



Trelleborg

Group and the

environment

Contents

Trelleborg AB – a global industrial and distribution group	3
Milestones and challenges – the President has the floor	5
Industrial sector	7
Distribution sector	9
Environment, health and safety aspects	10
Environmental policy	11
ISO 14001 at the Trelleborg Group	
Environmental Management System	
Trelleborg's environmental organisation	
Environmental coordinators	12
Environmental performance of the Trelleborg Group	
Data collection	
Occurrences during 1998	14
Consumption of natural resources	
Soil and groundwater issues	
Energy consumption	
Water consumption	15
Chemical issues	16
Air emissions and discharges to aquatic environments	
Air emissions	
Discharges to aquatic environments	18
Waste management	19
Working environment	20
Other environmental aspects and conditions	20
Environmental objectives	21
Contact persons	22
Glossary	23



Trelleborg AB

*– a global industrial and
distribution group*

Trelleborg is a globally active group currently undergoing major transformation. With state-of-the-art polymer technology and extensive industrial know-how within the automotive, engineering, offshore, chemicals, forest products, paper and building fields, we are well equipped to meet the challenges of the new millennium. Our basic corporate philosophy is as simple as it is obvious. Our goal is to make things easier and more convenient for our customers and our customers' customers. Through a strategy of concentration and expansion we shall create leading industrial positions.



Our common denominator is comfort, safety and the environment. One of our greatest advantages is the capacity to integrate our activities. This enables us to utilise the compiled know-how and expertise of the entire group.

Key figures

Invoiced sales in 1998, SEK M:	25,041 (20,825)
Operating income, SEK M:	736 (2,609)
No. of employees:	13,895 (13,525)
Represented in number of countries:	35
Number of shareholders:	70,000

President

Fredrik Arp President and Chief Executive Officer

Industrial and Distribution sectors

Hans Porat Head of Industrial sector
Fredrik Arp Head of Distribution sector

Business Area Presidents

Industrial Sector

George Caplea Trelleborg Automotive
Anders Pettersson Trelleborg Wheel Systems
Georg Brunstam Trelleborg Engineered Systems
Peter Suter Trelleborg Building Systems

Distribution sector

Göran Näsholm Ahlsell
Rolf Forssell Bröderna Edstrand
Gérard Lièvre Reynolds
Taisto Riski Starckjohann

Environmental Affairs

Torbjörn Brorson Vice President – Environmental Affairs

Ownership structure

Trelleborg AB has nearly 70,000 shareholders, the largest of which is the Dunker Foundation. Other significant owners include a number of Swedish and American banks and insurance companies. In December 1998, the Dunker Foundation stated that it owned 10 percent of the share capital. During the same period, 20 percent of the share capital was controlled by foreign interests.

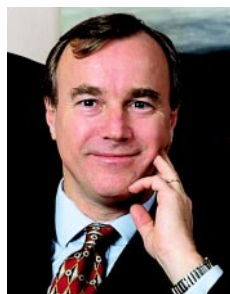
Trelleborg over the years

- 1897** Trelleborg's forerunner, AB Velox, is registered on February 8. Founded by well-known trader Johan Kock.
- 1904** Tretorn's owner Henry Dunker and Johan Kock jointly start Trelleborg's Gummifabriks Aktiebolag, which takes over the operations of Velox. Its sole product is inner tubes for bicycle tires.
- 1907** Series production of automobile tires commences.
- 1935** Trelleborg employs 1,000 people.
- 1946** The company starts its international expansion.
- 1955** Exports account for nearly 15% of total revenues.
- 1962** The first factory outside Sweden opens in The Netherlands.
- 1964** Trelleborg is listed on the Stockholm Stock Exchange.
- 1975** The company has 6,900 employees and annual sales of SEK 950 million, 44% of which are generated abroad.
- 1975** Termination of all production of passenger car tires and the bulk of bicycle tire production.
- 1977** The name is shortened to Trelleborg AB.
- 1978** The cooperation agreement with Tretorn is terminated.
- 1985** A program of rapid expansion commences. During the next two years companies and operations are acquired which increase sales by around SEK 1.8 billion and add 2,800 employees to the labour force.
- 1987** The mining and metals company Boliden AB is acquired
- 1997** The Boliden Group is introduced on the Toronto Stock Exchange thereby intensifying the concentration on "Industries" and "Distribution".
- 1998** The Trelleborg Group has about 14,000 employees in 35 countries.

Milestones and Challenges

- the President has the floor

Trelleborg and the surrounding world. Most countries are increasing the priority of environmental issues on their agendas: The effects and the internationalisation of this distinct trend are increasing. At Trelleborg, we are following the changes in the surrounding world from a far-sighted, strategic perspective, and our company is continually adapting to the demands of our customers and to society's views on environmental issues. In the following, we will present some of the processes of change that are of particular interest to us as well as many other companies:



Fredrik Arp, President

■ Internationalisation is on the increase and environmental problems require global solutions to an ever increasing extent. To prevent trade barriers from becoming insurmountable, we need to establish international rules and decisions on environmental policy. In Europe, we are witnessing how the EU is increasing its measures for environmental

protection. On a global level, international agreements like the Kyoto Protocol's intent to reduce the emission of "greenhouse" gases will probably have a great effect. It is of vital importance for us that requirements for restricting the use of certain chemical products, restricting emissions to air and water, installing purification and cleansing equipment and implementing limit values are harmonised between various countries. We participate in the activities of many sector organizations and expert bodies that are working to establish joint solutions.

