



## **International Market Entry strategy for AmStar-Europe**

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*A m S t a r - E u r o p e***Management summary**

The topic of the thesis is developing an International Market Entry strategy for AmStar-Europe to enter Europe. AmStar-Europe is a new company with no experience abroad and needs an International Market Entry strategy plan to guide the penetration of the European market.

The following recommendations are found:

- Enter Denmark through direct export and focus on AffaldVarme Århus, Forbrændingsanlægget REFA, Roskilde Forbrænding and I/S vestforbrænding first, because they are open to new technology's and responded quickly. Focus on persons who make (big) investment decisions, analysed in table 14 and sell the AmS 8\*\* coating through personal selling.
- Develop references for potential customers by providing current customers with small samples. These samples provide knowledge about the product and word-of-mouth can distribute this knowledge into the market.
- Use trade shows and seminars to build awareness, show references, meet new customers and maintain your relationships with current customers. Frequently visit Denmark to maintain the relationships and to keep informed. AmStar-Europe should keep up to date when it comes to environmental regulations and laws in Europe. They should share information and educate and inform the market about the function of the AmS 8\*\* coating.
- Send information before business meetings, be punctual, professional and organising personal meetings to establish a good relationship. When selling the coating show environmental concern and focus on the long term effect of the coating.

These recommendations are found searching the internet, contacting several external organisations like the EVD, the FME, the embassy of the Netherlands in Denmark. Also information to formulate these recommendations were found reading scientific articles and distributing questionnaires.

The consequences are that it will take a lot of time to build awareness, establish relationships and sell the coating. Because it is a new product with high investment costs and little references people are cautious. The most important thing is to develop references for potential customers.

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**Introduction**

This thesis is part of the curriculum Business Administration direction International Management. The topic of the thesis is developing an internationalization strategy. I chose this topic because of the technical nature of the product and industry involved and the international environment.

The thesis is divided in four chapters. In the first chapter an overview of the research is given. Chapter two analyses related literature and gives a theoretical framework of the whole research and its individual steps. In chapter three the methodology of the research is described. The fourth chapter focuses on the information that is found of the individual steps of the research. Finally chapter five presents the conclusions, formulates recommendations, analyses the limitations of the Master Thesis and gives implications for further research.

## Chapter 1; Background

The first chapter presents an overview of the whole research. First the background is described, after which the research questions and structure are presented and finally the relevance of the Master thesis is given.

Nowadays many companies decide to go international or are already internationalized. Companies produce abroad, get their materials from different countries, sell their products and services abroad or even transfer whole departments to a foreign country. A definition of economic globalization is “the international integration of goods, technology, labour and capital; that is, firms implement global strategies that link and coordinate their international activities on a worldwide basis” (*Ball, McCulloch, Frantz, Geringer & Minor; 2006*). International business differs from domestic business because crossing borders means dealing with different environments. There are different drivers for a company to consider when going abroad. Ball, McCulloch, Frantz, Geringer & Minor (2006) formulated five drivers: political, technological, market, cost and competitive drivers.

AmStar-Europe B.V. is a joint venture of AmStar Surface Technology from Houston, the United States and Hilux5 from Hengelo, the Netherlands. AmStar Surface Technology wants to expand to Europe but needed some assistance to realize it. They contacted HiLux5 and together they set up a joint venture AmStar-Europe. AmStar-Europe penetrates the European market with the product of AmStar Surface Technology’s using the industry knowledge of HiLux5. AmStar-Europe needs an International Market Entry strategy to guide the internationalization.

### 1.1 Research questions and structure

The following aspects are considered in order to come to the problem formulation.

- The objective is to develop an International Market Entry strategy for AmStar-Europe to analyse and describe where and how AmStar-Europe should enter the European market and how they should sell their product in the target country.
- The product can be used in different industries where erosion and corrosion problems occur in high temperature environments, but because HiLux5 is specialized in the Power and Waste to Energy industry, the International Market Entry strategy focuses on this industry only.
- This research focuses on countries in Europe and not on regions, because legal requirements and laws differ per country and are considered in this research.
- Limited time is available and therefore an International Market Entry strategy plan is written for one country only.

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Based on the aspects stated above, the problem formulation is defined as follows:

***Which International Market Entry strategy should AmStar-Europe follow to enter an European country in the boiler market of the Power and Waste to Energy industry?***

Based on the problem formulation, the research questions are defined as follows:

- 1.1. What are the organizational characteristics of AmStar Surface Technology, HiLux5 and AmStar-Europe?***
- 1.2. Which criteria are considered when choosing a target country and which country in Europe should AmStar-Europe select as the target country?***
- 1.3. What are the characteristics of the boiler market of the Power and Waste to Energy industry in the target country?***
- 1.4. Which criteria are considered when choosing an entry mode type and which type should AmStar-Europe choose to enter the target country?***
- 1.5. How should AmStar-Europe sell its products in the target country?***
- 1.6. How should the International Market Entry strategy be implemented in the target country to have the greatest chance of success for AmStar-Europe?***

## **1.2 Relevance**

The practical and scientific relevance is analysed.

This Master thesis is written to receive a Master degree but it is also assigned by the company HiLux5. They want to use the thesis to structure the penetration of AmStar-Europe into Europe. This Master thesis advises the company how they have to do this. It also provides the company with different models they can use in other contexts and for different companies or parts of the company.

This Master thesis also analyses the potential of the top three countries in Europe in the end of the country selection. The selection model shows which countries have the most potential and which one are not an appropriate country to enter. It generates information about how to enter the country with the most potential and shows the steps companies have to follow when entering a new market.

The main scientific relevance of this Master thesis are the models that are developed in this Master thesis. All the different models are formulated based on a (short) literature review. The International Market Entry strategy plan as a whole is formulated, a country screening model is developed, the entry mode decision is structured and elements of the marketing plan are distinguished.

A deductive approach is used in this research. The theoretic framework represents different models and theories to give an answer to the research questions. The next chapter analysis the theoretical framework of this Master research.

## Chapter 2; Theoretical framework

Chapter two focuses on related literature and gives a theoretical framework of the whole research and its individual steps. The theoretical framework focuses on the literature and models that are used in this research.

The articles used for the International Market Entry strategy plan as a whole were found using the databases of “JStore” and “Web of Science”. The keywords “International market entry”, “internationalization strategy” and “International strategy” were used to find articles. It was difficult to find many articles. All three articles that were found relevant, after reading them, were used for the theoretical framework of the International Market Entry strategy plan. Table 1 gives an overview of the elements of the different internationalization strategies found.

Model with author(s)	International market entry strategy model Root (1994)	Evolutionary knowledge management model Saarenketo Puumalainen, Kuivalainen & Kyläheiko (2003)	Internationalization Glückler (2005)	Internationalization Ball, McCulloch, Frantz, Geringer and Minor (2006)	Internationalization Tupura, Saarenketo, Puumalainen, Jantunen & Kyläheiko (2008)
Analyse internal environment		X	X	X	X
Analyse external environment	X <sup>a</sup>	X		X	
Choose target market	X		X		X
Choose entry mode	X		X		X
Marketing plan	X				
Tactical plan				X	
a : included in choose target country					
Table 1; an overview of elements of internationalization strategies					

The International Market Entry strategy that is used in this research is based on the strategies of the authors described in table 1. Only Tupura, Saarenketo, Puumalainen, Jantunen & Kyläheiko (2008) state that after the choice of an entry mode type the target market is chosen. In my opinion the entry mode type partly depends on the target market, because characteristics of the target country favour or even demand certain entry mode types. Also according to Root (1994) and Glückler (2005) first the target market is chosen and then the entry mode type is substantiated. The elements of the International Market Entry strategy are presented in figure 1. A small part of the external analysis is executed in the country selection.

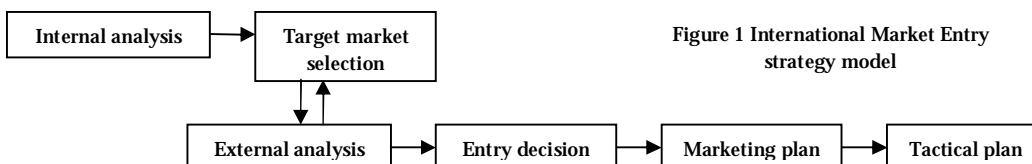


Figure 1 International Market Entry strategy model



## 2.1 Internal analysis

To understand the companies engaged in this research an internal analysis is executed. The internal analysis focuses on product-, market- and organizational characteristics.

To understand the purpose of the companies engaged in this Master thesis (AmStar Surface Technology, HiLux5 and AmStar-Europe) their mission and vision are formulated. A mission is the overriding purpose of the company which is in line with the values and expectations of stakeholders (*Johnson, Scholes & Whittington; 2006*). A vision is a desired future state of the company (*Johnson, Scholes & Whittington; 2006*).

To map the organisational characteristics the model of McKinsey is used, because questionnaires based on the model of McKinsey were already designed by a student for her Bachelor thesis, conducted from February until July 2008. The model of McKinsey is developed to describe several factors which have to be considered and influenced by managers to make their business effective and efficient (*Pascale & Athos; 1981*). According to McKinsey, strategy is only one in seven successful business practices. The 7S model of McKinsey is showed in figure 2.

The first three elements; strategy, structure and systems, are considered the hardware of success. Strategy represents the overall purpose and goals of a company, structure describes the line of command and system represents systems used in a company for several supporting activities (*Pascale & Athos; 1981*).

The other four; skills, shared values, style, staff, are considered the software. Skills represent the skills needed to carry out the companies strategy, shared values focuses on values that are shared among employees, style means a common way of thinking and behaving and staffing represents hiring, training and firing people (*Pascale & Athos; 1981*).

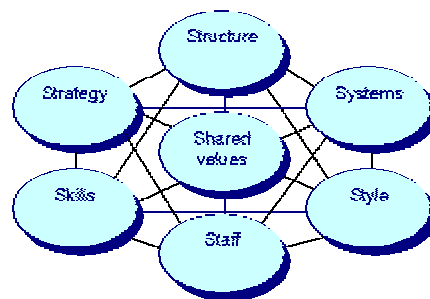


Figure 2; 7S model of McKinsey (*Pascale & Athos; 1981*)

## 2.2 Country selection

A target country is selected where the International Market Entry strategy is going to be written for. Selecting among international markets requires information and the assessment of information across different types of markets determines, in large part the degree of success (*Wood & Robertson; 1999*).

The articles used to find the criteria for the selection model were found using the databases of “JStore” and “Web of Science”. The keywords “criteria”, “elements” and “country selection” were used to find relevant articles. It was difficult to find many articles with analysed criteria for a country selection. Only two articles are relevant, the articles of Russow & Okoroafo (1996) and Wood & Robertson (1999). A textbook written by Ball, McCulloch, Frantz, Geringer & Minor (2006) also mentioned criteria for country selection model. The founders of AmStar-Europe also formulated criteria which had to be included in the country selection model. Table 2 gives an overview of the criteria found in the two articles, the textbook and those that were formulated by the founders of AmStar-Europe.

	Market forces	Economic forces	Infrastructure	Legal forces	Political forces	Financial forces	Socio-cultural forces	Distance
Russow & Okoroafo (1996)	X	X	X	X			X	
Wood & Robertson (1999)	X	X	X	X	X		X	
Ball, McCulloch, Frantz, Geringer & Minor (2006)	X	X		X	X	X	X	
Founders of AmStar-Europe	X <sup>a</sup>						X <sup>b,c</sup>	X
a : market size b : level of adaptation of new and innovative products, and techniques c : level of English and/ or German								

Table 2; criteria for the selection model

This research further includes only the criteria formulated by the founders of AmStar-Europe and by Ball, McCulloch, Frantz, Geringer & Minor (2006).

The criteria mentioned by Ball, McCulloch, Frantz, Geringer & Minor (2006) include all the other criteria mentioned by the other authors except for infrastructure. Infrastructure is a part of the criterion “economic forces” because in my opinion economic development influences the investment and development of infrastructure in a country and (new) infrastructure indirectly impacts economic development of a country (*Ball, McCulloch, Frantz, Geringer & Minor; 2006*).

The distance criterion formulated by the founders of AmStar-Europe is used to scan Europe and find countries which are put into the country selection model, because this criterion is found to be very important.

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The method of the country selection is formulated based on different models and theories found in the databases of “JStore” and “Web of Science” and in textbooks I used for my study. The keywords “country selection model” and “selection model” were used to find relevant articles for the country selection model. Only a few relevant models were described in the articles that I found. The most relevant articles and their country selection model are listed below:

- Root (1994). He identifies three steps when selecting a target market (first a preliminary screening, then a market potential screening and finally a sales potential estimation).
- Kramer (1964) and Deschampsneufs (1967) use multiple stages of assessment using general and product specific market size indicators, as well as a measure of a nation’s level of development.
- Ball, McCulloch, Frantz, Geringer & Minor (2006) formulated six steps to select a target country (a market screening step, a financial & economic screening step, a political & legal screening step, a socio-cultural screening step, a market potential screening step and a selection step).

All authors suggest a selection model using several steps, this has two big advantages (*Root; 1994*):

1. The model can handle many countries and therefore countries with good prospects are not ignored.
2. As little time as possible is spent investigating countries with poor prospects.

Only Root (1994) and Ball, McCulloch, Frantz, Geringer & Minor (2006) analyse distinctive steps. This research uses the screening model of Ball, McCulloch, Frantz, Geringer and Minor (2006) because their formulated criteria are used. They identify six steps, the first step of the market screening is a initial screening where the basic need is evaluated. The second screening step focuses on financial & economic forces. The third step focuses on political & legal forces. The fourth step screens of the socio-cultural forces of a country. The fifth step looks at competitive forces, specific on market potential. The three countries with the most potential go to the final step of the selection model where all criteria mentioned in the previous steps are summarized. Countries that are put into the model are analysed using the distance criterion. AmStar-Europe wants to enter countries that are relatively close to the Benelux. Close to the Benelux means laying within 1500 km of Hengelo. 1500 km of Hengelo is chosen because 1600 km results in 30 countries for the model, 1500 km puts 25 countries in the model and with 1400 km 22 countries lay in the circle. The founders of AmStar-Europe found 25 countries an acceptable number of countries to study and the five countries that are excluded using 1500 km and included using 1600 km have no or little potential. These countries are: Spain, Moldavia, Romania, Macedonia and Albania. Spain has 10 Waste-to-Energy plants and thermally treats 2,1 million tons per year. Moldavia, Romania, Macedonia and Albania have no potential for AmStar-Europe.

The scores of the countries on the different criteria can be done in different ways: (Best/ Second/ Worst; Equal best/ Equal best/ Second; Best/ Equal second/ Equal second) The only article found in the database of “Web of science” about weights of criteria to select a target country. The article of Wood & Robertson (1999) found six environmental dimensions which are important when working international, weights are assessed for these dimensions. The weight of the criteria is therefore analysed using an article of Wood & Robertson (1999). Table 3 represents the criteria Wood & Robertson described, the criteria that are used in this research and the importance of each criteria. The founders of AmStar-Europe find these weights the most suitable.

