the whole research process is described precisely in every phase of the study. Furthermore, as the freight forwarders were asked to send their quotations for their best charges, there is a strong likelihood that any company requesting their quotation in a similar situation would achieve similar results.

To ensure validity, the freight forwarding companies were selected by using purposive sampling. They were chosen according to the requirements of the case company and its specific industry. This means that the respondents were experts and

familiar with this area. To ensure that the freight forwarders interpreted the information given in the request for quotation properly they were asked to send itemised quotation and also encouraged to ask for clarifications. The itemised quotation enabled the researcher to identify the answers that were initially pursued.

The research results are most useful for the case company, but the results would be useful for similar companies in India as well. Even if this case focuses on the exports to Germany, it can also be adapted to exports to other EU countries, as most of the regulations, requirements and circumstances are quite similar, especially in the western European countries like France and Austria.

### 6 EXPORT PLAN FOR GMH

The purpose of this operational export plan is to function as a detailed handbook for arranging the export and transportation of two types of pump parts, pump NRV body and pump MF 157 bowl, to a German customer. The phases of the plan are presented step-by-step, providing instructions and proposals for executing the phases of export. This chapter links the theoretical aspects of international logistics and exporting to empirical information presented in this chapter. The plan covers the phases from the point when GMH contacts freight forwarders and prepares a quotation for the German customer to the point when the export transaction is successfully completed. However, the emphasis of the plan will be in planning and arranging the physical transportation of the goods and evaluating different costs relating to it. Although this plan has been tailored for these specific pump parts, it can be used as a basis for the export of similar products as well.

## 6.1 Description of the goods

The information concerning the export products in this thesis was given by the case company. The detailed part information was sent to the researcher via e-mail (Appendix 5) by the Senior Engineer of GMH. It was determined that the export

consignment would consists of two different types of pump parts, pump NRV body and pump MF 157 bowl. The shipment would include 1125 pieces of both pump parts. In total this would makes 2250 pieces. Detailed part and packaging information for these products are given below:

#### Part 1:

Name of the part: PUMP NRV BODY

Material: Cast iron

Dimensions: Total length 147.0 mm

Major diameter 161.0 mm

Shape: Cylinderical

Weight: 6.5 kg

Price: US \$6 ex works

Quantity: 1125 pieces

Part 2:

Name of the part: PUMP MF 175 BOWL

Material: Cast iron

Dimensions: Total length 139.0 mm

Major diameter 161.0 mm

Shape: Cylinderical

Weight: 6.0 kg

Price: US \$5 ex works

Quantity: 1125 pieces

It has been determined that the parts will be packed in to a wooden box (0.762 m x 0.762 m x 0.762 m / 25 x 25 x 25 feet), containing 25 pieces / box. The weight of one box would be 10 kg.

#### 6.2 Terms of sale

The idea of the terms of sale was also initiated by GMH. The company has got two alternatives that it prefers: either to provide the goods available to the customer in its factory (ex works) or arranging the transportation of the goods to the port of destination. As one objective in this thesis was to investigate the costs of forwarding and transportation, the researcher chose to apply Incoterm CPT in this study as it obliges GMH to arrange and pay the transportation of the goods to the port of destination. Another possibility would have been Incoterm CIP but that would have meant insurance responsibilities for GMH.

Even if the customer is located in Germany the goods will be transported to the port of destination, Rotterdam, The Netherlands. The purpose is to arrange the transportation of the goods from Coimbatore to the port of Mumbai, and from Mumbai, to the port of Rotterdam. The customer will arrange the transportation from Rotterdam to its own premises to Germany at its own expense. Planned schedule for the shipment is July, 2008.

As the terms of sale are according to Incoterms 2000 (CPT Rotterdam), GMH has to make sure that it is familiar with the rights and obligations of both parties associated with this Incoterm. The Incoterm defines the point to which GMH is responsible for the goods and what are the expenses relating to its obligations which will therefore have to be included in the price GMH offers for the buyer.

CPT "Carriage paid to..." means that GMH delivers the goods to the carrier that it has nominated, or more precisely in this case, the carrier collects the goods from GMH's premises (Coimbatore) on the agreed date or period on July 2008. This is the point where GMH actually delivers the goods to the buyer. GMH must in addition make a contract for the carriage of the goods and pay the cost of carriage necessary to bring the goods to Rotterdam. This means that the buyer bears all risks and any other costs occurring after the goods have been delivered to the carrier. "Carrier" means here the person who undertakes to perform or to procure the performance of transport.

GMH is also obliged to provide the goods and the commercial invoice in conformity with the contract of sale. GMH also has to obtain at its own risk and expense export licence or other official authorization and carry out needed customs formalities in India. However, GMH does not have any obligations concerning the contract of insurance. Basically, GMH bears all risks of loss or damage to the goods until the time they have been delivered to the carrier. After delivery, the buyer bears all risks of loss or damage.