■ In many countries, environmental policy is becoming increasingly sectorial. Power is becoming decentralised and environmental affairs are no longer solely managed by central environmental authorities. Instead, decisions are made in many various sectors of society – both on a centralised and a local level. Our company is represented in various countries through a network of authorities, universities and other companies. In Sweden, Trelleborg participates on the committees for the environment and for chemicals, under the auspices of the Swedish Association of Chemical Industries. Together with other rubber manufacturers in Sweden, we have founded an environmental committee in 1998 under SGI (The Association of Swedish Rubber Manufacturers). Trelleborg's vice president for environmental affairs represents SGI on a European level in the BLIC association. Corresponding activities are being carried out in the USA and other countries.

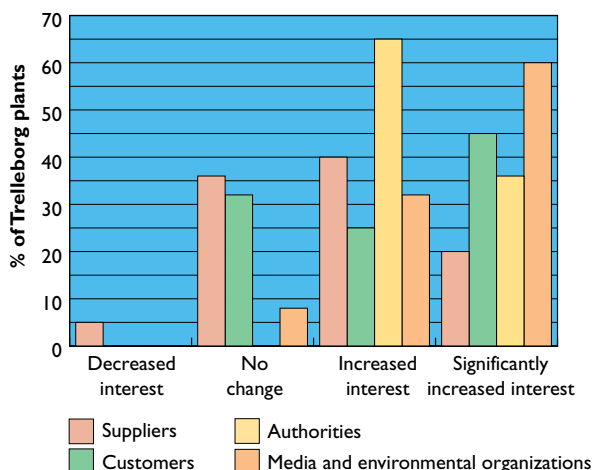
■ Environmental policy is being "depoliticised", at the same time that market forces are receiving increasing

influence. In the political arena, the political parties generally agree on environmental goals. As a result, the driving forces in the environmental field will be industry and various sector organizations. Our own studies indicate an ever increasing interest in environmental issues both from our customers, the general public and authorities (see below).

■ As the environmental organizations play out their role as society's alarm clocks and instead are incorporated into normal, public decision-making processes, their number of members and supporters will decrease, and they will increasingly work in partnership with politicians and companies. The direct interest of the man on the street for environmental policy will decline, while personal environmental commitment will increase. The environmental awareness of consumers will increase.

The interest of mass media for environmental issues will probably remain high in the foreseeable future.

Many of Trelleborg's plants report increasing interest in environmental issues from various interested parties.





Extensive environmental reviews within the framework of ISO 14000 are being carried out at all plants of the Group.

■ Today, environmental policy is greatly concerned with the spread of harmful substances and life-cycle issues. Concepts like “ecologically sustainable development” and “factor 10” are now commonly accepted. The fundamental viewpoint behind these concepts is that we must not exploit our natural resources in a manner that jeopardises the living conditions of future generations.

The following societal goals are today of substantial strategic interest: To reduce exposure to chemicals that are hazardous to the environment and human health, to minimise emissions to air and water, to clean up soil pollution and to place greater product liability on the manufacturers during the stages of both utilisation and disposal. As an important step in our efforts to define the objectives for our environmental work and thereby contribute to a sustainable development, we are in the

process of introducing the environmental management standard, ISO 14001, at the group’s plants all over the world.

■ An ever increasing number of companies are now realising the correlation between the environment, ethics and economy. In recent years, there are increasing demands that companies must not only account for their financial situation, but also give an account of their environmental situation and social commitment. Up to now, these demands are more ambitious than the letter of the law, but most companies and organizations today realise that they must assume responsibility as respected citizens in society. Therefore, during the last year, Trelleborg has collected facts regarding our environmental situation from the Group’s plants all around the world. The most important tasks are accounted for in the following.

For whom *is this report intended?*

This is an overview of the environmental activities in the Trelleborg Group, and we hope that it will convey a message to our various partners. The Group’s employees are the most important target group for the report, but we also envision this report to be an excellent method for demonstrating our environmental efforts to readers outside the Group. We have tried to describe the company’s environmental impact in an objective, concrete manner, without going into too much detail on various technical and ecological issues. If you would like additional information, you are welcome to contact the persons listed at the end of the report. Moreover, several of our plants issue separate environmental reports.

The environmental report should be read as an independent document. Additional information about products, organization and the financial situation is available in the annual report of the Trelleborg Group.

Fredrik Arp
President and CEO

Trelleborg Group

Industrial sector

Rubber polymers have been developed to such an extent that they are now used in thousands of applications from the chewing gum of Indians in Brazil to a component in advanced products at Trelleborg's CQ Materials. Trelleborg has actively participated in this development process ever since the company was founded.

The number of areas well-suited for rubber application continues to increase, and research and development in this field are vital to our future success. We expend great efforts on improving customer-adapted systems and polymer products, while simultaneously considering the increasing need to develop new technology for the development of new materials and combinations of materials. Some examples of our research and development successes in recent years include a CQ material used in brakes, a highly effective dry-material hose named Scirrocco, and environmentally-friendly solid tires for forestry machinery.

Products

The common denominator for many of the products of the Trelleborg Group is that they in one way or another improve comfort, safety and the environment. In particular, Trelleborg Wheel Systems have developed wide tires whose construction enables them to be used at extremely low pressure. This reduces soil compaction and field damage and protects roots near the surface at the same time. The tires developed by Trelleborg for industrial trucks are made entirely of recycled materials. Trelleborg leads Scandinavia in the retreading of tires. Efforts are underway to gradually replace HA oils and other hazardous chemicals in tires and other rubber products. Trelleborg participates in several international projects regarding Life Cycle Analyses (LCA) and other aspects related to rubber products.