Criteria of Wood & Robertson	Importance of criteria	Criteria used in this research
Market potential	<div>Most important</div> <div>↓</div> <div>Least important</div>	Market potential
Legal		Political & Legal forces
Politics		Financial & Economic forces
Infrastructure		
Economy		Socio-cultural forces
Culture		
Table 3; Criteria of the research and it weight		

### 2.3 External analysis

To better understand the target market an external analysis is done to describe specific market, customer en competitor characteristics.

The target country is selected using the method in the previous section. Some basic characteristics are mentioned in this part, the Power and Waste-to-Energy industry of the target country is analysed and the five forces framework of Porter is used to analyse the competitive forces in the target market.

Basic characteristics focus on financial forces, the economic state of the country, the political environment, legal forces and the socio-cultural environment.

The five forces framework of Porter identifies five forces that shape strategy (*Porter; 2008*). These forces are:

1. The threat of new entrants;
2. The threat of substitute products or services;
3. The bargaining power of buyers;
4. The bargaining power of suppliers;
5. Rivalry among existing competitors.

Understanding the competitive forces and their underlying causes, reveals the roots of an industry's current and future profitability while providing a framework for anticipating and influencing competition over time (*Porter; 2008*).

## 2.4 Entry mode decision

The choice of an entry mode type is an important part of a firm's foreign investment strategy (*Chang & Rosenzweig; 2001*). Companies who enter a foreign market can choose from different entry modes. The choice of entry strategy becomes particularly significant, not only for the success of a new product but, for the performance of the total new business internal development effort in the firm (*Block & MacMillan; 1994*). The entry mode decision is structured in this part of the Master thesis.

Entry modes can be classified in three categories: Export entry modes, Contractual entry modes and Investment entry modes (*Root; 1994*). The entry modes are described and the advantages and disadvantages are listed in table 4.

1. Export entry modes are entry modes where the product is manufactured in a different country than where it is sold. You can distinguish two main kinds of export; *indirect export* uses middlemen who are located in the company's own country and who actually do the exporting and *direct exporting* which does not use home country middlemen, although it may use target country middlemen (*Root; 1994*). Exporting is essentially the transfer of products or services to a target market.
2. Contractual entry modes are long term non equity associations between an international company and an entity in a foreign target country that involve the transfer of technology or human skills from the former to the latter (*Root; 1994*). Contractual entry modes are: licensing arrangement, franchising, technical agreements, service contracts etc. In a licensing arrangement a company transfers to a foreign entity for a defined period of time the right to use its industrial property in return for royalty or an other compensation. Franchising differs from licensing in motivation, service and duration. With franchising the foreign company also gets the right to use the company's name, trademarks and technology. Franchising is not suitable for products which require substantial capital investment, high levels of technical competences and service products (*Root; 1994*), and is therefore not included in this research. Other contractual entry modes like technical agreements, service contracts etc involve the transfer of services directly to foreign entities in return for monetary compensation. These arrangements are not optional for AmStar-Europe because the knowledge comes from the USA.
3. Investment entry modes involve ownership by an international company of manufacturing plants or other production units in the target country (*Root; 1994*). You can classify sole ventures with full ownership and control (new establishments or acquisitions) and joint ventures with shared ownership and control. Investment entry involves the transfer to a target country of an entire enterprise.

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Indirect exporting	Direct exporting	Licensing	Investment entry
<i>Advantages</i>			
Low start up costs	Low start up costs	Low transportation costs	Low production and transportation costs
Share risks	Full control	Share risk	High control
Demands little market knowledge	Marketing advantages	Demands less market knowledge	Marketing advantages
International learning experience	Full protection of trademarks	Access to resources and local customers	Access to resources and local customers
Easy to stop	Easy to stop	No import restrictions	No import restrictions
<i>Disadvantages</i>			
High transportation costs	High transportation costs	Lack of control	High start up costs
Share profit	High risk	Share profit	High risk
Import restrictions	Market knowledge is needed	Risk of creating a competitor	Market knowledge is needed
	Import restrictions	Share technology and trademark	Long payback period
		Can not use other entry mode during licence	Difficult to quit
Table 4; the advantages and disadvantages of different entry mode types			

The choice of an entry mode is influenced by several criteria. The articles used for the entry mode criteria are found using the databases of “JStore” and “Web of Science”. The keywords “entry mode” and “criteria” are used to find relevant articles. Many articles resulted from the search and a selection was made using the number of time cited. The summary of the 20 articles with the highest times cited has to be read. The whole article of the 10 most interesting articles has to be read. And the articles that were the most relevant are used and are listed in table 5 on the next page.

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		Root (1994)	Pehrsson (2006)	Chan Kim & Hwang, (1992)	Broutthers & Nakos (2004)	Block & MacMillan (1994)	Chang & Rosenzweig (2001)	Brown, Dev & Zhou (2003)	Buckley & Casson (1998)	Burgel & Murray (1998)	Times mentioned
Home country	Market size	X					X				2
	Concentration of competition	X					X				2
	Production costs	X								X	2
	Barriers	X			X		X				3
Target country	Sales potential	X						X			2
	Concentration of competition	X		X			X				3
	Marketing infrastructure	X									1
	Production costs	X									1
	Trade barrier (risk)	X		X	X		X				3
	Geographical distance	X									1
	Cultural distance	X					X	X			3
	Location familiarity			X							1
	Resource availability							X			1
	Costs							X	X		2
	Diversification					X					1
Company	Commitment	X									1
	Control requested and present		X		X						2
	Value of firm specific knowhow			X				X			2
	Company size	X			X	X	X	X		X	6
	Threat to existing customers					X					1
	Experience abroad						X			X	2
	Level of technology	X							X	X	3
Product	Product adaptation	X									1
	Property protection					X					1
	Level of customization	X								X	2

Table 5; Criteria which have an influence on entry mode type

All criteria are categorized in four main groups: home country, target country, company and product characteristics, because some authors use these four groups. Criteria of authors that did not mention the groups are put into the groups. Not every author uses the same definition or use different words. For example trade barrier, one authors mentions trade barrier and explains it as different kinds of risk, while an other author mentions risk explicitly. Risk and trade barrier are not mentioned as separate sub criteria but as one in this example trade barrier. Some criteria have some overlap in an other group like property protection. Property protection can be put in company and product characteristics. It is however put in the group product characteristics because it influence the product specifically. This research focuses on the four main groups and its sub elements mentioned in table 5 except for production costs because nothing is produced. The last column of table 5 represents the number of times the criterion was mentioned by the authors.

This analysis includes target country characteristics which are also mentioned in the country selection. There is a small overlap of the two analyses. In this Master thesis the two steps are deliberately separated and dealt with individually.

## 2.5 The marketing plan

To effectively sell a product or service in a target country a marketing plan has to be developed. This part focuses on the marketing plan and its individual steps.

There is a tendency in the high-tech industry to believe that the technical superiority of a product is the determining variable in its commercial success (*Davies & Brush; 1997*), but nowadays this is not fully applicable. To successfully sell a product or service in a target country a marketing plan has to be written. Adoption of a new technology is likely to be faster if the marketing strategy is compatible with the segment targeted (*Easingwood & Harrington; 2002*), therefore the marketing plan analysed here is only written for the Power and Waste-to-Energy market in Denmark. One crucial decision for international marketing managers is the extent to which marketing strategy and programs should be standardized across international markets (*Iyer; 1997*).

There are several elements of a (foreign) marketing strategy. The elements are found searching for articles using the databases of “JStore” and “Web of Science”. The keywords “International” and “marketing strategy” are used to find relevant articles. A few articles resulted from the search and a selection was made using the number of time cited. The whole article of the 10 most interesting articles has to be read and the articles that were the most relevant are used and are listed in table 6. Not all authors focus on high tech specifically. Davies & Brush (1997) and Eastingwood & Koustelos (2000) focus specifically on marketing high technology products.

Elements of a (foreign) marketing strategy	Market Segmentation	Market preparation	Targeting	Product	Naming	Price	Packaging	Place	Distribution	Promotion/ selling	Tech support
Authors											
McCarthy's 4 P's (1981)				X		X		X		X	
Dickson & Ginter (1987)	X					X					
Jain (1989)				X		X			X	X	
Szymanski, Bharadwaj & Varadajan (1993)				X		X			X	X	
Davies & Brush (1997)	X			X	X	X	X		X	X	X
Eastingwood & Koustelos (2000)		X	X			X				X	
Table 6; elements of a foreign marketing strategy by several authors											

Looking at table 6 some authors combined several criteria into one element. Place refers to the location and channels in the target country, these elements are already analysed in the target country decision and the entry mode decision. Place is therefore not included in the marketing plan.



Overall, a marketing strategy consists of the following elements, which are analysed in this Master thesis:

- Market segmentation means analysing the market and distinguishing different segments.
- Market preparation focuses on getting the target market ready for the product, building awareness and relationships (*Eastingwood & Koustelos; 2000*).
- Targeting focuses on finding the right customers (*Eastingwood & Koustelos; 2000*).
- Positioning includes the product, naming, price and packaging and focuses on creating a image or identity (*Eastingwood & Koustelos; 2000*).
- Execution includes distributing, promotion and support and means launching the product to trigger a positive purchase (*Eastingwood & Koustelos; 2000*).

The process of adopting new innovations has been studied for several decades and one of the most popular adoption models is described by Rogers in his book “Diffusion of Innovations (Sherry & Gibson, 2002). Rogers (2003) described the innovation-diffusion process as an uncertainty reduction process and he proposes attributes of innovations that help to decrease uncertainty about the innovation. Attributes of innovations includes five characteristics of innovations, these are:

1. Relative advantage; the degree to which an innovation is perceived as being better than the idea it supersedes.
2. Compatibility; the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters.
3. Complexity; the degree to which an innovation is perceived as relatively difficult to understand and use.
4. Trialability; the degree to which an innovation may be experimented with on a limited basis. The more an innovation is tried the faster its adoption is.
5. Observability; the degree to which results of an innovation are visible to others.

Rogers (2003) argued that innovations offering more relative advantage, compatibility, simplicity, trialability and observability will be adopted faster than other innovations.

After an analysis of the theory that is going to be used in this Master thesis, the next chapter focuses on how information for all individual steps is gathered to fill out the different models presented in this chapter.

### Chapter 3; Methodology

Chapter three analyses the methodology of the individual steps of the Master thesis. It focuses on how information is gathered to fill out the models and use the theory analysed in the previous chapter.

#### 3.1 Internal analysis

Information about the mission and vision of the companies HiLux5, AmStar Surface Technology and AmStar-Europe, are found using the individual websites. Two questions in the company questionnaire, which can be found in the attachment, asked about the mission and vision of the company.

The product and market are described using the individual websites of the companies and by talking to several employees.

To find organisational characteristics of the companies HiLux5, AmStar Surface Technology and AmStar-Europe a company questionnaire is used. The company questionnaire is mainly based on the 7s model of McKinsey and each S is included in the questions. The questionnaire which was send to AmStar Surface Technology is expanded with some questions about the product application, because the questionnaire was also used by an other student who has to analyse this aspect as well. The company questionnaire are filled out by several employees of the three companies, AmStar Surface Technology, HiLux5 and AmStar-Europe. The questionnaire of AmStar Surface Technology was filled out by Scott Southall. The five shareholders of HiLux5 filled out the company questionnaire of HiLux5. Atrhur Kinnegen and Piet Binkhorst filled the questionnaire of AmStar-Europe out, because AmStar-Europe does not exists at the moment only the questions they can answer are answered.

#### 3.2 Country selection

The country selection consists of a model with several steps. These steps require specific information about market potential, political & legal information, financial & economic information and facts about the socio-cultural environment. The information for the individual steps are overall found on the internet. Several internet sites are used. Especially the website of cewep is used to find information about market potential and also websites of the individual plants are used. For the other steps websites of individual countries, general country information sites and the websites of the EVD and the FME-CWM are consulted.

The internet programme Google earth is used to find the countries which are put into the model. Google earth is a programme which maps the world on scale. In the programme the centre of the circle is set and a circle with a radius of 1500 km is drawn. Google earth can draw lines and measuring them at the same time. After a few lines were drawn with starting point Hengelo a circle became visible.

### 3.3 External analysis

The external analysis focuses on the target country found in the previous step of the International Market Entry strategy. The external analysis focuses on general aspects of the target country, on the Power and Waste-to-Energy industry and on the five forces framework of Porter.

The general aspects of the target country are already analysed in the country selection and little attention is therefore paid on general information.

Information about the Power and Waste-to-Energy industry is found on the internet site of the target country, on the internet site of cewep, on the internet site of the EVD and of Power and Waste-to-Energy companies.

The five forces framework of Porter is used to analyse the competitive forces in the target market, these forces are: threat of new entrants, bargaining power of buyers, threat of substitute products or services, bargaining power of suppliers and rivalry among existing competitors. Information about the five forces are found mainly on the internet. The site google is used to find company names and the individual web sites are consulted for specific information. Also the internet sites of the cewep, the EVD and FME-CWM is also used.

### 3.4 Entry mode selection

The choice of an entry mode is influenced by four groups with several criteria, listed in table 5 in chapter two. Each criterion is analysed and information about these criteria is found through an extensive internet search. Several websites are consulted like the website of the target country, sites of the individual plants and the websites of the companies EVD, FME-CWM and Cewep are used. This information is compared with what the authors say about the criteria and the most suitable entry mode type is substantiated.

Also talking to several employees of HiLux5 and the founders of AmStar-Europe generates information which can be used, this information is mainly about the product and company characteristics.

### 3.5 Marketing plan

A marketing plan consist of several aspects, Rogers' five characteristics of innovation are analysed and also the marketing plan elements: market segmentation, market preparation, targeting, positioning and execution are discussed.

Information about the five characteristics of innovations formulated by Rogers are found by talking to the employees of HiLux5 and the founders of AmStar-Europe. Also information that is gathered in previous parts is also used like specific product and customer information.

Information for the marketing plan elements: market segmentation, market preparation, targeting, positioning and execution are found using several scientific articles, contacting the EVD and FME-CWM. A plant questionnaire is also developed to find specific information about the plant and boiler. The plant questionnaire can be found in the attachment and is send to the interesting plants of the target country. These interested plants are already found in the external analysis. The plant questionnaire focuses on general information about the plant, the level of innovation of the plant and the willingness to innovate. Also information about contact persons and people who make investment decisions is included in the plant questionnaire and is found on the internet sites of the individual plants. In total twenty plants were contacted, because contact information was found for only twenty plants. DONG energy represents nineteen of the forty-one plants but no contact information was found for all plants only a general e-mail address. In total eight people responded to the e-mails and in total five questionnaires were send back (including DONG energy). Every week a reminder e-mail was send for a period of three months.