The costs that GMH is obliged to pay include costs relating to the goods until they have been delivered to Rotterdam, freight costs, all the charges for unloading in Rotterdam if defined in the contract of carriage, as also costs of customs formalities for exports and any other charges payable upon export. The buyer arranges and pays the customs duty and the costs of customs formalities for importing the goods in The Netherlands.

## 6.3 Step 1 - Contacting freight forwarders

Before sending the final price quotation to the customer, GMH should contact the freight forwarders who can provide information on ocean freight costs, forwarder's fees, duty charges and consular invoice fees or any other costs that need to be added to the price GMH offers to the customer.

As GMH lacks the resources and knowledge to conduct international shipping itself, it has decided to use a freight forwarding company which is specialised in international logistics to handle the transportation and forwarding of the goods from Coimbatore to Rotterdam. To find a suitable freight forwarder for GMH's needs, and to identify the costs that need to be added to the final price, five freight forwarders were sent a request for quotation as a purpose to compare the services and prices they offer.

### 6.3.1 Request for Quotation

General selection criteria were set up in order to find five freight forwarders that would reflect GMH's needs. These selection criteria included:

- company's ability to provide comprehensive transport solutions
- company's ability to handle the required documentation
- company's ability to arrange customs clearances

This pre-selection of freight forwarders was based on the information that was found on the Internet by using search engines and logistics and cargo directory, Freightnet, taking into consideration the desire to compare freight forwarding companies that differ from each other, for example, in company size and location. The selected freight forwarding companies included Schenker AG, Kuehne + Nagel Inc., and DHL International GmbH, which are world's leading providers of integrated logistics services, as well as one Indian freight forwarding company, APT Logistics, and one Finnish company Wikeström & Krogius Oy.

The purpose of the request for quotation (RfQ) was to receive an accurate and realistic offer for the transportation and forwarding of the pump parts. Each freight forwarder was given the same information and questions concerning the transportation, prices and additional services. The following information was given in RfOs:

- Inquiry No.
- Short company presentation
- Place of departure, port of departure and port of destination
- Terms of delivery
- Planned schedule
- Description of the goods
- Description of packaging
- Quantity
- Total weight

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Total value

• Estimated yearly quantity

• Period of validity of RfQ

Preferred method of contact

• Contact information

The following calculations were made to determine the total weight, amount of boxes and value of the shipment:

#### Amount of boxes needed:

Part 1: 45 (1125 / 25)

Part 2: 45 (1125 / 25)

Total amount: 90

## Weight of boxes:

Part 1: 7762.5 kg (45 x 25 x 6.5 kg + 45 x 10 kg)

Part 2: 7200.0 kg (45 x 25 x 6.0 kg + 45 x 10 kg)

Total weight: 14 962.5 kg

### Value of the shipment:

Part 1: US \$6750 (US \$6 x 1125)

Part 2: US \$5625 (US \$5 x 1125)

Total value: US \$12375

The estimated yearly quantity was estimated to be around 180 tons. This would refer to a similar shipment as this once a month, totaling 12 shipments per year. (14962.5 x 12) This estimation was added to the RfQ as it may have an effect on the amount of costs.

Additionally, the freight forwarders were asked to give information concerning their capability to handle the required documentation as also the list of needed documentation, their capability to arrange customs clearances and possible storage the goods in Rotterdam, freight costs, forwarding costs, harbor costs, custom fees

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and duties as well as any other possible costs. Each RfQ was given an inquiry number that the freight forwarder was asked to mention in its quotation. This was done to facilitate the handling of the quotations.

The RfQs were sent by e-mail or using an inquiry form found in the freight forwarder's web sites. They were sent 17 April 2008 under the name of Trigon Technology Oy, the Finnish company that represents GMH in Europe. The quotations were asked to send via e-mail by 28 April 2008.

## 6.3.2 Container type

As the goods will be transported in containers it would be useful to estimate the size and type of the needed container. Often the freight forwarders may quote their charges according to the different container sizes. The following calculations have been made to determine the container type that is needed for the 90 boxes of pump parts.

The size of a wooden box is 0.762 m x 0.762 m x 0.762 m.

Number of boxes needed 90.

The interior dimensions of 20 feet and 40 feet containers are given below:

20 feet container interior dimensions:

- width 2.350 m
- length 5.885 m
- height 2.403 m

40 feet container interior dimensions:

- width 2.350 m
- length 12.033 m
- height 2.394 m

The calculations have been made according to 40 feet container interior dimensions:

The maximum number of boxes in one layer: 3 boxes (2.394 m / 0.762 m)

The maximum number of boxes in width: 3 boxes (2.350 m / 0.762 m)

3 boxes one upon the other and 3 boxes next to each other in width would make 9 boxes in cross-section.

Rows in longitudinal direction: 10 rows of boxes side by side (90 boxes / 9 boxes)

The length of 10 boxes in longitudinal direction: 7.62 m (10 x 0.762 m)

As the length of 20 feet GP container is only 5.885 m, the goods have to be loaded into 40 feet GP container. The length of 40 feet GP container is around 12.033 m. Thus the 40 feet GP container would be long enough for 10 boxes next to each other in longitudinal direction.