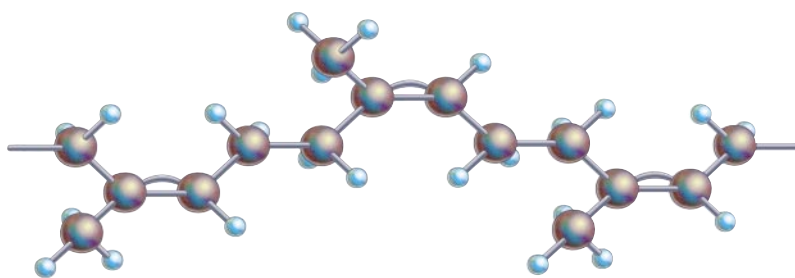
Trelleborg Building Systems have developed several products for the building sector that lower energy consumption, increase economic savings and improve indoor environments – sealing strips for doors and windows are a good example. Roof sealant products have undergone intensive technological developments in recent decades. 25 years ago, three layers of roofing felt with a lifespan of 15 years was used. Later on in the 1970s, two layers of felt with a lifespan of 25 years was developed. In the 1990s, one-layer, high-quality roofing was intro-



One third of the world's rubber comes from the rubber tree. The remaining two-thirds consists of synthetic rubber made from crude oil.

duced with an estimated lifespan of 35 years. The development has resulted in substantial resource savings in raw material consumption and transport needs.

Trelleborg Engineered Systems has developed a special flame-resistant rubber. It is used for coating steel structures in the offshore industry, for example. The rubber inhibits fire long enough to evacuate personnel from the rigs and implement rescue operations. Trelleborg Automotive provides products like vibration inhibitors for vehicles, machinery and buildings as well as composite materials for sound insulation.



Polymer molecule

What is rubber?

The first traces of rubber used in Europe were discovered in coal deposits in Germany. The raw material - which did not originate from the rubber tree – is believed to be 55,000 to 60,000 years old and was still elastic after all these years.

Natural rubber is made from the rubber tree which is cultivated in places like Malaysia, Indonesia and Thailand. The most common chemical elements in raw rubber polymers are carbon and hydrogen, and the vulcanization process is used to give this raw rubber its unique characteristics of durability and elasticity.

As the automobile industry grew in the early 1900s, the need for rubber greatly increased, which resulted in considerable research on discovering an artificial alternative. The quality of the first synthetic rubbers could not measure up to that of natural rubber, but gradually new kinds were developed with characteristics fully comparable to those of natural rubber, and in some cases better.

Styrene butadiene rubber, the most common and cheapest synthetic rubber, provides a good example of the manufacturing process. It starts with crude oil, which is distilled at oil refineries into styrene and butadiene, the raw materials for making styrene butadiene rubber. These two ingredients are chemically combined to make synthetic rubber which in principle has the same characteristics as natural rubber. Its heat resistance is better, whereas its elasticity at low temperatures and tensile strength are poorer. Around 75 percent of the polymers used at Trelleborg are synthetic and 25 percent are natural rubber. In many instances, styrene butadiene rubber is used in the same products as natural rubber, but it is also used as a protective material on various kinds of hoses and in many other products.

We also manufacture isoprene rubber, butadiene rubber and many other special types at Trelleborg, such as EPDM, butyl rubber, chloroprene and nitrile rubber. We also use plastic polymers like polyurethane for certain products, i.e. solid tires and rollers.

Processes and chemicals

Two stages are required to transform a raw material into a final product. In the first, the raw materials are mixed into a rubber compound according to a specific formula. The process is carried out based on specifications like temperature, time, etc. In the second stage the compound

undergoes a vulcanisation process to shape it into some of our final products.

A rubber compound not only contains polymer. Other ingredients are also required:

- Fillers like carbon black are used to reinforce the compound. Particle size is very important in this context. Small particles definitely increase the strength of the final product, but make the compound more difficult to process. On the other hand, large particles simplify the manufacturing process, but reduce durability.
- Ground chalk or clay are also commonly used fillers in rubber compounds.
- Sulphur, peroxides and accelerators are added during the vulcanization process to accelerate the chemical processes.
- Antioxidants and antidegradants are used to protect the rubber from oxidation and ozone cracking, i.e. to inhibit the ageing of the material.
- Various mineral oils like HA oils (aromatic oils) are added as softeners to regulate the hardness and simplify the manufacturing process.
- In some instances, pigments are added to light coloured compounds, antistatic lubricants are added to reduce static electricity and flame retardants are added to reduce inflammability.
- Textiles for protective clothing, textile and steel cording in tires and hoses and glass fibre cording in special hoses are examples of various kinds of reinforced rubbers.

Certain chemicals in the polymer industry have a negative effect on health and the environment.

The following chemicals or chemical groups are worth mentioning:

- HA oils (oils with high PAH content).
- Organic solvents (aromatic, chlorinated).
- Nitrosamine-generating accelerators.
- Lead and lead compounds, cadmium compounds.
- Flame retardants (chlorinated paraffins, brominated compounds).
- Diisocyanates, formaldehyde.
- Thiuram.
- ETU (accelerator).

Trelleborg Group

Distribution sector



Ahlsell has introduced an effective system for collecting used fluorescent tubes.

Ahlsell

The Ahlsell wholesale company provides a range of products in the fields of heating and plumbing, electrical supplies, refrigeration and tools from leading manufacturers for installation engineers, industry and municipalities. Through its more than 80 "professional marts", combined with a state-of-the-art central warehouse in Hallsberg, Ahlsell has developed a locally rooted, highly accessible distribution company that provides rapid deliveries throughout Sweden. In addition, Ahlsell is now located in Denmark, Norway, Finland,

Poland and Russia. The products are delivered to precise locations at the exact time stipulated by the customers. In some instances, the products are delivered in special recycled packaging, which provides a positive environmental effect. Moreover, the central warehouse in Hallsberg was certified under ISO 9002 in early 1998.