The next chapter presents the information found, based on the models and the methodology. All the information about the different steps of the International Market Entry strategy are presented in the next chapter.

## Chapter 4; Data

This chapter focuses on the information that has to be used to answer the research questions. First an analysis of the companies is given to describe the internal environment, after which a selection of a target country is conducted, then the external analysis is presented, an analysis is conducted about the entry mode decision and finally the marketing plan is described.

### 4.1 Internal analysis

The goal of the internal analysis is to describe the goals and purposes of the companies that are considered in this research focussing on the product, the market and the organizational characteristics.

#### 4.1.1 HiLux5

HiLux5 is founded in 2005 by five men and now has about 20 employees. They are pioneers in the boiler market in the Power and Waste-to-Energy industry. HiLux5 provides knowledge, craftsmanship and experience to the customer in and around the boiler<sup>1</sup>. The mission of HiLux5 is to become the permanent provider of projects in and around the boiler<sup>1</sup>. The vision of HiLux5 is to excel in three areas: first, to be the provider of engineering projects and coordination up and around the boiler; second, expand the department logistics on site; and third, to be the provider and adviser of protecting materials inside the boiler<sup>2</sup>.

HiLux5 focuses on: strengthening the engineering capacity and quality; expanding logistic solutions; set up long term alliances to enlarge the supply and satisfaction of the customer; bringing new products to the market; providing project coordination at a high level and engaging in Value Recovery Management (find a new purpose for used equipment, installation parts and/or boilers)<sup>2</sup>. The structure is presented in figure 3<sup>2</sup>. HiLux5 uses a system which consists of meetings and informal procedures, decisions are made by people on location<sup>2</sup>. Their skills mainly come from experience, but theoretical knowledge is also important. Quality, trust and honesty are their shared values and HiLux5 has a down to earth mentality<sup>2</sup>. HiLux5 hires people based on a balance between knowledge and experience<sup>2</sup>.

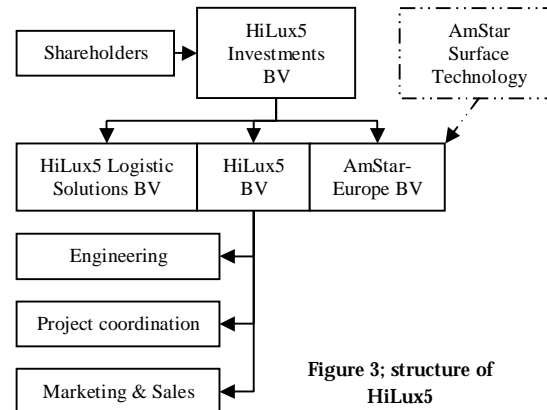


Figure 3; structure of HiLux5

<sup>1</sup> <http://www.hilux5.com>

<sup>2</sup> questionnaire with the five shareholders of HiLux5

## *AmStar-Europe*

### 4.1.2 AmStar Surface Technology

AmStar Surface Technology was founded in 2001/ 2002 and has about 40 employees<sup>4</sup>. They are located in Houston, Texas and have an agent for logistics in Canada, an agent for logistics and sales in Scotland, Kazakhstan and India, a joint venture for equipment development in South Africa and a joint venture for sales in the Netherlands<sup>4</sup>. AmStar Surface Technology is a specialist in the application of high velocity continuous combustion (HVCC) thermal spray coatings (AmS 8\*\*) and distinguish them self by pioneering coating materials and advanced application methods<sup>3</sup>. The AmS 8\*\* series prevent erosion and or corrosion of plant process equipment and components in high temperature environments. The coating is custom made and is applied with specially designed equipment. The coating material is a hollow wire with a powder inside. The wire is guided to an application gun, which uses a sparkle to melt the wire and sprays it on the wall. The coating is applied with high speed and high temperature. The layer thickness lays between 0,5 and 0,75 millimetre. The coating was developed in 2002 and introduced into the American market late 2003<sup>4</sup>. The coating is applied in the Utility, Power, Waste-to-Energy, Pulp & Paper and Petrochemical industry, mainly in the United States<sup>3</sup>.

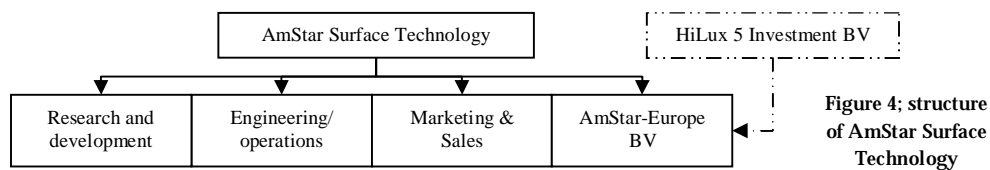


Figure 4; structure of AmStar Surface Technology

“AmStar Surface Technology’s mission is to provide clients with a material upgrade alternative to address corrosion and erosion in process equipment that will enable plants to operate without fear of tube leaks”<sup>3</sup>. They further strive to produce a product that is maintainable for long-term sustainability. AmStar Surface Technology wants to serve in the near future the North American, European and Asian market by being the market leader in development and installation of material upgrades to preserve base metal substrates against corrosion and or erosion<sup>4</sup>. Their structure is presented in figure 4<sup>4</sup>. The individual managers are responsible for their area and the management team reviews customer complaints<sup>4</sup>. They strive to be the most innovative in development of materials and upgrade strategies for long-term payback rather than being a low-cost option<sup>4</sup>. In general the employees of AmStar Surface Technology have specific skills which are developed with hands-on training mainly in-house<sup>4</sup>, because AmStar Surface Technology works in a niche technology that requires specialized knowledge. They stand for quality and innovative products, methods and technologies. AmStar Surface Technology focuses on technology & quality first and sales second<sup>4</sup> and this has resulted in a high retention of clients. A combination of practical and theoretical skills are found within the workforce of AmStar Surface Technology.

<sup>3</sup> <http://www.amstar-usa.com>

<sup>4</sup> questionnaire with the sales director of AmStar Surface Technology

#### 4.1.3 AmStar-Europe

AmStar-Europe combines the product of AmStar Surface Technology with the knowledge of HiLux5. “AmStar-Europe provides a coating performance which prevent erosion and or corrosion of plant process equipment and components in a high temperature environment”<sup>5</sup>. The mission of AmStar-Europe is to enter the European market with the coating performance. AmStar-Europe’s vision is to become the permanent provider of a coating which prevent corrosion and erosion of plant process equipment in high temperature environments<sup>6</sup>. AmStar-Europe gives advice were the coating has to be applied, they clean and prepare the surface, apply the coating using special equipment and home trained personnel, and also offer an after service which includes a regularly inspection and repair duties.

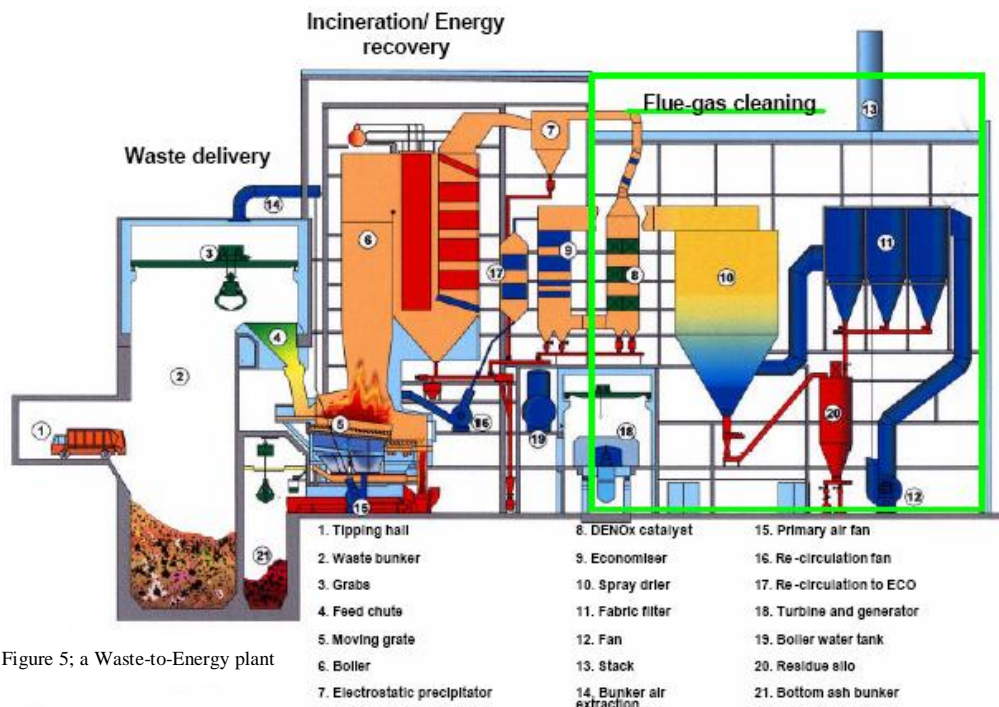
Although the coating can be used in different industries where erosion and or corrosion problems occur, AmStar-Europe focuses at the moment on the Power and Waste-to-Energy plants which burn municipal solid waste, sludge, brown coal or coal<sup>6</sup>, because HiLux5 has knowledge of the industry and has to help set up AmStar-Europe in Europe. Second, the Power and especially the Waste-to-Energy market is a relative big market and is growing very fast. Worldwide about 130 million tonnes of municipal solid waste are combusted annually in over 600 Waste-to-Energy facilities and the European Union wants to eliminate all land filling of combustible materials within the decade (*Themelis; 2003*). Third, the Power and Waste-to-Energy industry is inclined to try new products and techniques because they face big challenges and have a history of investing in new technologies, products and methods. And finally, the composition of the flue gas inside the Waste-to-Energy boiler has changed in the last decade because the level of HCL in the flue gas has risen and does devastating things to the boiler walls. Figure 5 represents a waste to energy plant and number 6 marks the location where a protecting coating has to be applied. Number 6 represents the first part of the boiler where the incineration takes place. A protecting coating has to be applied in the complete seat of the fire, the walls, roof, first pass and second pass. Figure 6 shows the first part of the boiler where the protecting coating has to be applied.

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<sup>5</sup> <http://www.amstar.info>

<sup>6</sup> questionnaire with the founders of AmStar-Europe



*AmStar-Europe*

At the moment there are only ideas about the organisational characteristics because AmStar-Europe is not fully running at the moment. They want to focus on quality and on the wishes of the customer, honesty and reliability are very important values<sup>6</sup>. Long term relationships with customers is important. Many organisational characteristics are adapted from HiLux5 and from AmStar Surface Technology. Shared values, style and skills are the same of those of HiLux5 because their employees work for AmStar-Europe. The people who apply the coating are in the beginning borrowed from AmStar Surface Technology. Future employees of AmStar-Europe are hired by HiLux5 and AmStar Surface Technology trains them in Houston. Research of thermal spray applications and materials is done by AmStar Surface Technology in the United States at the moment and in the future.

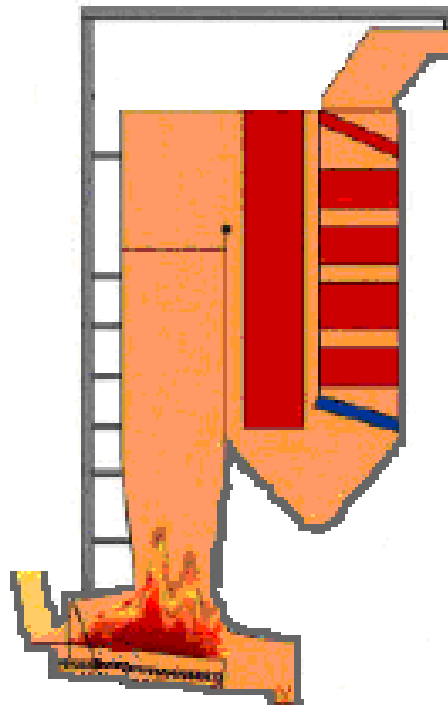


Figure 6; detailed figure of a boiler



#### 4.2 Country selection

The goal of selecting a target country is to find the most potential country for AmStar-Europe.

Countries that are put in the model are European countries, except for relative small countries like: Moldavia, Andorra, Liechtenstein and Monaco. Vatican, San Marino and Malta are included in Italy, Spitsbergen & Jan Mayan are included in Norway, Cyprus is included in Greece and Kosovo is included in Serbia. AmStar-Europe wants to expand their business starting in the Benelux and working its way into Europe and want to enter countries within 1500 km of Hengelo, see figure 7. The red circle in figure 7 is positioned at 1500 km of Hengelo. All countries which lay for more than 50% within the red circle are put into the model, these countries are: Austria, Belarus, Belgium, Bosnia & Herzegovina, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Ireland, Latvia, Lithuania, Luxembourg, Norway, the Netherlands, Poland, Serbia & Montenegro, Slovenia, Slovakia, Switzerland, Sweden and the United Kingdom.



Figure 7; countries that are included in the model lay within the red circle

As described in chapter two the screening model of Ball, McCulloch, Frantz, Geringer & Minor (2006) is used to select a target country. The model consists of six steps to select a target country: an initial screening, a financial and economic screening, a political and legal step, a socio-cultural screening, a market potential screening and finally a target market is selected. Overall the countries in Europe are economically developed and political and legal stable countries, therefore the second and third step of the screening model are eliminated. The steps that remain are evaluated below.

All countries, mentioned above, enter the first step of the screening model. Countries that are not eliminated move to the next screening step. In the end one country remains, the country with the most potential. If country characteristics or selection criteria change which are analysed in a first step, it can have consequences for the outcome. For example, in the socio-cultural screening all countries that do not speak English or German are eliminated. If this criteria should change to all countries that do not speak English, German or France are eliminated results not in a elimination of France. All next steps change because France is still in the model. The result can change because France can be the most potential country. Changes in country characteristics and criteria have to be monitored and take into account.

*A m S t a r - E u r o p e*

- The initial screening evaluates the basic need. Countries are eliminated who: do not need an International Market Entry strategy plan or have no or little market potential.

AmStar-Europe is already working in the Netherlands, Belgium and Luxembourg and these countries do not need an International Market Entry strategy plan. Germany also does not need an International Market Entry strategy plan because a plan is already written. AmStar-Europe focuses on the power and waste to energy industry, but puts more emphasis on the waste to energy plants. There are countries in Europe who do not have any Waste-to-Energy plants and are therefore eliminated. These countries are: Belarus, Bosnia & Herzegovina, Croatia, Estonia, Ireland, Latvia, Lithuania, Serbia & Montenegro, Slovenia and Slovakia<sup>7</sup>. Many of these countries are upgrading its environmental and energy laws to match those of the EU, because they are a new member or want to be a member of the EU. Countries with less than five waste to energy plants are also eliminated from the model. These countries are; Czech Republic, Hungary and Poland<sup>7</sup>.