However, the 40 feet GP container will not fill a full 40 feet container. The optimum shipment would be one full container, but the goods can also be shipped by consolidating them with some other company's goods to group them together for one container shipment. As the maximum capacity of 40 GP container is 26.680 kg, this will be sufficient enough for 90 boxes whose total weight is 14 962.5 kg.

## 6.3.3 Freight forwarders

The request for quotation was sent to five freight forwarding companies. The quotation was received from an Indian company APT Logistics. The quotation included an itemised cost calculation on transporting and forwarding the goods to Rotterdam.

### **APT Logistics**

APT Logistics is an Indian freight forwarding company, founded in 2002. The company's head office is situated in Mumbai. The company has also representation in all major cities throughout the world. Additionally, it has offices in major cities in India, including also among others Bangalore, Chennai, and Coimbatore. The

company is specialised in helping its customers with different custom regulations. APT Logistics also provides special services such as documentation, packing, warehousing and customized solutions. (APT Logistics)

Before sending the quotation the freight forwarder contacted the researcher to ensure that he had understood the content of the request for quotation correctly. The forwarder demanded some clarifications for the intended port of departure and destination that the researcher wanted them to quote their prices for.

Contrary to what was requested in the quotation, APT Logistics quoted the charges through the port of Chennai instead of the port of Mumbai. The reason for this is that Chennai is the nearest port for Coimbatore and consequently more economical solution for GMH than Mumbai. Hence, APT Logistics quoted their best charges for ex works Coimbatore through the port of Chennai up to Rotterdam as in the following:

(Values converted to USD 2 May 2008, EUR 1= USD 1.5484)

Pick up charges: US \$1432.27 (per 40 GP container)

Custom clearance: US \$139.36

Documents: US \$77.42 (per shipment)

Ocean freight: US \$3483.90 (per 40 GP container)

CAF (Currency Adjustment Factor): US \$19.65

BAF (Bunker Adjustment Factor): US \$345 (per TEU)

CSF (carrier security fee): US \$7

Low sulphur fuel charge: US \$5 (per TEU)

THC (Terminal Handling Charge): US \$371.62 (per 40 GP container)

Handling: US \$38.71 (per container)

As one 40 feet container equals two TEU, the charges given for one TEU must be multiplied by two. These charges make in total US \$6269.93. This total sum has been calculated for less than container load, not considering possible consolidated shipment with some other company's goods. In case the goods could be consolidated, it would be more economical solution for GMH. As the charges have

been given for one container or for one TEU, GMH is able to use them as a basis for calculating the costs of exporting some other products also and finding an optimal size for a shipment.

The charges for handling the required documentation and customs clearance in India were also included in the quotation. As APT Logistics would be able to provide these services it is therefore able to fulfil GMH's requirements that the company has set for the potential freight forwarder. If GMH will form a contract with the freight forwarder, it should also negotiate that the freight forwarder arranges the required documentation and assist GMH with packing and marking the goods as well.

### Other freight forwarders

Even if quotations were not received from the other four freight forwarders, they all might still be potential forwarding companies for GMH in the future. That is why they are shortly presented below:

#### Schenker

Schenker AG is one of the world's leading providers of integrated logistics services, offering land operations, air and seafreight as well as comprehensive logistics solutions and global supply chain management. Schenker is a part of DB Logistics, the Transport and Logistics Division of Deutsche Bahn AG. It was founded in Vienna 1872 and there are more than 59 000 employees at about 1500 offices worldwide. The corporate office of Schenker India is located in New Delhi. In total, there is a network of 27 locations and over 900 employees in India. The locations include cities such as Bangalore, Chennai and Mumbai. (Schenker; Schenker India)

Even if Schenker India did not send its quotation, it was in contact with the researcher by several e-mails for asking clarifications for the request for quotation. As APT Logistics, Schenker also asked whether it would be possible for quoting the rates from the port of Chennai instead of port of Mumbai as Chennai is the nearest port for Coimbatore and that's why more economical solution for the case company. According to Schenker it would be very costly to transport the goods to Mumbai.

This is valuable information for GMH. In General, the researcher finds Schenker as a potential freight forwarder for GMH.

Kuehne + Nagel

Kuehne + Nagel is one of the world's leading logistics providers. The company was founded in 1890 in Bremen, Germany. It provides integrated end-to-end supply chain management solutions for many major industries, including high-tech, industrial, chemical, aviation and automotive. There are 830 offices in over 100 countries with more than 51,000 employees. (Kuhne + Nagel)

Also Kuehne + Nagel contacted the researcher by phone and asked some clarifications for the terms of sale. However, it was said that do the relatively short validity time of the request for quotation, the company might not be able to quote their prices. The quotation was not received.

#### DHL International GmbH

DHL is one of the market leaders in international express, overland transport and air freight. The company offers a full range of customised solutions - from express document shipping to supply chain management. DHL's international network links 220 countries and territories worldwide. The company employs 285 000 employees taking care of transportations to 120 000 destinations in all continents. DHL is 100 % owned by Deutsche Post World Net. (DHL United Kingdom) DHL did not either send a quotation.