Bröderna Edstrand

Bröderna Edstrand is a nation-wide distributor which purchases, stores and distributes reinforcement materials for the construction industry. Commercial steel is by far the largest product, followed by stainless steel and aluminium. Bröderna Edstrand's resources for pretreating and additionally refining materials, such as coating and rust protection processing, have become an increasingly competitive factor. Operations are spread throughout five regions with warehouses in Malmö, Jönköping, Gothenburg, Stockholm/Norrköping and Sundsvall, as well as a reinforcement plant in Jularbo and a sales office in Copenhagen. The head office and management function are located in Malmö. Bröderna Edstrand has been quality certified under ISO 9000 for several years.

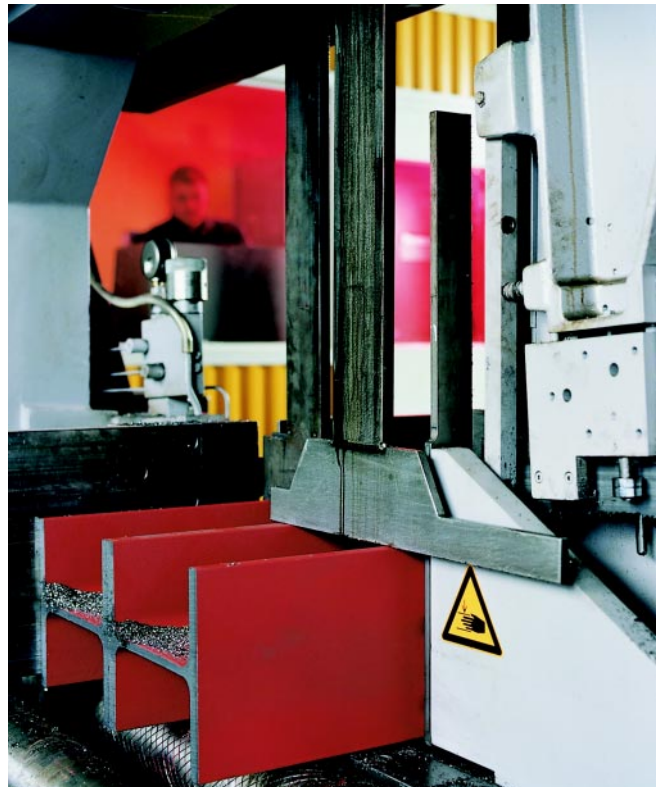
Reynolds

The Reynolds wholesaling company is an independent distributor which markets and sells semi-manufacture products like tubes, sheets and wire in copper, brass,

aluminium and special steel from some twelve locations in France, Germany and Great Britain. Reynolds' customers cover a broad spectrum with the majority from the manufacturing and building industries in France, Great Britain and Germany.

Starckjohann

Trelleborg AB owns approximately 98 percent of the Finnish wholesale company Starckjohann Oy. The company's operations mainly comprise the sale of heating, plumbing and construction products. The company also has an extensive distribution network with hubs in the Finnish cities of Lahti, Turku, Tampere and Vantaa. A distribution centre in Tallinn, Estonia provides sales to the Baltic States. Most of Starckjohann's sales are made to Finland's building and engineering industries.



Trelleborg's working environments are being systematically and specifically improved. Above is an example of the cutting of steel at Bröderna Edstrand.

Environmental, health and *safety aspects*

Significant environmental aspects

According to the ISO 14001 standard, an environmental aspect is “an element of an organization’s activities, products or services that can interact with the environment”. At the Trelleborg Group, we also include health and safety aspects in this definition.

Naturally, environmental aspects are not identical in all the various operations of the Trelleborg Group. The table below illustrates the significant environmental, health and safety aspects for the primary operations of the sectors.

For various reasons, great disparity sometimes exists among the individual plants in the industrial sector. This may be due to factors like plant size, whether mixing occurs at the plant, and whether the industrial plant is located in an industrial area or in the proximity of residential and commercial areas, etc. Correspondingly, there are differences in the trade sector between Ahlsell, Bröderna Edstrand and Starckjohann. For example, Bröderna Edstrand and Starckjohann cut, coat and rust-protect metal, while Ahlsell is exclusively devoted to distribution.

Many of the most highly prioritised environmental

aspects are found in the industrial sector. For example, companies in this sector produce air emissions (solvents, dust and odours), waste and noise, as well as consume natural resources and create risks in the working environment. A primary environmental aspect of the Distribution sector is the transportation of products. The table below rates our most important aspects in three categories: High, medium and low priority.

Positive environmental aspects of our product range

The companies in the Trelleborg Group not only produce negative environmental effects. Our product range contains many examples of products that help improve our environment. For example, Trelleborg Building Systems manufactures sealing strips which represent considerable energy savings.

Rubber’s unique characteristics are used in a durable membrane that resists the effects of both air and water, and rubber mats are becoming increasingly important in various kinds of artificial reservoirs. Other positive examples include noise reduction, anti-vibration devices and impermeable membranes for waste dumps.

Significant environmental aspects of the Trelleborg Group

Environmental, health and safety aspects	Industrial sector	Distribution sector
Location	■	■
Soil and groundwater (pollution)	●	▲
Use of natural resources (raw materials)	■	▲
Use of natural resources (water, energy)	●	▲
Use of chemical substances	●	▲
Air emissions	●	■
Noise (outdoor)	■	▲
Discharges to aquatic environments	▲	★
Waste	●	■
Spills, fire and unforeseen situations	■	■
Products	●	●
Packaging	▲	●
Transport	■	●
Risks in the working environment (exposure to chemicals)	●	▲
Risks in the working environment (accidents)	●	▲
Risks in the working environment (ergonomics, noise)	●	■

▲ Low priority ■ Medium priority ● High priority ★ Minor aspect

Environmental *Policy*

Trelleborg's environmental policy was issued in 1998. The policy specifies the environmental adjustments and goals for our environmental efforts, at the same time that we prepare the tasks that lie ahead. The environmental policy describes the framework for the group's environmentally adapted activities. Subsequently, each plant prepares its own environmental policy as a component of the ISO 14001 system.