Countries that are eliminated in the initial screening are: Belarus, Belgium, Bosnia & Herzegovina, Croatia, Czech Republic, Estonia, Germany, Hungary Ireland, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Serbia & Montenegro, Slovenia and Slovakia. Countries that are still in the model and who go to the socio-cultural screening are: Austria, Denmark, France, Italy, Norway, Sweden, Switzerland and the United Kingdom.

- The socio-cultural screening evaluates the cultural elements of the countries. Countries with cultural disadvantages are eliminated and special attention is paid to the level of English or German spoken by the people.

The founders of AmStar-Europe find it very important that people in the target country speak English or German, because AmStar-Europe can only speak these languages. Not only businessmen have to speak English or German but also lower educated people who work in and around the boiler. If AmStar-Europe is working on a project they have to be able to communicate with these employees as well. So also low educated people have to speak English and this is a problem for Italy and France. These countries are known for its bad level of English because of its strong nationalism. Italy and France are difficult to enter in English or German and prefer their own language. The other countries have no significant cultural disadvantages for which they should be eliminated.

Countries that are eliminated in this step are: Italy and France. Countries that are still in the model and who go to the market potential screening step are: Austria, Denmark, Norway, Sweden, Switzerland and the United Kingdom.

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<sup>7</sup> <http://www.cewep.eu>

*A m S t a r - E u r o p e*

- The market potential screening step looks at competitive forces and focuses specific on market potential. The three countries with the most potential go to the final step of the selection model.

In table 9 several criteria are compared for the remaining seven countries. The amount of thermally treated waste per year refers to how much waste is incinerated annually and in this context is more waste incineration better. The number of waste to energy plants represent potential customers, more is better. Looking at how much waste is produced per capita and how much waste is incinerated gives an idea of market potential. More waste per capita and a high incineration percentage is in this context better than low figures.

	Austria	Denmark	Norway	Sweden	Switzerland	United Kingdom
Total incinerated waste (million tons/ year)	1,40	3,40	0,54	3,18	3,14	2,6
Number of waste to energy plants	9	34	13	26	29	22
Amount of waste produced (kg/capita)	627	696	402 <sup>8</sup>	464	356 <sup>9</sup>	600
Percentage of waste that is incinerated	10%	54%	33% <sup>8</sup>	45%	-	8%
Table 7; six potential countries compared <sup>10</sup>						

Denmark, Sweden and Switzerland are the most potential countries of the remaining seven, because they incinerate most waste and have the most waste to energy plants. The United Kingdom comes fourth looking at the numbers in table 7. If there is a lot of growth prospected in the near future the country could be interesting. But because the United Kingdom has no high growth prospect and does not recycle a lot of their waste the United Kingdom is not worth looking at in the next step. Although Norway incinerates relatively a lot of waste they are not selected because the amount of thermally treated waste is rather low.

Countries that are eliminated in the fifth step are: Austria, Norway and the United Kingdom. Countries that are still in the model and who go to the final step are: Denmark, Sweden and Switzerland.

<sup>8</sup> <http://www.ssb.no>

<sup>9</sup> <http://www.bafu.admin.ch>

<sup>10</sup> <http://www.cewep.com>

*A m S t a r - E u r o p e*

- The final step is the selection of the target country. In this step all criteria mentioned in the country screening model are summarized for each country and the target country is chosen.

The scores of the countries on the different criteria are presented using a best second or worse score and are presented in table 8. In table 8 the criteria of the previous steps are all analysed, how each country scores on the different criteria is unique. The country with the best scores is the target country.

Criteria	Weight	Country		
		Denmark	Sweden	Switzerland
Market potential	<div>Most important</div> <div>↓</div> <div>Least important</div>	+/- 40 interesting plants incl. 5 small ones. Produce 696 kg waste /capita. Plants relative close to each other. (Best)	+/- 38 interesting plants incl. 16 small plants. Produce 464 kg waste /capita. Plants relative far from each other. (Second)	+/- 33 interesting plants Produce 356 kg waste /capita. Plants relative close to each other. (Worst)
Political & Legal forces		Stable political conditions, no/ little bureaucracy, democracy, EU member (Equal best)	Stable political conditions, no/ little bureaucracy, civil law country, EU member. (Equal best)	Stable political conditions, democracy, not a EU member. (Second)
Financial & Economic forces		Stable economy, high growth, innovative attitude, good infrastructure, distances are small. (Best)	Rapid market takeoff, high growth, innovative attitude, good infrastructure, distances are big. (Equal second)	Stable modern mixed market economy, distances are small, busy infrastructure network. (Equal second)
Socio-Cultural forces		Informal, focus on personal freedom, open to international influences (Equal best)	Egalitarian, open to international influences. (Equal best)	Strong regionalism, mixed culture, multiple official languages. (Worst)
Table 8; three countries compared				

The country with the most potential is Denmark because all scores of Denmark are better then the scores of Switzerland. Also are the scores of Denmark better or equal to the scores of Sweden, non of them are worse.

## *AmStar-Europe*

### 4.3 External analysis

The goal of the external analysis is to describe the target market AmStar-Europe is penetrating in the target country, Denmark.

Denmark officially includes the Faroe Islands and Greenland, but they are not included in this market analysis, because the distance between the Faroe Islands and Hengelo is more than 1.300 kilometre and between Greenland and Hengelo more than 3.500 kilometre<sup>11</sup>. Denmark is located in Northern Europe on the sea lane, from the Baltic sea to the main oceans of the world and is therefore located on the trade route between the Nordic countries and central Europe. Throughout their entire history, their position has influenced circumstances governing developments in trade and political and military strategy. Because of its central location Denmark is good accessible by air, water, rail and road. Denmark has about 5,4 million habitants, with a population density of approximately 125 habitants per square kilometre. Denmark has 406 islands, but is still relative small.



Denmark has a small, open, stable but flexible economy. The service sector makes up the vast amount of the employment and economy. Its standard of living is average among the Western European countries. The Politics of Denmark take place in a framework of a parliamentary, representative democratic, constitutional monarchy with a multi-party system. The Prime Minister is the head of government. Through Denmark's membership of the EU since 1973, the rules in the EU have become a big part of the Danish law.

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<sup>11</sup> Calculated using Google earth

### 3.3.1 Power and Waste-to-Energy market

After a cholera epidemic in Denmark in the 1850s it was clear to the habitants of Denmark that household waste could not just be disposed of in the streets, but it had to be collected and taken to special assigned landfills (*Kleis & Dalager; 2004*). It did not take a long time when major cities ran out of available landfill sites. To reduce the number of household waste it was incinerated which was introduced in September 1903 (*Kleis & Dalager; 2004*).

Denmark has a relative cold climate with a long winter and home heating is very important almost all year round. Because of the Danish climate and the demand for home heating the Danish people started to use household waste incineration in combined heat and power (CHP) plants, which produce electricity and heat. District heating mainly became very popular in the big cities and almost every city build a CHP plant to supply electricity and heat to nearby citizens. Denmark only has a few coal fired plants and some use natural gas which only generate electricity.

During the German occupation in 1940-1945 the economic and industrial development of the Danish society had stopped. The development started again in the 60's. After the second world war, repairing things no longer paid off and Denmark became a "use and throw away" society. This development had a big impact on the number and the composition of the waste. The calorific value of the household waste increased increasingly (*Kleis & Dalager; 2004*). New plants were build to incinerate the increasing number of waste people produced. After the first energy crisis in 1973 energy supply and consumption became a political issue, and government regulations became tighter and tighter (*Kleis & Dalager; 2004*). At the same time environmental activists began to debate about environmental issues like dioxin and pollution. The government promoted incineration and district heating with taxes and subsidies and a waste management policy followed quickly. All the plants that incinerated waste had to follow strict rules and regulations and many plants had to close their operations and were build according the new rules. As from 1997, Denmark was the first country in the world to introduce a ban on land filling of incinerable waste (*Kleis & Dalager; 2004*). Nowadays Denmark produces under 13 million tonnes waste every year and 60% of all waste is recycled.

### 3.3.2 Five forces framework of Porter

The five forces of Porter are analysed below and include: threat of a substitute product, rivalry among existing competitors, threat of new entrants, bargaining power of suppliers and buyers.

#### *Substitute products*

Substitute products are always present (*Porter; 2008*). A substitute performs the same or has a similar function as an industry's product (*Porter; 2008*). Substitute products or services limit an industry's profit potential by placing a ceiling on prices (*Porter; 2008*). Mapping substitute products results in analysing industry profit potential.

The substitute products of the AmS 8\*\* coating are other products that protect process equipment from erosion and or corrosion in a high temperature environment. There are three options to protect the boiler:

- Option 1: Prevent problems by changing the process or design of the boiler. Changing the process is usually done before the plant is build because changing the process or the design of the boiler is very costly when it has to be done in an existing plant. Changing the boiler does not eliminate all corrosion and or erosion problems. The problems can decrease in obstinacy but will not disappear completely and a protection method still has to be used.
- Option 2: Protect the boiler by fighting the problems of corrosion and or erosion. The power and waste to energy industry deals with corrosion and or erosion problems because of the material they incinerate. Almost every plant uses some kind of protection on the boiler walls, this can be done in different ways:
- § Treat the boiler walls with AmS 8\*\* coating using a HVCC technique.
  - § Treat the boiler walls with Inconel, Inconel is a registered trademark of Special Metals Corporation that refers to a family of nickel-based coatings. Inconel can be applied using different techniques: cladding by welded overlay, WEX pipe and HVOF/ HVCC.
  - § Use bricks to protect the walls. Bricks can not fully protect the whole boiler because the boiler has curves and tubes. They are usually placed where the incineration takes place in the bottom of the boiler.
  - § Tile the walls to protect them. Tiles can not fully protect the whole boiler because the boiler has curves and tubes. They are usually placed where the incineration takes place in the bottom of the boiler.
- Option 3: Do nothing. In this industry doing nothing means being out of business very soon so overall all incineration plants in the power and waste to energy industry focus on how to fight corrosion and or erosion problems or change the design.



## *A m S t a r - E u r o p e*

Doing nothing is not an option in this industry. Changing the design is mainly done when a plant or boiler has to be build, even then the design can not completely eliminate erosion and or corrosion and the symptoms still need to be fought. Existing plants or boilers can use tiles or bricks, but they are not enough and can not be placed in the whole boiler and Inconel has to be applied. Inconel can be seen as the main threatening substitute product, because every boiler with erosion and or corrosion problems needs it to stay in business.

### *Competitors*

Rivalry among existing competitors takes many familiar forms, including price discounting, new product introductions, advertising campaigns and service improvements (*Porter; 2008*). High rivalry limits the profitability of the industry (*Porter; 2008*). The degree to which rivalry drives down an industry's profit potential depends, first on the intensity with which companies compete and second on the basis on which they compete (*Porter; 2008*).

Companies that change the process or design of the boiler to make sure problems do not occur or treat the boiler to prevent symptoms like corrosion and erosion are competitors of AmStar-Europe. Competitors are analysed for every substitute product mentioned above.

- To prevent problems, the incineration process or the gas streams have to be changed and therefore the whole design of the boiler has to be looked at. In Denmark a lot of engineering companies exist. A few names of big companies are: Aalborg Engineering, Burmeister & Wain Energy A/S, Force Technology and Rambøll A/S. High skilled labour is widely available in Denmark and they are known for its engineering capabilities.
- Fight the symptoms like corrosion and erosion, means treating the boiler wall with some kind of material. In Europe there are about 5 a 10 companies who can apply Inconel on the boiler wall. Many of these companies are specialized and some also offer other services, like construction. Applying bricks or tiles on the walls is something several companies can do but it remains a specialism.
- Doing nothing results in no market demand and can be left out when analysing competitors.

The intensity of the competitors is relative small, and rivalry on the basic is also relative small because only Inconel really looks like the AmS 8\*\* coating of AmStar-Europe. Rivalry among competitors is small looking at Inconel, only about 5 till 10 companies exist in Europe who can apply Inconel. Companies who apply Inconel on the boiler wall work in a niche market. Rivalry is a little bigger when it comes to applying bricks or tiles on the boiler wall. Rivalry is relative big looking at preventing problems, because Denmark has many construction companies.



***A m S t a r - E u r o p e******New entrants***

New entrants to an industry bring new capacity and desire to gain market share that puts pressure on prices, costs and the rate of investment necessary to compete (Porter, 2008). The treat of entry therefore puts a cap on the profit potential of an industry (Porter, 2008). The treat of entry in an industry depends on the height of barriers that are present and on the reaction entrants can expect from incumbents (Porter, 2008). There are seven major sources of entry barriers, which are analysed in table 9.

Sources of entry barriers	Entry barriers analysed for Denmark
Supply-side economies of scale	The Danish industry does not supply large volumes of the main substitute product Inconel, and for AmS 8** it is also not possible. Because of the high level of customization it is not possible to supply large volumes and spread costs.
Demand-side benefits of scale	The market is dominated by Inconel and it is a big challenge for AmStar-Europe to enter the market. Past experiences show that adaption can be slow in the beginning because of its newness but because it governs such big investments companies are willing to try new things which solve their problems.
Customer switching costs	This industry does not have any switching costs because every supplier new or old needs to customize its product to the requirements of the customer. The requirements can change over time and because applying a coating is a long term investment this has to be done every time a coating has to be applied.
Capital requirements	AmStar-Europe needs to invest some capital but the total investment is relative low. AmStar-Europe can use the employees, the material and equipment of AmStar Surface Technology to apply the coating in the beginning. They only have to ship everything to the customer. Applying the coating takes a short period of time but these are scheduled in advance and only when inspection takes place AmStar-Europe needs to send someone again. AmStar-Europe only needs to invest in the marketing and selling of the product and needs to hire a few people who can do this. But because AmStar Surface Technology assists AmStar-Europe the capital requirements are relative low and form no big threat.
Incumbency advantages independent of size	The AmS 8** coating is a new product and at the moment Inconel dominates the market. The AmS 8** coating has to prove itself on the market and show that they are better than Inconel. Because of the position of Inconel this is a threat to AmStar.
Unequal access to distribution channels	AmStar-Europe does not use distribution channels and sells and ships the AmS 8** coating directly to the customer, therefore they are not influenced by any distribution channel problems.
Restrictive government policy	In the country selection model analysed in chapter two, outcomes show that there are no negative government policy's in Denmark which influence the other barriers or a company entry.
Table 9; analysis of the seven major sources of entry barriers	

Overall the threat of new entrants is relative low except for incumbency advantage of Inconel. They are the market dominator and competing with them is a big challenge and results in a threat for AmStar-Europe.