#### Wikeström & Krogius Oy

Wikeström & Krogius Oy is a Finnish international forwarding agent, specializing in road-, sea-, air- and project transports. The company has a network of selected agents worldwide that enable the company to operate globally. The company handles transports from small parcels up to large special deliveries door to door. The company offers regular service for full container loads (FCL) as well as containers loaded with single consignments (LCL) to and from any destinations. Wikeström &

Krogius Ab has offices in five places in Finland, head office located in Turku. (Wikeström & Krogius Oy) The quotation was not received.

## 6.4 Step 2 – Choosing a freight forwarder

The information on expenses and freight forwarders in general will help the case company in its future exports as the company must be able to recognize and estimate the costs and evaluate the profitability of its exports. In the future it is recommended that GMH also contacts a few other freight forwarders before beginning the actual exports, in order to be able to compare the prices and services that they offer. After that GMH should review the selection criteria that it has set up for the freight forwarders and then choose the forwarding company that best suits its needs.

As the selection criteria included the suggestion that the freight forwarder should be able to provide comprehensive transport solutions, including handling the required documentation and customs clearance, APT Logistics could be a potential alternative for GMH. The received quotation indicates that APT Logistics is able to fulfil all those general criteria that are required of it. However, these additional services should be carefully negotiated before making an actual contract with the freight forwarder.

### 6.5 Step 3 - Final price quotation

After having received a quotation from the freight forwarder, GMH will be able to estimate the costs related to the transportation of the goods that need to be added to the final price quotation. The basis for defining the export price is the price including charges only up to GMH's factory. The ex works price for pump parts is US \$12375. In addition, the export price should contain the costs of physical transportation, forwarding, export formalities and documentation as well as any other costs derived from the freight forwarder's services or the transportation from Coimbatore to Rotterdam. The calculations for defining the export price for the pump parts based on the APT Logistics' quotation have been presented in following:

EXW	EX WORKS	\$
	EXW Coimbatore	12375.00
FOB	FREE ON BOARD	
	EXW Price plus	12375.00
+	Pick up charges	1432.27
+	Customs clearance	139.36
+	Handling	38.71
	FOB Chennai	13985.34
CPT	CARRIAGE PAID TO	
	FOB Price plus	13946.63
+	Freight costs	3483.90
+	Document fees	77.42
+	CAF	19.65
+	BAF	690.00
+	CSF	7.00
+	Low sulphur fuel charge	10.00
+	Terminal Handling Charge	371.62
	CPT Rotterdam	18644.93

Additionally, there are costs related to the financial arrangements and interests payable, terms of payment, possible third party inspection services and also insurance arrangements. These must also be added to the price GMH offers for the buyer. As insurance responsibilities are not covered in CPT Incoterms 2000, GMH and the buyer have to agree on how to arrange the insurance.

After calculating the final price for the goods, GMH should prepare a final price quotation, for example in a form of a proforma invoice, a quotation prepared in an invoice format. According to the website of The Federation of International Trade Associations (2002), the quotation should cover all the following bases:

- contact information of the buyer and seller
- terms of sale (Incoterms 2000)
- proposed terms of payment
- validity time of the quotation

- estimated shipment date
- · currency of sale
- quantity, description, unit prices, total price, and weight (net and gross, in pounds and kilos) of the export goods
- description of packaging
- itemised description of the selling price

If the buyer accepts the conditions of the proforma invoice, it sends a purchase order for GMH.

### 6.5.1 Import levies

Even if GMH is not responsible for the import clearance of pump parts in The Netherlands under the CPT Incoterm, it would be valuable to estimate the amount of duty rates and value added tax that the buyer has to pay for the goods. As the duty rates and VAT increase the costs of the goods for the buyer, they may affect the attractiveness of the trade. The formulation of the duty rates and VAT are described below to give a basic understanding of the amount and factors affecting these import levies.

TARIC is the online customs tariff database of the European Commission in which all measures relating to tariff, commercial and agricultural legislation are integrated. By integrating and coding these measures, the TARIC secures their uniform application by all member states and gives all economic operators a clear view of all measures to be undertaken when importing or exporting goods. (The European Commission. 2004)

The import tariffs for the pump parts have been determined in the TARIC database by defining TARIC code for the products. The pump parts were categorizes in the following way:

Code	Product Description
8413	Pumps for liquids, whether or not fitted with a
	measuring device; liquid elevators
8413 91	– parts
8413 91	– of pumps
8413 91 00 90	– other

The TARIC code for pump NRV body and pump MF 157 bowl is 8413 91 00 90. The country of origin is defined to be India. The import duty for these products is thus 1,70%. (The European Commission) The definition of the value for customs is derived from "transaction value" which is the commercial value of the merchandise at the point of entry in the EU. This value is the total amount of purchase price and delivery costs up to the point where the goods first enter the customs territory. As the goods are transported to the port of Rotterdam, the duties are paid there. The transaction value for the pump parts is US \$18644.93 and the import duty 1,70 %. The duties that the customer has to pay for these goods are thus US \$316.96 (1,70 / 100 x 18644.93).