Based on our approach to environmental issues we dedicate ourselves to complying with national and international commitments that strive for a sustainable society in the long-term. Our objective is that the activities of the Trelleborg Group shall not harm the environment or human health. The environmental aspects shall be integrated in the day-to-day operations of the Group.

- We shall economize on energy, water and other natural resources. The environmental aspects shall be taken into account whenever we choose raw materials, chemical products and distribution systems.
- We shall minimize waste and emissions from our production plants and from our distribution operations.
- We shall have safe and sound workplaces and ensure that our personnel training enables our employees to perform their work in the best possible way.
- In our research and development operations, we shall strive for environmentally sound technologies, products and packaging.
- Whenever we change process, plants and products, we shall utilise the opportunity to make environmental adaptations.
- We shall maintain sound emergency preparedness by systematically evaluating the risk of accidents, fires and uncontrolled emissions.
- We shall inform customers, suppliers and contractors about our environmental work, and in cooperation with them, strive to achieve mutual improvements.
- We shall provide open and objective information about our environmental work to our employees, the general public and the proper authorities.
- We shall comply with current environmental legislation and develop long-term plans related to national and international legislation in the areas of the environment, health and safety.
- By the beginning of the 21st century, we shall comply with the requirements of ISO 14001 and/or EMAS at our existing production plants. Work tasks and responsibilities within the framework of the environmental management system shall be clarified. Environmental objectives and plans of action must be established at every plant.
- We shall evaluate environmental performance by monitoring emissions and through frequent environmental audits. We will continually strive to improve our environmental performance.



ISO 14001 *at the Trelleborg Group*

Environmental management system

By environmental management system, we mean those parts of the general management system that encompass the organization, planning, responsibility, qualifications, routines, processes, and resources used to develop, adopt, evaluate and maintain the environmental policy of the Trelleborg Group. Our environmental management system ensures us that we comply with legal requirements and other regulations and that our environmental work is continually being improved.

Our common environmental management system is described in the Environmental Management System Manual issued in 1998. The Group's system complies with ISO 14001, and each plant or comparable organization is requested to develop its own management system, i.e. manual, objectives and procedures. This goal has not yet been reached, but we expect to implement ISO 14001 at all plants within a few years.

Activities for implementing ISO 14001

Currently, one plant has achieved ISO 14001 certification (Mjøndalen, Norway). The Group also has a certified environmental lead auditor according to the requirements of ISO 14012. To achieve the objective that all Group plants must be certified by the beginning of the year

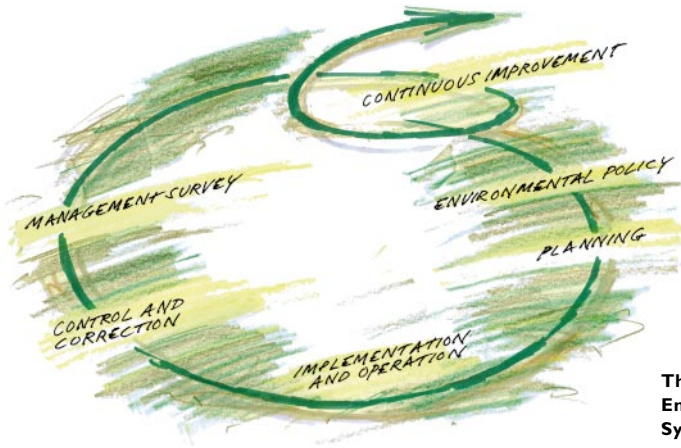
2000, the various plants are hard at work preparing environmental statements, training and practical activities.

Environmental reviews – which in practice mean a detailed analysis of the environmental situation and the method of organising environmental issues – were made by around fifteen European plants in 1998. The reviews were made according to a standardised model and provide valuable information for our ongoing work with environmental management. In 1999–2000, the environmental reviews will encompass all plants all over the world.

The implementation of ISO 14001 at a plant normally takes twelve to eighteen months, and to facilitate this work, around twenty plants in Sweden, Belgium and The Netherlands have participated in training activities at seminars on ISO 14001. The series of seminars lasts a total of six days and homework is assigned to the participants. In 1999, a corresponding number of seminars will be carried out for project managers at the remaining company sites in Sweden, as well at a number of plants in Europe and the USA. In addition, around ten units in the Trelleborg Group are mainly working on their own, or with the assistance of external consultants, to implement the environmental management system. We assume that a significant number of certifications will be implemented in 1999 and 2000.



Trelleborg Wheel Systems has developed wide tires for forestry and farming equipment. The tires can be used at extremely low air pressure, which reduces soil compaction and field damage and protects roots near the surface.



The various elements of the Environmental Management System ISO 14001.

Trelleborg's environmental organization

The Group's vice president for environmental affairs has the overall responsibility for environment, health and safety issues within the Trelleborg Group.

At Trelleborg, environmental, health and safety issues are the responsibility of the respective line managers. The local company managers are key persons responsible for running their units in accordance with:

- Legal requirements and other regulations.
- Trelleborg's Environmental Policy and the Environmental Management System Manual.
- Requirements stated in ISO 14001.