## *A m S t a r - E u r o p e*

### ***Suppliers***

Powerful suppliers capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants (*Porter; 2008*). Powerful suppliers, including suppliers of labour, can squeeze profitability out of an industry that is unable to pass on cost increases in its own prices (*Porter; 2008*). It is therefore important to map and analyse suppliers.

AmStar-Europe does not deal with suppliers which provide material, equipment or personnel in the target country because AmStar Surface Technology provides the everything that is needed to get the job done. AmStar-Europe depends on AmStar Surface Technology for the timing, quantity and quality of the material and equipment. This force therefore does not have any influence and can be left out.

### ***Buyers***

Powerful customers can capture more value by forcing down prices, demanding better quality or more service and generally playing industry participants off against one another, all at the expense of industry profitability (*Porter; 2008*). Buyers are powerful if they have negotiated leverage relative to industry participants, especially if they are price sensitive, using their power primarily to pressure price reductions (*Porter; 2008*). Therefore it is important to map potential customers.

All companies that deal with erosion and or corrosion problems in a high temperature environment are potential customers. At the moment AmStar-Europe focuses on plants that incinerate (brown) coal, sludge and waste, a list of potential customers is presented in table 10.

In Denmark power plants and waste to energy plants are owned by energy providers or by municipalities. There are two energy producing companies in Denmark, Dong Energy and Vattenfall. Dong Energy produces more than 50% of Denmark's power and approximately 40% of the district's heat and owns eighteen interesting plants for AmStar-Europe<sup>12</sup>. Vattenfall controls approximately 24 % of the power generation capacity and owns three interesting plants for AmStar-Europe<sup>13</sup>. The rest of the interesting plants are owned by municipalities or small companies. Dong energy is therefore an important buyer and has relative high bargaining power.

The buyer market is relative price sensitive because the industry's product has a big effect on the buyers other costs and the product the buyers purchase represent a significant fraction of its cost structure or procurement budget.

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<sup>12</sup> <http://www.dongenergy.com>

<sup>13</sup> <http://www.vattenfall.dk>

Plantname	City	Fuel type	Lines	Total capacity
Frederikshavn Affaldskraftvarmeværk A/S*	Frederikshavn	Waste	1	36.000 t/year
Haderslev Kraftvarmeværk A/S*	Haderslev	Waste and gas	2	62.000 t/year waste
Horsens Kraftvarmeværk A/S*	Horsens	Waste and gas	2	59.000 t/year waste
Måbjergværket A/S*	Holstebro	Waste, chips & gas	3	165.000 t/year waste
Vejen CHP Plant*	Vejen	Household waste	1	37.000 t/year
Grenaa CHP Plant*	Grenaa	Coal and straw	1	-
Haslev CHP Plant*	Haslev	Straw	-	26.000 t/year
Herning CHP Plant*	Herning	Chips, gas and oil	2	200.000 t/year chips
Køge CHP Plant*	Køge	Biofuel	2	-
Maribo-Sakskøbing CHP Plant*	Sakskøbing	Straw	-	40.000 t/year
Masnedø CHP Plant*	Vordingborg	Straw and wood chips	-	40.000 t/year staws
Slagelse CHP Plant*	Slagelse	Straw	2	28.000 t/year
Esbjerg Power Station*	Esbjerg	Coal	-	-
Asnæs Power Station*	Kalundborg	Coal (Oil as reserve fuel)	3	-
Ensted Power Station*	Aabenraa	Coal, straw and chips	-	-
Stigsnæs Power Station*	Skælskør	Coal	2	-
Studstrup Power Station*	Skødstrup	Coal, oil and biomass	4	-
Avedøre Power Station*	Hvidovre	Coal, gas, oil & wood	2	-
I/S Amagerforbrænding	København	Household waste	4	425.000 t/year
Nordjyllandsværket	Vodskov	coal	-	-
Fynsværket	Odense C	coal	-	-
Rudkøbing CHP plants	Valby	Household waste	-	-
Hjorkær CHP Plant	Hjorkær	Wood chips, bio waste	-	-
Assens	Assens	Household waste	-	-
Harboøre CHP plant	Harboøre	Biomass gasifier	-	-
AffaldVarme Århus	Lisbjerg	Industry and home waste	3	31 t/h
Svendborg Kraftvarmeværk	Svendborg	Household waste	1	6
Sønderborg Kraftvarmeværk I/S	Sønderborg	Household waste	1	8 t/h
Forbrændingsanlægget REFA	Nykøbing F	Industry and home waste	3	17 t/h
Næstved Forbrændingsanlæg	Næstved	Household waste	4	18 t/h
Roskilde Forbrænding	Roskilde	Industry and home waste	3	34 t/h
I/S RENO SYD	Skanderborg	Household waste	2	11 t/h
I/S RENO NORD	Aalborg	Household waste	4	74 t/h
Hammel Fjernvarme	Hammel	Household waste	-	-
I/S vestforbrænding	Glostrup	Household waste	4	500.000 t/year
I/S Faelles Forbrænding	Hobro	Household waste	-	-
I/S Nordforbrænding	Horsholm	Household waste	4	19 t/h
Trekantsområdet Affaldsselskab I/S	Kolding	Household waste	3	15,2 t/h
AVV	Hjørring	Household waste	3	12 t/h
Aars Kommune	Aars	-	2	8,5 t/h
I/S Thyra	Thisted	-	1	6,4 t/h
* plants owned by DONG energy				

Table 10; interesting plants in Denmark <sup>14 15</sup><sup>14</sup> <http://www.cewep.nl><sup>15</sup> Internet sites of the individual plants

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Companies that build new boilers or technological appliances for plants can also be seen as potential customers because they can advise the AmS 8\*\* coating to companies or municipalities that build the new plants. Danish companies that build technical appliances are listed in table 11.

Company name	Address	Internet address
FLS miljø A/S	Ramsingsvej 30, 2500 Valby Tel: +45 3618 1100 Fax: +45 3618 3426	<a href="http://www.flsmiljo.com">http://www.flsmiljo.com</a>
Krøger A/S	1 Gladsaxevej 363, 2860 Søborg Tel: +45 3969 0222 2 Klamsagervej 2-4, 8230 Åbyhøj Tel: +45 8746 3300 3 Sofiendalsvej 88, 9200 Aalborg Tel: +45 9818 9300	<a href="http://www.kruger.dk">http://www.kruger.dk</a>
The Aalborg Industries A/S	Gasvaerksvej 24, 9100 Aalborg Tel: +45 99 304000 Fax: +45 98 102865	<a href="http://www.aalborg-industries.com">http://www.aalborg-industries.com</a>
Alstom Danmark A/S	Ringager 2A, 2605 Glostrup Tel: +45 4690 0100 Fax: +45 4690 0102	<a href="http://www.alstom.com">http://www.alstom.com</a>
Danstoker A/S,	Industrivej Nord 13, 7400 Herning, Tel: +45 9928 7100 Fax: +45 9928 7111	<a href="http://www.danstoker.dk">http://www.danstoker.dk</a>
Burmeister & Wain Energy A/S	Lundtoftegårdsvej 93A, 2800 Lyngby Tel: +45 3945 2000 Fax: +45 3945 2005	<a href="http://www.bwe.dk">http://www.bwe.dk</a>
Bornicon & Salming	Kongevej 20- 1, 2791 Dragør Tel: +45 3255 8834 Fax: +45 3255 8854	<a href="http://www.bornicon-salming.dk">http://www.bornicon-salming.dk</a>
ABB A/S	Meterbuen 33, 2740 Skovlunde Tel: +45 4450 4450 Fax: +45 4450 4460	<a href="http://www.abb.dk">http://www.abb.dk</a>
Filcon A/S	Centervej 14, 4180 Sorø Tel: +45 5786 0300 Fax: +45 5783 0345	<a href="http://www.filcon.dk">www.filcon.dk</a>
Babcock & Wilcox Vølund	Falkevej 2, 6705 Esbjerg O Tel: +45 7614 3400 Fax: +45 7614 3600	<a href="http://www.volund.dk">www.volund.dk</a>
Table 11; list of companies who build boilers		

This research focuses only on existing plants and not on construction companies as potential customers, because construction companies have to be persuaded and then they have to persuade the owner of the plant. When focussing on the plant AmStar-Europe makes sure that time is not lost by persuading the construction company as well. In the future focussing on construction companies is a possibility.

*AmStar-Europe***4.4 Entry mode decision**

The goal of selecting an entry mode type is to find out with which entry mode type AmStar-Europe should select that fits all parties involved.

To choose an entry mode type criteria are evaluated, which were mentioned in chapter 2. The criteria are categorized in four groups: home country, target country, company and product characteristics and are presented and analysed in table 12.

	Criteria	Outcome
Home country characteristics	Market size	The market in the Netherlands is relative small. A small home country market prefers an exporting entry mode ( <i>Root; 1994</i> ), but according to Chang & Rosenzweig (2001) it results in no particular advantage for an entry mode.
	Concentration of competition	There are relative many competitors in the Netherlands, and a relative high concentration of competition favours an exporting entry mode ( <i>Root; 1994</i> ) ( <i>Chang &amp; Rosenzweig; 2001</i> ).
	Barriers	There are no restrictions or barriers in the Netherlands. Exporting and equity investment is suitable when there are little restrictions ( <i>Root; 1994</i> ). Brouthers & Nakos (2004) say that low environmental uncertainty is suitable for equity entry modes. A need for rapid entry prefers entry by acquisition ( <i>Chang &amp; Rosenzweig; 2001</i> ).
Target country characteristics	Sales potential	Sales potential is high. A large market generally favours equity entry modes or direct exporting ( <i>Root; 1994</i> ). Local market potential does not have a significant influence on the type of entry mode ( <i>Brown, Dev &amp; Zhou; 2003</i> ).
	Concentration of competition	Competition is relative big in Denmark. A relative high concentration of competition favours an equity entry mode ( <i>Root; 1994</i> ) ( <i>Chang &amp; Rosenzweig; 2001</i> ). <i>Chan Kim &amp; Hwang (1991)</i> say that when the concentration of competition is high, high control entry modes are more appropriate.
	Marketing infrastructure	Denmark has a good marketing infrastructure, this favours an exporting entry mode ( <i>Root; 1994</i> ).
	Trade barrier (risk)	Denmark does not have any big trade barriers. No trade barriers are suitable for all entry modes ( <i>Root; 1994</i> ), when country risk is low whole owned subsidiaries are used frequently ( <i>Chan Kim &amp; Hwang; 1991</i> ). Brouthers & Nakos (2004) say that low environmental uncertainty is very suitable for equity entry modes. However Chang & Rosenzweig (2001) found that when trade barriers are high acquisition is preferred, but they focus mainly on cost restrictions.
	Geographical distance	The Geographical distance is relative low and according to Root (1994) export entry modes are favoured in this situation.
	Cultural distance	The cultural distance between the Dutch and the Danish culture is not big and therefore an mode with high risk is suitable ( <i>Root; 1994</i> ). Chang & Rosenzweig (2001) stated that when cultural distances are low an equity entry mode is preferred. Companies that experience a larger socio-cultural distance between the local market and their home market are less likely to use ownership entry modes ( <i>Brown, Dev &amp; Zhou; 2003</i> ).
	Location familiarity	AmStar-Europe is not familiar with the Danish market, but knows some people. Location unfamiliarity tend to avoid high risk entry modes ( <i>Chan Kim &amp; Hwang; 1991</i> ).
Company characteristics	Resource availability	When local resources or investors are available the company is more likely to use full control and ownership entry modes ( <i>Brown, Dev &amp; Zhou; 2003</i> ).
	Costs	The company is more likely to use no ownership entry mode when local market training costs are higher ( <i>Brown, Dev &amp; Zhou; 2003</i> ). Higher cost encourage companies to use licensing and wholly owned entry modes ( <i>Buckley &amp; Casson; 1998</i> ).
	Diversification	AmStar-Europe focuses on a specific aspect of and is therefore operating in a niche market. According to Block & MacMillan (1994) leads focussing on a niche market to an aggressive entry mode.
	Commitment	Commitment is relative high. Commitment results in a favour for entry modes with more risk.
	Control requested and present	AmStar-Europe prefers full control and ownership but if the target country demands other wise they are willing to share control and or ownership. A full control mode generally implies high commitment and higher risks but allows the highest share of return on investments ( <i>Pehrsson; 2007</i> ). Companies with more developed internal control systems tend to prefer equity entry modes of entry ( <i>Brouthers &amp; Nakos; 2004</i> ).

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	Value of firm specific knowhow	The higher the tacit component of knowhow, the greater the likelihood for firms to choose either wholly owned subsidiaries or joint venture over licensing ( <i>Chan Kim &amp; Hwang; 1991</i> ).
	Company size	AmStar-Europe is capable of limited invest because the are small. When limited resources are available indirect exporting or licensing is favoured ( <i>Root;1994</i> ). Companies making greater asset specific investments tend to prefer equity modes of entry ( <i>Brouthers &amp; Nakos; 2004</i> ). Smaller firms tend to prefer non- equity entry modes ( <i>Brouthers &amp; Nakos; 2004</i> ). Larger companies are significantly more likely to use entry modes with low control and little ownership ( <i>Brown, Dev &amp; Zhou; 2003</i> ) ( <i>Burgel &amp; Murray; 1998</i> ). Block & MacMillan (1994) say that restricted resources lead to no particular entry mode but use an aggressive on is the worst option.
	Threat to existing customers	There is little threat to existing customers when AmStar-Europe is going abroad. If the threat to existing customers is relative low, a more aggressive entry mode is therefore suitable ( <i>Block &amp; MacMillan; 1994</i> ).
	Experience abroad	The people who work for AmStar-Euroe ate the moment have some international experience. Prior international experience will be positively related to equity investments ( <i>Chang &amp; Rosenzweig; 2001</i> ). Burgel & Murray (1998) say that international experience of the company is not related to an entry mode type.
Product characteristics	Level of technology	The level of technology is very specific. Root sais that technology intensive products are suitable for licensing and also Burgel & Murray (1998) say that more advanced technology tends to be sold through intermediaries. Buckley & Casson (1998) found that a specific type of technology encourages full control and ownership.
	Product adaptation	High adaptation results in entry modes with high risks and low adaptation results in low entry modes ( <i>Root; 1994</i> ).
	Property protection	There is a high need for property protection within AmStar because the coating has an unique composition. This leads to no specific entry mode according to Block & MacMillan (1994).
	Level of customization	There is a high level of customization within AmStar-Europe. Burgel & Murray (1998) found that more customization leads to less selling through intermediaries, differentiated products favour an exporting entry mode ( <i>Root; 1994</i> ).
Table 12; criteria that define the entry mode type and their outcomes		

Evaluating home country, target country and company characteristics leads to an entry mode type with high risk like (direct) exporting or equity investment. The Danish government does not demand a particular kind of entry mode<sup>16</sup>. Looking at the company characteristics, overall entry modes with high risk and full control are most suitable. Due to the fact that AmStar-Europe has little resources and capabilities to invest large amounts, an (direct) exporting entry mode would be most appropriate. Smaller companies are better at creating radical innovations because they better protect the innovator's property rights (*Acs, Morck, Shaver & Yeung; 1997*). Being innovative is very important to AmStar-Europe. For small companies to stay innovative they need to protect their property right and therefore direct exporting is the preferred entry mode. Product characteristics show that selling the AmS 8\*\* coating through intermediaries or direct exporting entry mode is most appropriate. After analysing these outcomes, it shows that direct exporting is the most appropriate entry mode type for AmStar-Europe to penetrate Denmark at the moment.