In addition to customs duty, the goods transported from non-EU states are liable to import VAT. This is usually charged when customs clearance procedures take place in order to be released for circulation. However, when goods are imported into an EU member state but are intended for use or consumption in another, they can be placed under a VAT suspension arrangement. This means that VAT will be charged in the member state of destination and not in the member state where they entered the EU. (The European Commission) As the pump parts will enter the EU territory in the Netherlands but they are intended for use in Germany, the goods should be placed under the VAT suspension arrangement. This means that the import VAT would be paid in Germany even though the customs duties are charged already in the Netherlands. As discussed already in the chapter 3.5, the rate of the import VAT in Germany is 19%. This is charged on the duty paid value of the import article plus a customs duty. The duty paid value for the pump parts is US \$18644.93 and the

customs duty US \$316.96. This makes in total US \$18961.89. The import VAT for the pump parts is thus US  $$3602.76 (19 / 100 \times US $18961.89)$ .

## 6.6 Step 4 - Contracts in the export transaction

### Contract of sale and financial arrangements

After the buyer has accepted the proforma invoice, it may serve as a contract between GMH and the buyer. Or alternatively, the parties can agree on a specific contract of sale. This is the central contract in the export transaction. The contract of sale covers all the principal elements of transaction so that surprises and uncertainties can be avoided. It includes a clear description of the goods, the packaging method, the price, the terms of delivery and payment, and other possible information required. This contract is the ruling contract in the export transaction, and other contractual arrangements, like transport, insurance and payment, have to be in accordance with this sales contract.

After the contract has been made, GMH should make sure that there are no export restrictions for the goods it is going to export. It should also be ascertained that an export license is not required. After considering all these aspects, the next step is to make all necessary financial arrangements with the bank.

### Freight forwarding contract

After having agreed the contract between GMH and the buyer, GMH should start to arrange the physical transportation of the goods and required documentation. This will be done with the help of the chosen freight forwarder. Thus, the next step is to form a forwarding contract with the freight forwarder that specifies the charges and services needed. In addition, the contract should include any specific forwarding instructions issued by GMH. GMH has to also ensure that it understands the general terms of the contract that may be a part of the actual forwarding contract, specifying the obligations and rights of both parties.

### Contract of carriage

Another basic contract is the contract of carriage, which is formed between the shipper and the carrier. The carrier may act through an agent or broker. The freight forwarder is responsible for planning the transportation and making the necessary transport agreements such as contract of carriage. The contractual terms and conditions of transport contracts are found in a transport document, bill of lading.

#### Insurance contract

As the insurance responsibilities are not defined under CPT Incoterm, GMH has to negotiate the insurance arrangements with the buyer. The insurance contract will be made between the insurer and either the seller or buyer to insure the shipment.

### 6.7 Step 5 - Securing transportation and documentation

After all the contracts have been made, GMH arranges the transportation of the goods and the required documentation through the freight forwarding company. The freight forwarder reserves the required space on the ship and takes care of other needed activities. There are some general requirements for products exported from third countries to the EU that GMH should be aware of. Of course, the freight forwarder will assist GMH with all these requirements and take charge of those. Finally, before delivering the goods to the carrier, the goods must be packed and marked appropriately.

## 6.7.1 General requirements

The general requirements for all products for exporting to the European Union include six elements. First, the commercial invoice is needed for a record or evidence of the transaction. Once the goods are available, the seller issues a commercial invoice to the buyer in order to charge him for the goods. The commercial invoice contains the basic information concerning the transaction and it is always required for customs clearance. Another requirement is the freight documents. The bill of

lading is issued by the shipping company acknowledging that the goods have been received on board. Additionally TIR Carnet may be required for the international transport of goods a part of which has to be made by road. They allow the transport of goods under a procedure called the TIR procedure. The third requirement refers to the packing list, which is a commercial document accompanying the commercial invoice and the transport documents. The purpose of the packaging list is to provide information on the imported items and the packaging details of each shipment (weight, dimensions, handling issues, etc.). The customs value declaration is a document which must be presented to the customs authorities where the value of the imported goods exceeds EUR 10 000. When exporting to the EU, also the freight insurance is required. For the customs import declaration, Single Administrative Document (SAD) is needed. SAD is the common import declaration form for all the member states. In addition, there may be additional documents depending on the operation and the nature of the imported goods that shall be declared with the SAD and shall be presented together with it. The freight forwarder, who is specialized in handling the documents, is able to assist the exporter with all these. (The European Commission)

### 6.7.2 Preparing, packing and marking the goods for shipment

The CPT term used in the export transaction requires that GMH pays the costs of checking operations, such as checking quality, measuring, weighing and counting, which are necessary for the purpose of delivering the goods in accordance with the contract of carriage. GMH is also responsible that the packaging is according to the requirements and sufficient enough to protect the goods during transportation. If the customer provides any instructions or requirements for the packaging, GMH has to take those into consideration. Also the freight forwarders are often able to recommend the degree of packaging needed and optimal packaging sizes.