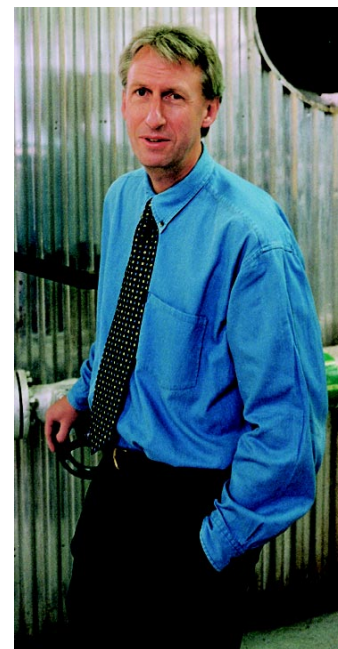
Some responsibilities are specifically defined. For example, the managers are responsible for:

- arranging training for managers and other personnel,
- implementing risk analyses and environmental audits,
- setting up steering groups which regularly tackle issues concerning the environment, working environment and safety,
- developing routines and instructions in the areas of the environment, health and safety,
- defining and following up key figures in the fields of environment and working environment,
- taking environmental and working environmental issues into consideration when preparing annual evaluations of employee performance,
- considering issues that concern the environment, health and safety whenever plants are acquired or sold and whenever changes are implemented at the company.

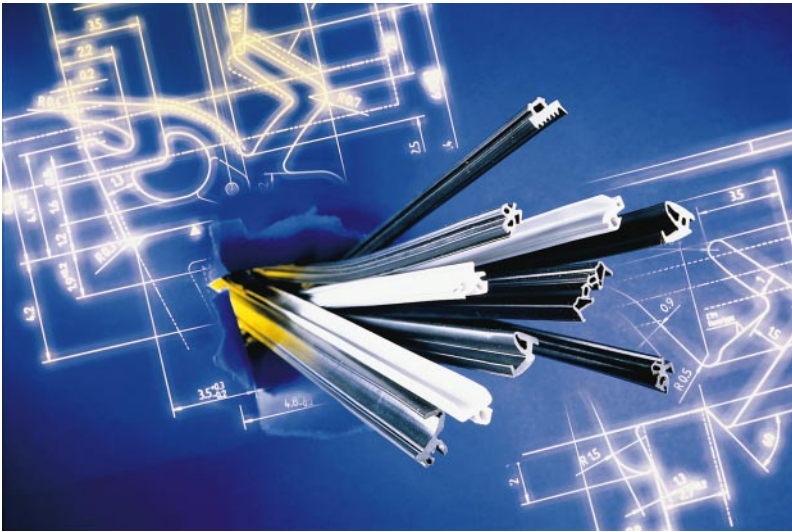
Environmental coordinators

In 1998 we increased our group of environmental coordinators so that most plants now have an environmental coordinator. Environmental, health and safety issues are high on our agenda, and in the years to come, the coordinators already employed by the Group will further develop their expertise. The primary tasks of the environmental coordinators are to assist the general manager with environmental expertise, to coordinate monitoring programs and compile data, to initiate and perform training, to implement and maintain ISO 14001 and to keep records concerning environmental performance. The names of the Group's contact persons/ environmental coordinators are listed at the end of this report.

Torbjörn Brorson
Vice President – Environmental Affairs



Environmental performance of the **Trelleborg Group**



Data collection

This report provides an overview of the environmental performance of the Trelleborg Group. Each plant has contributed relevant data in accordance with the Trelleborg model for environmental reports. Even so, some of the various internal monitoring programs differ considerably. Depending on the various routines and legal requirements, some organizations present detailed environmental data, while others currently have access to very limited amounts of information. The quality of the environmental reports will undoubtedly improve in the years to come. The present reports concern the years 1995 to 1998.

The key data in the report are described in texts and diagrams. The most important sources of information are specified in the diagrams. The specifications are divided into the industrial and distribution sectors wherever relevant. A total of 47 organizations have contributed to the report. They are listed in the table on page 22.

Occurrences during 1998

Several environmental issues were brought to the fore at the Trelleborg plant. An extensive survey of the environmental consequences of rubber production (curing fumes, odours and solvents) was delivered to the relevant authorities in connection with a permit application. During the year, the plant was criticized by the industrial

inspection authorities who stated that the frequency of occupational accidents at the factories was too high in their opinion. Immediately afterwards, the working environment was analysed, and we are now taking a number of concrete steps to improve the situation.

Another important event was the fire at Trelleborg Rubore in Kalmar, Sweden, in which the buildings were seriously damaged. On the other hand, the environmental consequences caused by discharge of polluted water used in the fire extinguishing efforts and by the emission of smoke from the fire were very limited. One of the plants in Värnamo, Sweden, was also ravaged by fire, which knocked out a smokestack. For a brief period, curing fumes from the production process were

released at a low height.

At many plants all around the world, the work of updating or widening the permits according to current environmental law is continuing. In Sweden, these activities have been given high priority since applications submitted before the end of 1998 were processed according to current law. Both industry and the authorities fear that the new environmental protection act could delay the processing of various permit cases, at least during a transition period.



A closed system for charging of chemicals at the mixing department at the Trelleborg plant has minimised exposure to chemicals.

Consumption of natural resources

Soil and groundwater issues

Managing soil and groundwater contamination is more than a technical challenge. It is also an important business issue, especially when acquiring or divesting a plant. Our viewpoint on contamination issues is that the problem should be taken care of in a phased process.

Typical activities include:

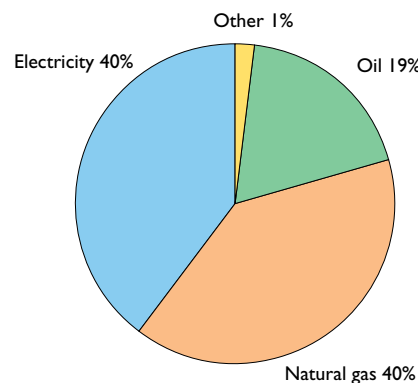
- Survey of the specific site conditions, i.e. present and previous uses of the site, as well as other potential sources of contamination.
- Investigation of geologic and hydrogeologic factors, adjacent site uses and any demarcation of sensitive areas.
- Description of the type and extent of the contamination, with emphasis on the largest sources of contamination.
- Analysis of the results to assess the importance of the contamination in relation to the vulnerability of the ecosystems to contamination.