<sup>16</sup> E-mail communication with Hr. Lester of the Economic and Commercial Attaché, Embassy of the Kingdom of the Netherlands

#### 4.5 Marketing plan

The goal of the marketing plan is to analyse how AmStar-Europe has to sell its product effectively in the target market, Denmark.

The marketing plan focuses on market segmentation, market preparation, targeting, positioning and execution which was also mentioned in chapter two and are analysed in this chapter. The previous part analysed the entry mode decision and direct exporting is the entry mode type that is found most suitable.

AmStar-Europe introduces a new product using a new technology in the target country Denmark and therefore adaptation of innovation is an important aspect in selling your product. Rogers (2003) developed an adaptation model and described the innovation-diffusion process as an uncertainty reduction process. He stated that attributes of innovations include five characteristics. These five characteristics are analysed below (Rogers, 2003):

##### *The first characteristic: relative advantage*

Relative advantage means the degree to which an innovation is perceived as being better than the idea it supersedes.

It is for the potential customer of AmStar-Europe hard to find references about the company and product. The AmS 8\*\* coating is only used for four years now mainly in the United States and Inconel has a longer history with references. However in the four years AmS 8\*\* was used, tests and boilers with the AmS 8\*\* coating show that the coating works better than Inconel. Not only the quality of the product was shown but also how relative easy it is to repair parts. To apply the AmS 8\*\* coating or Inconel on the boiler wall is a big financial investment. The material AmStar-Europe uses is more expensive but because the layer thickness of the coating on the boiler wall is smaller the total application cost is lower. If repair duties have to be performed it is easier to repair a boiler wall treated with the AmS 8\*\* coating than if it is treated with Inconel mainly because of the layer thickness of the coating on the wall. For potential customers it is hard to speak of relative advantage because the AmS 8\*\* coating is only on the market for four years, but if you mainly look at the results the AmS 8\*\* coating has a bigger advantage for the client than Inconel.

##### *The second characteristic: compatibility*

Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters.

The AmS 8\*\* coating is based on an existing product (Inconel) and customers are familiar with what the function of the coating is. Clients do not want that their boiler breaks down, because it costs a lot of money. The coating has to prevent erosion and or corrosion inside the boiler. Inconel does the job but plants show that after six till ten years the Inconel coating is destroyed and not repairable. It has to be removed and be applied again. This costs a lot of money and for the clients it would be better if repair duties would increase the boiler life expectancy. The AmS 8\*\* coating fulfils this need.



*A m S t a r - E u r o p e****The third characteristic: complexity***

Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use.

Although the technical complexity is relative big it is understandable for future customers. Such an investment is not made overnight and overall a team of specialists are involved in the purchase of a protecting coating. For process specialists it is not hard to understand the way the AmS 8\*\* coating works but for a general person it is too complex. The only thing the customers need to know is what the coating can do for them, they do not have to apply it or perform repair duties. AmStar-Europe applies the coating on the boiler wall and inspects it regularly.

***The fourth characteristic: trialability***

Trialability is the degree to which an innovation may be experimented with on a limited basis.

To apply the AmS 8\*\* coating on all the walls of a boiler is very costly. It is relative easy to treat a part of the boiler wall (a few tubes) with the AmS 8\*\* coating and weld the tubes in the wall. This way the costs stay low and the client gets the opportunity to see if the coating does what it is supposed to do and if they want to apply it on all the walls. It is possible to put tubes, treated with the AmS 8\*\* coating, in the boiler in different places. Inside the boiler there are places where there is more corrosion or erosion because of the path of the flue gas.

***The fifth characteristic: observability***

Observability is the degree to which results of an innovation are visible to others.

The AmS 8\*\* coating is used inside boilers and is not visible for other potential customers. Because it is a small tight market where everybody knows everybody, word-of-mouth is very strong. The whole industry will be kept up to date only by talking to each other. So the product is not visible it is present

Rogers (2003) argued that innovations offering more relative advantage, compatibility, simplicity, trialability and observability will be adopted faster than other innovations.



#### 4.5.1 Market segmentation

Market segmentation refers to analysing the market and distinguishing different segments.

As stated before the product of AmStar-Europe, the AmS 8\*\* coating, can be used in different industries. AmStar-Europe's coating works best in environments where corrosion and or erosion problems occur in high temperature. The coating can also be applied in low temperature environments where corrosion occurs for example in the Construction, Engineering and Production industry. Different industries with high temperature environments are for example: the Utility industry, the Power industry, the Waste-to-Energy industry, the Pulp & Paper industry and the Petrochemical industry. At the moment AmStar-Europe focuses on the boilers inside plants of the Power and Waste-to-Energy industry only.

#### 4.5.2 Market preparation

Market preparation focuses on getting the target market ready for the product, building awareness and forming and maintaining relationships. Market preparation strategies are used to prepare the market, usually in advance of the more direct strategies (*Easingwood & Harrington; 2002*).

Some form of cooperation is increasingly seen not as an option but as a necessity (*Easingwood & Harrington; 2002*). Only a few companies can go it alone, at least not where the launch of major innovative technology is concerned (*Easingwood & Harrington; 2002*). Working with customers, suppliers and competitors is vital for the success and survival of a new high-tech company (*Easingwood & Harrington; 2002*). Most high-tech companies are involved in several intra-industry strategic alliances, because they provide companies with a third option to the traditional build or buy alternatives (*Davies & Brush; 1997*). Alliances also allow companies to be active in technical areas that are not their core competence, without departing from their areas of core competence (*Davies & Brush; 1997*).

#### *Building awareness*

AmStar-Europe is a new established company in Europe and does not have a well known name at the moment. For business to business services, word-of-mouth is an indispensable source of credible information for potential customers, as potential customers will tend to lend more trust to non-paid advocates (*Hansen, Samuelsen & Silseth; 2007*). With Word-of-mouth people are talking about the company or product and experiences are discussed. Word-of-mouth has two main benefits, first it provides free advertising and second word-of-mouth can be seen as the voice of the market and the company can adjust its operations if it is necessary.

High technology is an ill-defined concept and one that has avoided satisfactory definition, but there are certain generic characteristics of high-technology products that help understand the nature of the marketing issues that need to be addressed (*Meldrum & Millman; 1991*). The most important of these is that state-of-the-art technology is unfamiliar to different parties and this unfamiliarity creates

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uncertainty and therefore risk (*Meldrum & Millman; 1991*). Risk is overall seen as something people and companies want to avoid. When building awareness it is important that the potential customers are slowly being prepared to the new technology (*Meldrum & Millman; 1991*). New technology may provide a product that does not qualify as a substitute for existing technology and although the product may deliver benefits beyond those of existing offerings, many customers may be unwilling to change and initial market penetration is likely to be slow (*Meldrum & Millman; 1991*). Therefore it is also important that AmStar-Europe takes its time informing the potential customers about the product.

Information sharing is essential to be proactive, so to provide information to customers even before they might be aware of their need for that particular information can be a smart thing to do. A particular form of information is an education programme (*Eastingwood & Harrington; 2002*). Rather than marketing the product directly its function is to educate various potential customers on the potential of the product (*Eastingwood & Harrington; 2002*). It will leave the specialists of the customer with in-dept knowledge to work out how it might be used in their particular situation (*Eastingwood & Harrington; 2002*). However, information can become overwhelming, so it has to be tailored to the customer's need (*Hansen, Samuelsen & Silseth; 2007*). The type of information released and the manner in which it is delivered can be seen as a key tactical decision (*Beard & Easingwood; 1996*). Attention must be given to the level of in-debt technical information that is released to the market, so that sufficient interest in the new product can be provoked without losing a competitive edge in a market where imitation can appear instantaneously (*Beard & Easingwood; 1996*). A careful balance however needs to be drawn between the need to have influential components of the market informed, without giving a technological lead away to competitors (*Beard & Easingwood; 1996*).

### *Forming relationships*

The embassy of Denmark and the company the EVD say that Danish businessmen frequently use trade shows and seminars to meet new relations or customers and maintain their relationships with current customers. Especially (international) events are appropriate to share experiences of the product with potential and existing customers and build awareness, because the products is not bound to country borders.

Personal and organizational levels of relationships influence each individual purchasing and marketing interaction, because they take place in an atmosphere influenced by a broader set of relationships existing at both personal and organizational levels (*Lian & Laing; 2006*). Danish businessmen find it important that there is a good personal relationship between the customer and the supplier of the service or product<sup>17</sup>. To maintain and develop the relationship with customers and further develop the market the EVD emphasize that frequent visitations are also a necessity in Denmark.

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<sup>17</sup> <http://www.evd.nl>

#### 4.5.3 Targeting

Targeting focuses on finding the right customers to enter and sell the product to.

It is crucial for the success of a company that they find the right customers to sell their product or service to. During this research some contact has been made with several plants in Denmark and a list of the contact persons is found in table 13.

Plant	Contact person	Contact data
All DONG Energy plants	Anne Zachariassen, Manager of Asset Management	<a href="mailto:annza@dongenergy.dk">annza@dongenergy.dk</a>
AffaldCentre Aarhus	Juul Meldgaard, Afdelingsingeniør	<a href="mailto:jume@aarhus.dk">jume@aarhus.dk</a>
Forbrændingsanlægget REFA I/S	Bjørn Stender, Department chef	<a href="mailto:bls@refa.dk">bls@refa.dk</a>
I/S Vestforbrænding	Freya Grossmann	<a href="mailto:fgr@vestfor.dk">fgr@vestfor.dk</a>
Sønderborg Kraftvarmeværk I/S	Anders Grum Kjærgaard, Direktør	<a href="mailto:agk@skvv.dk">agk@skvv.dk</a>
Svendborg Kraftvarmeværk	J. Fobian	<a href="mailto:tfojfo@svendborg-kom.dk">tfojfo@svendborg-kom.dk</a>
I/S Amagerforbrænding	Dan Fredskov, Teknisk chef	<a href="mailto:dfr@amfor.dk">dfr@amfor.dk</a>
Nordjyllandsværket	Hakon Mosbech, Chef-engineer	<a href="mailto:Hakon.Mosbech@vattenfall.com">Hakon.Mosbech@vattenfall.com</a>
Roskilde Forbrænding	Klaus W. Hansen, Forbrændingschef	<a href="mailto:kwh@karanoveren.dk">kwh@karanoveren.dk</a>
Table 13; contact persons of the Danish plants		

To find the right person within a company is vital for the success of the sell. Therefore the plant questionnaire, which was send to the plants in Denmark, was used to find out who was responsible for big investment decisions within a plant. In table 14 the person or function of the person who is responsible for investment decisions are listed.

Plant	Person who is responsible for (big) investments
AffaldCentre Aarhus	Small investments: the plant manager Erik Bech Nielsen <a href="mailto:ebni@aarhus.dk">ebni@aarhus.dk</a> and big investments the city council.
Forbrændingsanlægget REFA I/S	The operational manager is responsible for big investments.
I/S Vestforbrænding	The board makes big investment decisions and the production leader smaller decisions.
Roskilde Forbrænding	Head of mechanical maintenance Torben Hansen e-mail: <a href="mailto:th@karanoveren.dk">th@karanoveren.dk</a> & Head of electrical maintenance Frans Christensen e-mail <a href="mailto:fc@karanoveren.dk">fc@karanoveren.dk</a>
Table 14; persons who are responsible for investment decisions.	

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Targeting innovators and early adopters is an appropriate tactic for very new technologies (*Beard & Easingwood; 1996*). Innovators are highly responsive to the benefits of a new technology and they also influence others (*Beard & Easingwood; 1996*). Early adopters are often large organizations with a clear need to adopt new technologies to retain or improve competitiveness (*Beard & Easingwood; 1996*). They demand lots of attention and information about the new technology during the market preparation (*Eastingwood & Harrington; 2002*). Innovators and early adopters represent a relative small segment of the potential market can be extremely difficult to identify (*Beard & Easingwood; 1996*), but are willing to buy without seeing the product up and running elsewhere. To find the right person a questionnaire was send to the plants in Denmark. The questionnaire also tried to find out if the plants are open for innovative techniques, methods or products and can be distinguished as innovative or early adopters. In table 15 a list of the level of innovation of Danish plant is presented.

Plant	Level of innovation
All DONG Energy plants	Relative innovative
AffaldCentre Aarhus	Very innovative
Forbrændingsanlægget REFA I/S	Very innovative, experience with innovative cleaning techniques
I/S Vestforbrænding	Very innovative, experience with innovative techniques
Roskilde Forbrænding	Relative innovative but has a small budget because small plant.
Table 15; answers regarding innovation adaptation	

In the answers of the plant questionnaire were also two organizations mentioned which represent the waste to energy industry. These organizations are Affald Danmark (<http://www.affalddanmark.dk/>) and Reno-Sam (<http://www.renosam.dk/>) and coordinate industry innovation and other general issues. These companies represent waste to energy plants and are important candidates to invite to international events and seminars.

The mainstream market wants different things than early adopters. The mainstream market wants proven technology, with a solid practical application preferably using open standards (*Eastingwood & Harrington; 2002*). Before they accept a technology innovation, it wants references not from technology innovators but from other members of their industry, particularly industry opinion leaders (*Eastingwood & Harrington; 2002*). It makes good sense to get the support of word-of-mouth and industry leaders because no company can afford to pay for every marketing contact made (*Eastingwood & Harrington; 2002*). Current customers are likely to have tried other products from the company in the past and be willing to provide a test site for the new product (*Eastingwood & Harrington; 2002*). Targeting current customers is a strategy particularly appropriate for rapid changing and advanced technologies (*Eastingwood & Harrington; 2002*). Adoption of a complex technology often only takes place when there is a high degree of mutual trust between buyer and supplier that can only be developed over time (*Eastingwood & Harrington; 2002*). Because AmStar-Europe is entering a new market targeting current customers is not possible. Using current customers to provide test sites is a possibility.

#### 4.5.4 Positioning

Positioning focuses on creating an image or identity.