As the pump parts are packed into wooden boxes, GMH should ensure that the producer of the boxes has used appropriate wood, which has been heat treated or fumigated according to the international ISPM 15 standard. The boxes should also be marked properly with the label of ISPM 15 standard.

GMH should also ascertain that the consignment is adequately labelled so that the goods can be easily identified. As services of the freight forwarders also include marking the goods properly for the shipment, it would be advisably for GMH to use these services and benefit from their knowledge and experience to ensure the successful transportation of the goods. If there are any specific requirements for handling the goods, the freight forwarder should be informed about them as these instructions should also be marked to the consignment.

### 6.8 Step 6 - Delivering the goods to the carrier

After all the necessary quality checks and inspection activities have been successfully conducted, and the goods have been packed appropriately, GMH is ready to deliver the goods to the carrier at its premises in Coimbatore. At this point all risks and costs are transferred to the buyer. When the carrier receives the goods, it delivers the bill of lading for GMH. GMH sends the bill of lading for the buyer through his bank. When the buyer presents the bill of lading for the carrier in Rotterdam, the carrier conveys the goods for the buyer.

## 6.9 Step 7 - Monitoring and control

In the final step, after successfully executing the export transaction, GMH should evaluate the company's own performance as well as the performance of the freight forwarder in the export transaction. However, the performance of the freight forwarder should be constantly monitored and evaluated already during every phases of the export operation. To make the export a successful operation, GMH has to find a freight forwarder that is able to fulfil GMH's requirements. If GMH is not satisfied with the freight forwarder's performance, it has to consider the reasons and possibly find another forwarder for its purposes. In the long term, if the company will export regularly, it has to find a freight forwarder that can be viewed as a partner who can be part of or comprise the company's entire logistics management team. The effectiveness of the freight forwarder will partially depend on how GMH is able to manage and control this relationship.

In the early stages of the export, it is difficult to estimate all the costs and expenses that the export operation incurs. That is why it is important to follow and record those expenses carefully so that it can benefit future cost estimates. After having more experience in exporting, it will be easier to assess the costs that the transportation, documentation, customs clearance and different services of the freight forwarder may incur.

Besides evaluating and monitoring the issues involved in the actual export operations, the company's export strategy should be constantly reviewed in the light of changing circumstances both within the company and in the high precision machining markets in which the company operates. After having executed and evaluated the successfulness of the export, GMH will be more able to reassess the resources and time it requires and also estimate the company's capacities for the future and more regular potential exports. In addition, it would be recommended to constantly follow the changing situation of the macro environmental forces of the target country as these may have an effect on the markets and the company's coming exports.

For the coming exports, GMH could use this export plan as the basis for arranging the exports by modifying it according to the situation. Of course every export case is different, but the handbook is supposed to provide a common guideline for the basic start-up arrangements of the exports.

### 6.10 Export procedure framework

The following figure illustrates the main steps of the above discussed export plan. The purpose of this illustration is to provide the basic understanding of the steps and elements that are involved in the export procedure of pump parts.

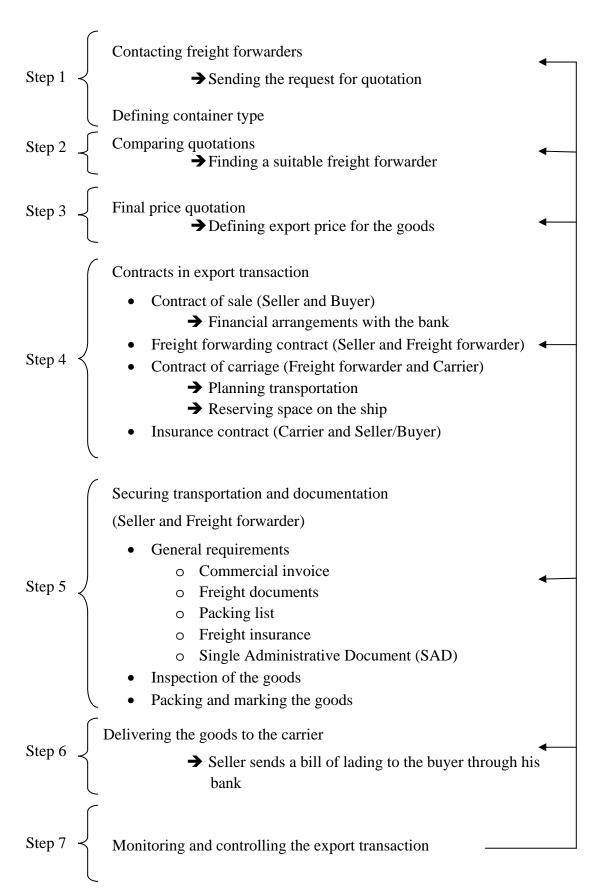


Figure 4: Export procedure

#### 7 CONCLUSION AND RECOMMENDATIONS

The starting point in this thesis was to generate an operational export plan for the case company, GMH Machines and Tools Pvt. Ltd. The purpose was to provide the case company with a basic understanding of the exports to Germany, as the company wanted to know about the operations that are involved in it. This also included identifying the operations that incur expenses. Hence, the empirical part consisted of business environmental analyses and of the actual export plan that involved the different phases and functions of exporting.