Currently, a number of soil investigations and recovery activities are being carried out within the Trelleborg Group. Soil and groundwater contamination have been discovered at some plants, and recovery efforts have now been completed at Ridderkerk and Ede in The Netherlands. Detailed investigations and recovery are currently in progress at other plants: Trelleborg, Hoogezand, Evergem, Herentals, Sandusky and Dawson. In connection with acquisitions made in 1998, soil issues have been of great interest, and an accurate survey has been carried out.

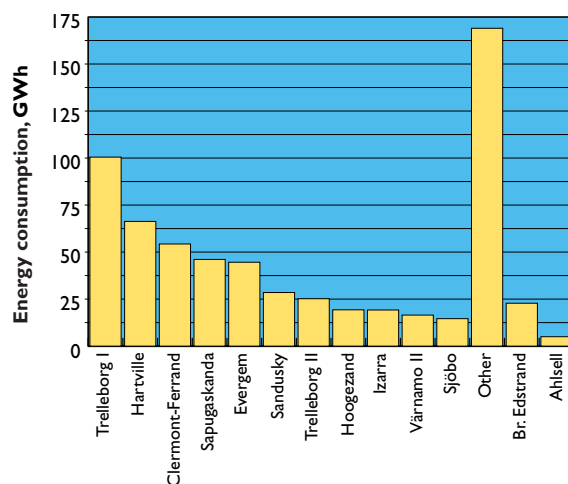
Energy consumption

The members of the Group use energy for heating, cooling, processes, equipment and transport. The total energy consumption of the Trelleborg Group in 1998 (not including transport) amounted to 623 GWh, of which oil amounted to 123 GWh, electricity 255 GWh, natural gas 247 GWh and other sources 7 GWh.

Energy consumption by fuel source



Energy consumption (oil, natural gas, electricity, other) at the various plants

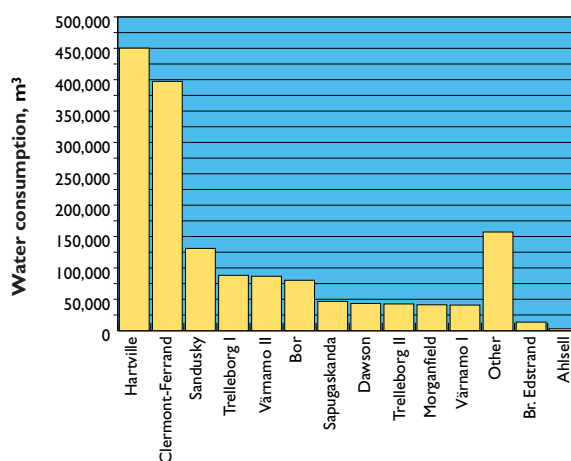


Water consumption

Water is mainly used for cooling, cleaning and sanitary purposes. In all, a total of 1.6 million cubic metres of water were used at the plants accounted for in this report. Certain plants consume considerable amounts of water.

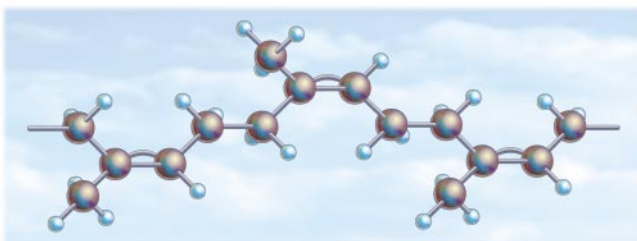
Around 48 percent of the water comes from wells on site or from nearby rivers or lakes. Around 52 percent of the water comes from municipal waterworks. At several plants, like Evergem, water consumption has been considerably reduced in recent years. This is mainly the result of installing recirculating systems for cooling water.

Water consumption at the various plants.



Chemical issues

The manufacture of rubber and other polymers uses large quantities of chemicals. Some can be hazardous to health and the environment during the production process, if not handled safely. On the other hand, the risks inherent in the final rubber product are very limited. Using limited amounts of hazardous



chemicals in closed systems, or preferably not using them at all, reduces the risks on the working environment and the surroundings. Some examples of reductions in chemical utilisation include aromatic oils (HA oils),

lead and lead compounds, cadmium compounds, chlorinated solvents, zinc compounds and certain antioxidants and accelerators. A number of chemical products with undesirable health and environmental hazards are still used within the Group, such as chloroparaffins, phthalates and thiuram.

In spite of intensive research, it is still not possible to replace these chemicals, since the deteriorating characteristics on the products from using the alternative chemicals that have been tried are considerable. The table on the next page provides an overview of several ongoing and completed projects related to chemical utilisation within the Group. These chemicals are the most widely used in the industrial sector.

The use of chemicals in the Distribution sector is limited, but within the framework of the ISO 14000 work, this sector is also examining the handling of chemical products.