Product image or reputation has grown in importance the last years (*Traynor & Traynor; 2003*). Corporate reputation is a sort of market validated information — a company would not have a good reputation unless the market thought so, and vice versa (*Hansen, Samuelsen & Silseth; 2007*). Hansen, Samuelsen & Silseth (2007) found a strong effect of corporate reputation on customer perceived value that suggests that a (service) company's reputation is not only important in terms of attracting new customers but also to deliver value to and keeping the customers with whom relationships are already established.

The company has to earn a reputation for innovation excellence, they have to substantiate service excellence by continuously innovating and try to be among the first to market those innovations (*Hansen, Samuelsen & Silseth; 2007*). Service excellence and innovation represent reputation dimensions with rather obvious links to the value they receive (*Hansen, Samuelsen & Silseth; 2007*). Service excellence can be shown using references. These references can show the quality of the service or product and the company. The company can further substantiate its reputation by showing concern to other stakeholders than customers by demonstrating social responsibility. The Danish people are very concerned about the environment<sup>18</sup>.

#### 4.5.5 Execution

Execution is the launch of the product to trigger a positive purchase.

A product launch may be exciting but even after a carefully planned and flawlessly executed launch the excitement sometimes ends all too soon as sales flag and the innovative new technology fails to enter the mainstream market and deliver the expected returns (*Eastingwood & Harrington; 2002*).

The AmS 8\*\* coating requires extensive customization and information to the customer and therefore it has to be sold through personal contact to analyse all specific requirements. In the power and waste to energy industry personal selling is common. Danish businessmen like to receive information before the meeting so they are able to prepare themselves<sup>18</sup>. The Danish are very punctual and during meeting there is no time for social talk. The salesperson can dress rather casual but during official meeting a tie and jacket are common<sup>18</sup>. Using the mobile phone during meetings or dinner appointments is found very disturbing and the mobile phone should be turned off<sup>18</sup>.

It is important that socialization meetings are included in a promotion or selling campaign of a company, because Danish businessmen find it important that there is a good personal relationship between the customer and the supplier of the product<sup>18</sup>.

There are several ways to promote a product or service. Traynor & Traynor (2003) say that the primary promotional weapons of high-tech marketers appear to be advertising in trade magazines, trade shows, web-based advertising, technical

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<sup>18</sup> <http://www.evd.nl>

*AmStar-Europe*

seminars/ presentations and use of sales promotional materials including direct mail advertising (*Traynor & Traynor; 2003*). The embassy of Denmark and the EVD say that Danish businessmen frequently use trade shows and seminars to promote their product or service. Especially (international) events are appropriate share experiences of the product with potential and existing customers.

While high-tech companies have historically relied on their unique technological advantage to remain competitive, companies have found that it is becoming more and more difficult to maintain a competitive edge through technological advantage alone (*Traynor & Traynor; 2003*). There is a tendency in the high-tech industry to believe that the technological superiority of a product is the determining variable in its commercial success (*Davies & Brush; 1997*) but even in high-technical fields, the presentation of the message tends to separate firms from their competition and marketing efforts are as important, if not more important, than the reliance of state-of-the-art technology (*Traynor & Traynor; 2003*). Companies have found that it is becoming more and more difficult to maintain a competitive edge through technological advantage alone (*Traynor & Traynor; 2003*).

Key purchases will be made for technology that is more closely related to their business strategy than to their technology strategy. The buying objective is revenue enhanced rather than cost containment (*Hansen, Samuelsen & Silseth; 2007*). Dun, Friar & Thomas (1991) analysed new and old values of customers presented in table 16.

Old values	New values
Low-cost services	Services that lower costs
Customer ally	Customers advocate
Systems efficiency	Application effectiveness
Packaged remedies	Tailored solutions
Responsiveness	Taking responsibility
Products	Systems
Reliability	Availability
Cooperation	Partnership
Table 16; new and old values of customers ( <i>Dun, Friar &amp; Thomas; 1991</i> )	

Flexibility implies the company's ability to adapt to situations where the customer has needs and wants that deviates from the norm or existing standards (*Hansen, Samuelsen & Silseth; 2007*). In business to business markets, the customer's needs are often subject to change due to derived demand and a company has to have both the ability and the willingness to show flexibility in such circumstances (*Hansen, Samuelsen & Silseth; 2007*). In this industry a breakdown of a boiler has significant financial affects and being flexible and quickly respond to these uncertain events is crucial for a company. Flexibility also has a positive effect on customer perceived value (*Hansen, Samuelsen & Silseth; 2007*).

In the Danish law is written that potential customers in the business to business market can not be approached through e-mail or fax with a automatic recall system unless the receiver agrees to it according to the EVD. It is very important that contact is made before any information or an invitation is send to the customers to prevent any difficulties.

All individual steps of the International Market Entry strategy plan are analysed in this chapter. The next chapter focuses on the conclusions of the research and formulates advice for AmStar-Europe how to penetrate the target country Denmark.



## Chapter 5; Conclusion

The final chapter presents the conclusions of this Master thesis. First the main conclusions of all individual steps of the International Market Entry strategy are described, an advice is formulated, the limitations of this research are presented and the implications for further research are given.

### 5.1 Conclusions

The main conclusions of all individual steps are analysed below.

#### 5.1.1 Internal analysis

AmStar-Europe is a joint venture of HiLux5 and AmStar Surface Technology and penetrates the European boiler market with the AmS 8\*\* coating. They combine the product of AmStar Surface Technology with the knowledge of HiLux5 of the market. AmStar Surface Technology specializes in the application of high velocity continuous combustion thermal spray coatings (AmS 8\*\*) which prevent erosion and or corrosion of plant process equipment in high temperature environments. HiLux5 is a pioneer in the boiler market.

#### 5.1.2 Country selection

AmStar-Europe wants to penetrate one country at a time and the European country with the most potential has to be selected in this research. A target country is chosen using the screening model of Ball, McCulloch, Frantz, Geringer and Minor (2006). The model consists of six steps and each step evaluates different criteria. The first step is an initial screening where the basic need is evaluated. The second step focuses on financial and economic characteristics, the third step evaluates political and legal characteristics, the fourth step looks at socio-cultural aspects and the final step looks at market potential. After the evaluation of all the criteria Denmark is found the most potential country and is therefore selected as the target country.

#### 5.1.3 External analysis

AmStar-Europe focuses on the Power and Waste-to-Energy industry in Denmark. Denmark has forty-one Power and Waste-to-Energy plants, they produce thirteen million tonnes of waste every year and incinerate fifty-four percent of the waste. In general Denmark uses combined heat and power plants to generate energy and heat. These Combined Heat and Power plants mainly incinerate (household) waste or wood.

#### *Five forces framework of Porter*

Table 17 shows the main conclusions of the five forces framework of Porter. Overall the threats are low.

<i>Buyers</i>	<i>Suppliers</i>
<i>At the moment AmStar-Europe focuses on plants that incinerate (brown) coal, sludge and waste. There are about 40 interesting plants in Denmark</i>	<i>AmStar-Europe does not deal with suppliers in Denmark. This force therefore does not have any influence and can be left out.</i>

*AmStar-Europe*

<p><b>Substitute products</b></p> <p><i>There are three options to protect the boiler:</i></p> <ul style="list-style-type: none"> <li>- Prevent problems by changing the process or design of the boiler.</li> <li>- Protect the boiler by fighting the problems of corrosion and or erosion. Almost every plant uses some kind of protection on the boiler walls, this can be done in different ways: (Treat the boiler walls with AmS 8** coating, Treat the boiler walls with Inconel, use bricks or tiles to protect the walls)</li> <li>- In this industry doing nothing means being out of business very soon so.</li> </ul>	<p><b>Competitors</b></p> <ul style="list-style-type: none"> <li>- To prevent problems; in Denmark a lot of engineering companies exist and high skilled labour is available.</li> <li>- Fight the symptoms; in Europe there are about 5 a 10 companies who can apply Inconel. Applying bricks or tiles on the walls is something several companies can do but it remains a specialism.</li> <li>- Doing nothing results in no competitors.</li> </ul> <p><i>The intensity of the competitors is relative small, and rivalry is also relative small.</i></p>
<p><b>New entrants</b></p> <p><i>Overall the threat of new entrants is relative low except for incumbency advantage of Inconel. They are the market dominator and competing with them is a big challenge and results in a threat for AmStar-Europe.</i></p>	
Figure 17; conclusions of the five forces framework of Porter	

## 5.1.4 Entry mode decision

Entering a country can be done in different way and this research analyses the type of entry mode. To choose an entry mode different criteria have to be evaluated which can be distinguished into four groups: home country, target country, company and product characteristics. Analysing the criteria leads to a entry type mode which is most appropriate in the situation. The most suitable entry mode type for AmStar-Europe to enter the Power and Waste-to-Energy industry of Denmark is direct exporting.

## 5.1.5 Marketing plan

Rogers (2003) argued that innovations offering more: relative advantage, compatibility, simplicity, trialability and observability will be adopted faster than other innovations. Overall, the five characteristics mentioned by Rogers result in a fast adaptation of the product. The relative advantage of the AmS 8\*\* coating is relative high, compatibility is high, complexity is relative low, trialability is high. The only characteristic that does not result in a fast adoption is observability, the coating is not visible and therefore the observability is low.

<p><b>Relative advantage</b></p> <p>It is for the potential customer of AmStar-Europe hard to find references about the company and product. The AmS 8** coating is only used for four years. The total application cost of the AmS 8** coating are lower then of Inconel.</p>	<p><b>Compatibility</b></p> <p>The AmS 8** coating is based on an existing product. The only thing that is different is that the AmS 8** coating is easier to repair.</p>
<p><b>Complexity</b></p> <p>Although the product is relative complexity, it is understandable for future customers, because specialists are overall involved in the purchase.</p>	<p><b>Observability</b></p> <p>The AmS 8** coating is used inside boilers and is not visible for other potential customers.</p>
Figure 18; conclusions of the five characteristics of Rogers	<p><b>Trialability</b></p> <p>It is relative easy to put samples, which are treated with the AmS 8** coating, in the boiler.</p>



## *A m S t a r - E u r o p e*

### ***Market segmentation***

The AmS 8\*\* coating can be used in different industries. AmStar-Europe's coating works best in environments where corrosion and/or erosion problems occur in a high temperature. The coating can also be applied in low temperature environments where corrosion occurs for example in the Construction, Engineering and Production industry. Different industries with high temperature environments are for example: the Utility industry, the Power industry, the Waste-to-Energy industry, the Pulp & Paper industry and the Petrochemical industry. At the moment AmStar-Europe only wants to focus on the boilers inside plants of the Power and Waste-to-Energy industry. For the future entering other industries is a possibility.

### ***Market preparation***

Some form of cooperation with customers, suppliers and competitors is a necessity for companies to survive.

#### **Building awareness**

Word-of-mouth is a source of information for potential customers, and has two main benefits, first it provides free advertising and second word-of-mouth can be seen as the voice of the market and the company can adjust its operations if it is necessary.

High technology is unfamiliar to different parties and it creates uncertainty and therefore risk. Risk is something people want to avoid and customers slowly have to be prepared to the new technology and take their time informing the potential customers about the product.

Information sharing is essential to be proactive, a particular form of information is an education programme. Information can become overwhelming, so it has to be tailored to the customer's need. The type of information released and the manner in which it is delivered is a key tactical decision. A careful balance needs to be drawn between the need to have influential components of the market informed, without giving a technological lead away to competitors.

#### **Forming relationships**

The embassy of Denmark and the EVD state that Danish businessmen frequently use trade shows and seminars to meet new relations or customers and maintain their relationships with current customers.

Danish businessmen find it important that there is a good personal relationship between the customer and the supplier of the service or product. To maintain and develop the relationship with customers and further develop the market the EVD emphasizes that frequent visitations are also a necessity in Denmark.

### ***Targeting***

It is crucial to target the right person. In table 14 was presented the person or function of the person who is responsible for investment decisions

Targeting innovators and early adopters is an appropriate tactic for very new technologies. They demand attention and information about the new technology. Table 15 represents an overview of the level of innovation of Danish plants.

Affald Danmark and Reno-Sam coordinate industry innovation and other general issues of the Waste-to-Energy industry and are therefore also candidates to invite to international events and seminars.

*A m S t a r - E u r o p e*

The mainstream market wants proven technology, with a solid practical application, before they accept a technology innovation. It wants references not from technology innovators but from other members of their industry, particularly industry opinion leaders. Current customers are likely to provide a test site for the new product.

***Positioning***

Corporate reputation is a sort of market validated information — a company would not have a good reputation unless the market thought so, and vice versa. A (service) company's reputation is important to attract new customers, deliver value and keeping the customers satisfied.

The company has to earn a reputation for innovation excellence, by continuously innovating and trying to be among the first to market those innovations. Service excellence can be shown using references. The company can further substantiate its reputation by showing concern to other stakeholders especially show environmental concern, because this is found important by the Danish people.

***Execution***

The AmS 8\*\* coating has to be sold through personal contact to analyse all specific requirements of the customer.

Danish businessmen like to receive information before the meeting. The Danish are very punctual and there is little time for social talk. The salesperson can dress rather casual but during official meeting a tie and jacket are common. The mobile phone should be turned off during meetings or dinner appointments. A good personal relationship between the customer and the supplier of the service or product is important in Denmark.

Promotional weapons of high-tech marketers are advertising in trade magazines, trade shows, web-based advertising, technical seminars/ presentations and use of sales promotional materials including direct mail advertising. Danish businessmen frequently use trade shows and seminars to promote their product or service. Companies have found that it is becoming more and more difficult to maintain a competitive edge through technological advantage alone. Even in high-technical fields, the presentation of the message tends to separate firms from their competition and marketing efforts are as important than the reliance of the new technology.

Key purchases will be made for technology that is more closely related to their business strategy than to their technology strategy. The buying objective is revenue enhanced rather than cost containment. In this industry a breakdown of a boiler has significant financial affects and being flexible and quickly respond to these uncertain events is crucial for a company.

Potential customers can not be approached through e-mail or fax unless the receiver agrees to it. It is very important that contact is made before any information or an invitation is send to the customer.

## 5.2 Recommendations

This section lists the advice to AmStar-Europe based on this Master thesis which should be followed to successfully enter the European boiler market of the Power and Waste-to-Energy industry. The advice is formulated per step of the International Market Entry strategy plan. The internal analysis is excluded.

AmStar-Europe should keep up to date when it comes to environmental regulations and laws in Europe. If anything changes this can have an impact on the potential of a country. They should monitor these changes through the website of Cewep and by talking to people in the industry.

Enter Denmark through direct export and focus on the Power and Waste-to-Energy industry. Approach AffaldVarme Århus, Forbrændingsanlægget REFA, Roskilde Forbrænding and I/S vestforbrænding first, because they are open to new technology's, are interested in new technologies and respond quickly. Focus specifically on the persons who make (big) investment decisions. People who make such decisions are presented in table 14. The AmS 8\*\* coating has to be sold through personal selling because of the high level of customization.