When gathering the research findings, the freight forwarders were sent a request for quotation with the same information, requirements and questions. The purpose of the request for quotation was to define the operations that incur expenses when transporting and forwarding pump parts to the EU. Additionally the request for quotation attempted to clarify the freight forwarder's capacities to handle the documentation and customs clearances. To increase the reliability of this thesis, the process of composing, sending and analysing the request for quotation was carefully described. The researcher felt that the request for quotation was somewhat difficult to do. It was rather hard to ensure that all the needed information was included in the request for quotation, as the researcher did not know exactly what information the freight forwarders needed in order to be able to quote their prices and services. To ensure validity and to make sure that the freight forwarders understood the request for quotation as the researcher had intended, they were asked to itemise their quotation and encouraged to ask for clarifications.

A quotation was received from the Indian freight forwarding company APT Logistics, and it gave useful information about the expenses that the freight forwarder's services and the transportation of the pump parts incur. The freight forwarder contacted the researcher by phone to ensure that it had understood everything correctly. This is how the validity was ensured. However, these prices given in the quotation were only suggestive. The researcher believes that the freight forwarder would provide more detailed information on the expenses, customs

clearances and documentation after the company has made a forwarding contract with it and become its customer.

The results derived from the quotation by APT Logistics provide indication of the profitability and the possibilities of GMH's exports. The quotation specifies the expenses resulting from the transportation and forwarding of the pump parts to Rotterdam. The results indicate that a big part of the total price GMH would be able to provide for the customer would result from the costs of transportation and forwarding, as the total value of the shipment was US \$12375.00 and the cost of transportation and forwarding would total US \$6269.93. However, the possible consolidation was not taken into account in this. In addition, there would be costs related to the financial arrangements and the interests payable, the terms of payment, the possible third party inspection services and also the insurance arrangements. After evaluating all these costs, GMH should determine the export price for the products. It has to be taken into account that the customer also has to pay the import duties and taxes. After all these costs and expenses GMH should be able to provide the products for the customer with a lower price than the competitors and this is what affects the profitability and opportunities of GMH's exports.

When planning the exports, GMH should also pay attention to the price of the raw-material and its procurement. In case the company cannot find a suitable raw-material supplier from India and has to acquire raw-materials from Europe, for example, this would also affect the price GMH provides for the customer. At some point the expenses might be so high that it would not be profit-making to export to Europe.

Although GMH is responsible for arranging the transportation of the pump parts under Incoterm CPT only up to the port of Rotterdam, it should still pay attention to and consider the customer's plans concerning continued transportation of the goods from Rotterdam to the customer's premises in Germany. In addition, GMH should consider whether the term CPT would be the best alternative for GMH or whether there would be some other Incoterm that would be more advantageous. The term CPT may leave considerable responsibility for the customer. It may be difficult for the customer to compare GMH's prices with competitors' offers. Thus these are the

factors that GMH has to evaluate and negotiate with the customer besides insurance responsibilities.

Before GMH starts exporting it has to carefully consider its own resources, possibilities and above mentioned profitability of the export operations. Exportation always requires additional resources, and the operations have to be managed and affiliated to the company's normal business activities. At this point it would be important that GMH would be able to start the production in India at its full capacity. This would bring liquidity and evidence of the company's successful operations and facilitate GMH's entry to German markets.

For potential future exports GMH should find a freight forwarder who can provide comprehensive logistics solutions. Before GMH starts the actual exports, it should review various freight forwarding companies to find the one that best suits its needs. APT Logistics could be a potential freight forwarding company for GMH but it would be recommended to also consider other possible companies to identify differences between their services and prices. A freight forwarder that is specialized in LCL (less than container load) shipments and consolidation might bring additional value for GMH. Another solution for GMH would be arranging shipments that fill a full container as they are more economical solutions, but that might be impossible owing to the irregular shipments.

In general, Germany is a very potential target country for GMH. Germany is both politically and economically stable, and the leading industrial sectors provide opportunities for high precision machining companies. However, the German high level of technological innovation, development and automation sets definite challenges for companies like GMH as the customers will require more and more technologically developed solutions along with shorter delivery times and more affordable prices. The way GMH is able to market its products to German customers will definitely have an important role in this. The marketing strategy developed by Eero Nikkanen for French markets provides a valuable basis for GMH on how to market its products also for German customers and to finally be able to internationalise.

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(Source: Google Maps)

20' GP Container I	Dimensions	Millimetres	Feet
Inside	Length	5885	19'4"
Dimensions	Width	2350	7'8"
	Height	2403	7'10"
	Width	2338	7'8"
Door Opening	Height	2292	7'6"
		Kilograms	Pounds
	Max. Gross	24000	52910
	Tare	2150	4740
	Max.		
Weight	Payload	21850	48170
		Cube Metres	Cube Feet
Capacity		33,15	1170

20' GP Container Dimensions (Source: World Wide Customs & Forwarding Agents)

40' GP Container Dimensions		Millimetres	Feet
Inside	Length	12033	39'6"
Dimensions	Width	2350	7'8"
	Height	2394	7'10"
Door Opening	Width	2338	7'8"
Door Opening	Height	2280	7'6"
		Kilograms	Pounds
	Max.		
	Gross	30480	67200
Weight	Tare	3800	8377
	Max.		
	Payload	26680	58823
		Cube Metres	Cube Feet
Capacity		67,7	2390

40' GP Container Dimensions (Source: World Wide Customs & Forwarding Agents)

INTERVIEW GMH Machines and Tools Pvt. Ltd.

Time: 15.11.2007

Place: Pripoli Centre of Technology, Pori

1.

Company's business concept and strategy

2.

Company's current situation in India

3.

Company's current resources concerning personnel and their experiences, financial issues, equipment, machinery, production etc

4.

Your ideas of future foreign market entry and competitive advantage in Europe

Trigon Technology Oy is a Finnish company representing an Indian machining company, GMH Machines and Tools Pvt. Ltd. in Europe. GMH is a manufacturer of high precision components in Coimbatore India.

GMH is commencing to export pump and other machinery parts to Europe. Estimated yearly quantity is 180 tons. Could you please quote for the transportation and forwarding of the goods from Coimbatore to Mumbai in India and from Mumbai, India to the port of Rotterdam, The Netherlands? Terms of delivery is CPT Rotterdam (Incoterms 2000).

Below you find the detailed product and packaging information for the first shipment. Planned shipment schedule is July, 2008.

Part 1:

Name of the part: PUMP NRV BODY

Material: Cast iron
Shape: Cylindrical
Weight: 6.5 kg
Quantity: 1125 pieces

<u>Part 2</u>:

Name of the part: PUMP MF 175 BOWL

Material: Cast iron
Shape: Cylindrical
Weight: 6.0 kg
Quantity: 1125 pieces

The parts are packed in to a wooden box (0.762 m x 0.762 m x 0.762 m / 2.5 x 2.5 Feet), containing 25 pieces / box. The weight of the box is 10 kg / box.

Amount of boxes needed: 90 boxes

Total weight of boxes: 14 962.5 kg

Total value of the consignment: US \$12375

Could you please give the following information in your quotation:

#### 1. Documentation

- Your capability to handle the required documentation for export and import
- List of the required export/import documentation
- Your ability to arrange customs clearance in India and Europe

## 2. Storage of the goods

- Your capability to storage the goods in Rotterdam

## 3. Pricing

- Freight cost in India
- Forwarding harbor and custom fees and duties in India
- Ocean freight cost to Rotterdam
- Forwarding, harbor and custom fees in Rotterdam
- Cost of storage of the goods in Rotterdam
- Any other cost not listed above

Feel free to contact us if you need any clarifications.

Please send your quotation via E-mail by 28.04.2008 addressed to:

Trigon Technology Oy Attn. Karoliina Pitko Tiedepuisto 4 FI-28600 Pori Finland E-mail: karoliina.pitko@trigontech.fi

Tel. +358 40 518 6458

Our Inquiry No. I080401 to be mentioned in your quotation.

# GMH MACHINES AND TOOLS PVT, LTD.

## 1. NRV BODY

NAME OF THE PART : NRV BODY

MATERIAL OF THE PART : CAST IRON

DIMENSIONS OF THE PART : TOTAL LENGTH = 147.0mm

: MAJOR DIA = 161.0mm

SHAPE OF THE PART : CYLINDERICAL

WEIGHT OF THE PART : 6.5kg

AMONUNT OF THE PIECE : Rs 250/ piece (US \$6)

#### PACKING METHOD

2.5\*2.5\*2.5 Feet packing wooden box which contain 25-30 pieces/ box. With normal export packing methods used here in local. In special case if the costumer needs any extra care we follow the instructions as required.

### 2. MF 175 BOWL

NAME OF THE PART : MF 175 BOWL

MATERIAL OF THE PART : CAST IRON

DIMENSIONS OF THE PART : TOTAL LENGTH = 139.0mm

: MAJOR DIA = 161.0mm

SHAPE OF THE PART : CYLINDERICAL

WEIGHT OF THE PART : 6.0kg

AMONUNT OF THE PIECE : Rs 200/ piece (US \$5)

## PACKING METHOD

2.5\*2.5\*2.5 Feet packing wooden box which contain 25-30 pieces/ box. With normal export packing methods used here in local. In special case if the costumer needs any extra care we follow the instructions as required.

Senior Engineer.