Develop references for potential customers by by treating a part of the boiler wall (a few tubes) with the AmS 8\*\* coating and weld the tubes in the wall. These samples provide knowledge about the product and by word-of-mouth information about the product can distribute into the market. Also educate the market about the function of the AmS 8\*\* coating to increase compatibility and reduce complexity. Educating the market also reduces risk for the customer.

Use (international) events like trade shows and seminars to build awareness, show references, meet new customers and maintain your relationships with current customers. Frequently visit Denmark to maintain the relationships and to keep informed. Develop a personal relationship with the customer by organising personal meetings.

Send information before business meetings, be punctual, professional and organising personal meetings to establish a good relationship. Focus on the business strategy of the potential customer and on the long term effect of the coating on the boiler wall. When mentioning the costs, focus on the long term (payback period). Showing concern to other stakeholders especially the environmental, because this is found important by the Danish people. Be flexible and quickly respond to uncertain events, by keeping up to date of the issues and developments of the market as stated before.

### 5.3 Limitations

Each research has limitations and also this Master thesis could not cover all aspects. The limitations are presented below.

The most important limitation in my point of view is that this Master thesis focuses only on the Power and Waste-to-Energy industry. The AmS 8\*\* coating can also be applied in other industries where corrosion and or erosion problems occur in high or low temperature environments. Other industries are the Construction industry, the Engineering industry, the Production industry, the Utility industry, the Pulp & Paper industry and the Petrochemical industry.

To find steps of the International Market Entry strategy plan as a whole it was hard to find many appropriate articles. Because of the limited number of relevant articles the model is not very strong and can be improved when more articles are available.

To find criteria for the country selection model was hard, because there are not many articles that focus on criteria. Also the number of relevant articles about the country selection model is minimal. Because of the limited number of relevant articles the country selection model can be improved when more articles are available.

This Master thesis only included European countries which lay within a circle with a radius of 1500 kilometres from Hengelo. In total 25 European countries were included in the country selection model. Countries that lay outside the circle are not included in this Master thesis, but this does not mean that there are no potential countries outside the circle.

When selecting a target country two steps were excluded from the original model. The original country selection model consists of six steps. The financial & economic step and political & legal step was excluded in this research because no big disadvantages were suspected. Maybe an in-dept analysis shows (small) differences.

An International Market Entry strategy plan is written for one country, the country with the most potential. This does not mean there is one potential country among the countries that were in the research. Other countries can also have potential as is shown in the country selection model. Especially the countries that were scored second and third can be interesting countries to enter in the future.

This Master research focuses on existing Power and Waste-to-Energy plants and not on construction companies who build incineration plants or components of plants. If construction companies would be included in the market analysis the list of potential buyers would be different.

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Plants are mapped but detailed information about the market is not gathered extensively. DONG Energy did not provided detailed information in the plant questionnaire and because they cover almost half of the interesting plants for AmStar-Europe in Denmark, this aspect can be looked at more extensively. Also the number of questionnaires that were filled out and send back was relative low. If more time was available maybe more questionnaires are filled out and send back.

When the entry mode decision was substantiated the criterion production costs was not included in the decision because nothing is produced.

Some criteria of entry mode decision have some overlap in an other groups mentioned in chapter two. There was no attention paid to this aspect and each criterion is put in one group only.

Only a few articles about high tech marketing strategy were found. This research also included general marketing and strategy information. The marketing plan is therefore not fully based on high technology.

The plant questionnaires were distributed in the months June, July and August. In total 20 e-mails were send to different plants in Denmark to ask if they would fill in a questionnaire. 8 answered and received the plant questionnaire and 5 persons filled it in and send it back. If more time was available or e-mails were send in a different period maybe the number of filled in questionnaires was higher and therefore this is also a limitation.

#### 5.4 Implications for further research

This section analyses the implications for further research.

This Master thesis analyses the individual steps of a International Market entry strategy. All steps can be looked at more closely. The International Market Entry strategy plan as a whole can be used as a basis for future research of internationalization strategies.

The AmS 8\*\* coating can also be applied in other industries where corrosion or erosion problems occur in high and low temperature environments. These industries are never looked at before and can be analysed in the future.

This research focused on countries which lay within a circle with a radius of 1500 kilometres from Hengelo, but more potential can lay outside the circle. This thesis focused on the country with the most potential. Further research can include an other part of the world or of Europe.

An International Market Entry strategy plan was written for the country with the most potential. A strategy plan can also be written for less potential countries, the second or third country in the country screening (Sweden and Switzerland).

Changes in country characteristics and criteria of the country screening model have to be monitored and taken into account in the future, because they have significant influence on the outcome. If country characteristics change then it is possible that the fulfil the requirements of the screening steps and end up as the most potential country. Also if the criteria of the screening steps change some countries that were eliminated before can fulfil the requirements now.

The United Kingdom produces a lot of waste compared with other European countries. If there is going to change environmental law on land filling or the incineration of waste the United Kingdom can increase its potential enormously. Further research can be conducted on the future market potential of the United Kingdom or future environmental changes of the country.

The entry mode decision includes target country characteristics which are also mentioned in the country selection. There is a small overlap of the two analyses. In this Master thesis the two steps are deliberately separated and dealt with individually. Future research can focus on combining the two analyses into one.

The criteria of the entry mode decision are put in four groups. Some criteria can be put in more then one group. This research put them in one group only and maybe further research can focus on the overlap of the criteria.

The final part of the thesis describes the used literature and after which the attachment is presented.

**Literature**

- Questionnaire send to the five shareholders of HiLux5
- Questionnaire send to the sales director of AmStar Surface Technology
- Questionnaire send to the founders of AmStar-Europe
- Questionnaire for contact persons of the plants
- E-mail communication with Hr. Lester of the Economic and Commercial Attaché, Embassy of the Kingdom of the Netherlands

**Internet:**

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- <http://www.amstar.info>
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**Attachment**

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<b>2 Plant questionnaire</b>	<b>64</b>

**1 Company questionnaire****HiLux5**

- 1) Wat is de missie van het bedrijf? *(Korte termijn, definieert waar de organisatie naartoe gaat, omschrijving van het doel, de reden dat het bedrijf bestaat)*
- 2) Wat is de visie van het bedrijf? *(Lange termijn, definieert waar het bedrijf naartoe wil in de toekomst. Het reflecteert het optimistische beeld van de toekomst van de organisatie).*
- 3) Wat is de strategie van het bedrijf? *(Het begrip strategie duidt op de voorgenomen acties van het management. Op welke wijze wil de organisatie doeltreffend zijn? Welke doelen heeft men zich gesteld en hoe denkt men die te bereiken?)*
- 4) Hoe ziet de structuur binnen de organisatie eruit? Geef dit eventueel aan door middel van een figuur. *(Wie doet wat, Coördinatie)*
- 5) Hoe zijn de formele en informele procedures, regelingen en afspraken binnen de organisatie georganiseerd?  
*(kenmerken van vergaderingen, wijze van besluitvorming, wijze van conflictbehandeling, rapporten, budgetten, overlegstructuren, werkoverleg)*
- 6) Wat zijn de sleutelvaardigheden van de organisatie? *(Wat kan de organisatie goed, wat is de kenmerkende kennis en kunde, waar blinken de organisatie en de werknemers in uit)*  
*(Research, Marktkennis, Productbeheersing, Financieel- en administratieve beheersing)*
- 7) Wat zijn de waarden en principes binnen de organisatie? *(De basiswaarden en fundamentele principes waar de organisatie en haar leden in geloven en naar handelen)*
- 8) Wat zijn de kenmerken van het gedrag van jou en de andere vier oprichters binnen HiLux5 bij de uitoefening van de taak en op welke wijze gaat men binnen het bedrijf met elkaar om? *(Managementstijl en organisatiecultuur)*
- 9) Hoe wordt personeel aangenomen en getraind en hoe wordt de juiste baan aan de persoon toegekend? Wat zijn de kenmerken van de werknemers in het algemeen en welke worden erg belangrijk gevonden binnen de organisatie?  
*(Kennis, Ervaring, Opleiding, Leeftijdsopbouw, Motivatie)*

***A m S t a r - E u r o p e*****AmStar Surface Technology****Strategic part**

1. What is the mission of the company? *(Short term and timeless, Defines where the organization is going now, basically describing the purpose, why this organization exists)*
2. What is the vision of the company? *(Long term, Defines where the organization wants to be in the future. It reflects the optimistic view of the organization's future)*
3. Can you describe the strategy of the company? *(The strategy points out the intended actions of the management. Which goals are set by the company and how will the company reach these goals)*
4. Can you give a model or figure of the organizational structure of the company? *(Who does what, Coordination)*
5. How are the formal and informal procedures organized within the company; *(Decision-making, Priority setting and planning, Complaints of customers, Evaluations systems, Work meeting, Characteristics of meetings)*
6. Can you describe the skills of the employees? Skills refer to the level of skills the employees have to carry out the company's strategy and which skills do the employees have that are the excellent? *(Research, Knowledge of the market, Product control, Financial and administrative skills)*
7. What are the shared values of the company? *(Shared values are values that employees within a company share)*
8. What is the common way of thinking and behaving within the company? *(Looking at the management style and the organization culture)*
9. How do you hire and train employees and how does the company assign them to the right job? What are the characteristics of the employees in general and what is found most important? *(Knowledge, Experience, Education, Expectations, Age, Motivation)*

Internal part

10. Why, when and by whom is AmStar Surface Technology founded?
11. How many people are employed by AmStar Surface Technology at the moment?
12. AmS 888 in the US
  - When was AmS 888 developed, produced and introduced to the US market?
  - Where is AmS 888 currently used, please mention the plants and the cities?
  - What are the experiences of AmStar Surface Technology with AmS 888?
  - What are the experiences of the plants with AmS 888, give example(s) of plants?
13. AmS 888 outside the US;
  - Where is AmS 888 currently used outside the US market, please mention the plants with city and country?
  - What are the experiences of AmStar Surface Technology with AmS 888 outside the US?
  - What are the experiences of the foreign plants with AmS 888, give example(s) of plants?
14. What forms of international partnerships in South Africa, Scotland, Kazakhstan, India and Canada does AmStar Surface Technology have and what is the reason for these collaborations?
15. What is the operating business of each international partnership at the moment?
16. What are the most recent developments of AmStar Surface Technology, what is the effect of these developments on the company AmStar and the product of AmStar?
17. Could you send a recent Annual Report of AmStar Surface Technology, which is to be used for the financial analysis?

***A m S t a r - E u r o p e*****AmStar-Europe**

1. Wat is de missie van het bedrijf? *(Korte termijn, definieert waar de organisatie naartoe gaat, omschrijving van het doel, de reden dat het bedrijf bestaat)*
2. Wat is de visie van het bedrijf? *(Lange termijn, definieert waar het bedrijf naartoe wil in de toekomst. Het reflecteert het optimistische beeld van de toekomst van de organisatie)*
3. Wat is de strategie van het bedrijf? *(Het begrip strategie duidt op de voorgenomen acties van het management. Op welke wijze wil de organisatie doeltreffend zijn? Welke doelen heeft men zich gesteld en hoe denkt men die te bereiken?)*
4. Hoe ziet de structuur binnen de organisatie eruit? Geef dit eventueel aan door middel van een figuur. *(Wie doet wat, Coördinatie)*
5. Hoe zijn de formele en informele procedures, regelingen en afspraken binnen de organisatie georganiseerd?  
*(Kenmerken van vergaderingen, wijze van besluitvorming, wijze van conflictbehandeling, rapporten, budgetten, overlegstructuren, werkoverleg)*
6. Wat zijn de sleutelvaardigheden van de organisatie? *(Wat kan de organisatie goed, wat is de kenmerkende kennis en kunde, waar blinken de organisatie en de werknemers in uit)*  
*(Research, Marktkennis, Productbeheersing, Financieel- en administratieve beheersing)*
7. Wat zijn de waarden en principes binnen de organisatie? *(De basiswaarden en fundamentele principes waar de organisatie en haar leden in geloven en naar handelen)*
8. Wat zijn de kenmerken van het gedrag van jou en de andere vier oprichters binnen HiLux5 bij de uitoefening van de taak en op welke wijze gaat men binnen het bedrijf met elkaar om? *(Managementstijl en organisatiecultuur)*
9. Hoe wordt personeel aangenomen en getraind en hoe wordt de juiste baan aan de persoon toegekend? Wat zijn de kenmerken van de werknemers in het algemeen en welke worden erg belangrijk gevonden binnen de organisatie?  
*(Kennis, Ervaring, Opleiding, Verwachting, Leeftijdsopbouw, Motivatie)*

**2 Plant questionnaire****General plant info**

1. Could you give a short description of the plant and its function?
2. Is the plant owned by a company (privately) or by municipalities (publicly) or both?
  - a. Please explain?
3. Are there any cooperation's with other plants in Denmark or abroad?
  - a. If yes, which one?
4. When was the plant build?
5. How many people work at the plant?
6. How much does the plant produce?
  - a. Electricity =
  - b. Heat =
  - c. Other =
7. How many incineration lines does the plant have?
8. When were the incineration lines build?
9. What is the capacity of the lines?
10. What is the incineration fuel of the lines?
11. Did the fuel type change the last 10 years?
  - a. If yes, please explain why?
12. What is the steam temperature and pressure?
13. Did the steam temperature and/ or pressure change in the past 10 years?
  - a. If yes, please explain why?
14. Does the plant shut down its operations for maintenance on a regular basis?
  - a. If yes, How many years or months are between maintenance checks?
15. When is the new stop for maintenance planned?

Structure

1. How would you describe the structure of the plant? (hierarchical or flat)
2. Who makes big and small investment decisions regarding the plant?
3. Who is responsible for (the maintenance of) the incineration process?
4. Can he or her be contacted for specific information?
  - a. If yes, in what way, by phone or e-mail (please mention phone number or e-mail address)?

Plant and innovation

1. Does the plant have experience with innovative products, methods or techniques?
  - a. If yes, please give an example?
2. Would you say the plant is very innovative and interested in trying new things?
  - a. Please explain why (not)?
3. Is there a plant or company (in the power or waste to energy industry) in Denmark that is known for its innovativeness?
4. Would you say in general the plants and or companies in Denmark can be considered innovative?

Combustion boiler details

*(please choose between the answers and circle the right one. More than one answer is possible)*

1. Are there any corrosion and or erosion “problems” in the boiler(s)?
  - a. Yes, corrosion
  - b. Yes, erosion
  - c. Yes, corrosion and erosion
  - d. No, there are no problems
2. What kind of protection do you use to prevent/ stop or limit corrosion and or erosion “problems”?
  - a. No protection
  - b. Tile the walls
  - c. Use bricks on the walls
  - d. Use a nickel-based coatings like Inconel
  - e. Other ....