Chemical	Status	Comments
Asbestos	Removed from production more than 10 years ago. Exists in certain buildings and equipment however.	Previously used as an outer, fireproof covering on hoses. Asbestos has now been replaced by fibre glass.
Benzene	Disappeared as a solvent from the rubber industry early on.	Replaced by other less hazardous aromatic solvents.
Cadmium compounds	Cadmium compounds have been removed from the production process.	Cadmium is mainly found in pigments and to a lesser extent in accelerators and antioxidants. Small amounts of cadmium are used as a natural compound in zinc oxide.
MOCA	MOCA is a carcinogenic accelerator no longer in use.	
ETU	ETU is an hazardous accelerator still used in certain parts of the Group, but which has been phased out in Sweden.	
N-nitrosodiphenylamine, Phenyl-β-naphtylamine	Retards respective antioxidants which are no longer used.	N-nitrosodiphenylamine is an aromatic nitrosamine that can give rise to carcinogenic nitrosamines. Phenyl-β-naphtylamine can cause cancer of the bladder and was removed from the European rubber industry at an early stage.
Kieselgur	Now replaced by kaolin.	Kieselgur is a silica-based filler containing silica quartz. Exposure to kieselgur dust can cause cancer.
Chlorinated solvents	The utilisation of chlorinated solvents has been reduced or stopped at many factories.	Carbon tetrachloride, methyl chloride (chloromethane), 1, 1, 1-trichloroethane and trichloroethylene are no longer used in Sweden. At some of our plants, the use of chlorinated solvents is still considerable (see "Air Emissions").
Solvents	Modified processes and in some cases a transition to water-based alternatives has reduced the utilisation of solvents.	A summary of solvents emitted to the atmosphere is provided in the section entitled "Air Emissions".
HA oils (high aromatic oils)	Around 25% of the oils have been replaced by less hazardous alternatives. Efforts are being made to remove HA oils from additional areas of application. The HA oils on tire treads have been replaced by more environmentally-friendly alternatives.	HA oils are classified as poisonous and contain high concentrations of carcinogenic polyaromatic hydrocarbons (PAH).
Lead and lead compounds	The use of lead in the manufacturing of hoses has been greatly reduced.	For many years, metallic lead has been used in the so-called lead process for making hoses. The lead is recirculated in the process and functions like an outer mould during the manufacture of hoses.
Zinc compounds	An overall survey of the possibilities of reducing the use of zinc has been carried out, and several measures have been implemented.	The predominant zinc compound is zinc oxide which is found in more than 90% of all rubber compounds.
TMTD	The alternatives being tested do not match the final product quality (heat resistance) compared to using TMTD.	TMTD is an accelerator which can form carcinogenic nitrosamines. This substance is also very harmful to the environment.
DEHP	The possible alternatives to DHEP are very expensive and DHEP is still being used.	DEHP (dioctylphthalate) is used as a softener in certain types of rubber. It is suspected that the substance may cause hormonal disturbances.
Chloroparaffins	Extensive replacement efforts have been made. Certain chloroparaffins still remain however.	Chloroparaffins are used as a flame retardant. Certain kinds are prohibited.

Air Emissions

and discharges to aquatic environments

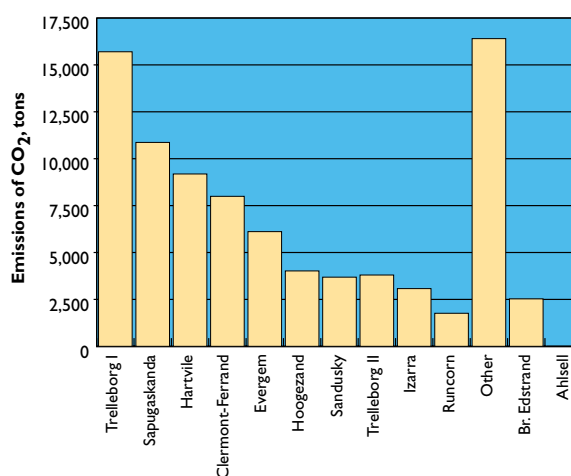
Air Emissions

Air emissions mainly consist of solvents, curing fumes, dust, carbon dioxide, nitrogen dioxides and odorous substances. The Group's total emission of solvents (VOC) amounts to 516 tons per year. VOC emissions were considerably reduced by installing purification systems and by modifying processes. The plant in Trelleborg for example has reduced its emissions over a 10-year period from around 400 tons VOC annually to around 40 tons/year. At Bröderna Edstrand's plants, emissions have fallen over the last four years from around 60 tons/year to 5 tons/year.

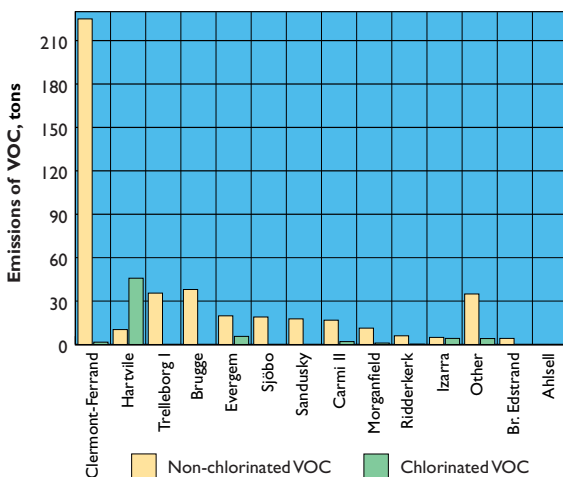
The use of chlorinated solvents has also significantly decreased in the Group. The total emission of chlorinated solvents in 1998 amounted to 65 tons.

Emissions of carbon dioxide mainly result from the burning of fossil fuels in the energy supply systems of the

Emissions of carbon dioxide to the atmosphere from the production of energy at the various plants.



Emissions of VOC to the atmosphere



companies, as well as in various kinds of transportation. The emissions accounted for in this report solely involve the production of energy at Trelleborg's plants. Emissions from district heating production, transportation and processes are not accounted for. The overall emission of carbon dioxide was around 85,000 tons. Information on the amount of carbon dioxide emissions from transpor-

tation is unavailable at present, but a project for examining this situation is currently in progress, i.e. at Ahlsell. The emission of carbon dioxide from transportation is considered to be a significant environmental aspect of Trelleborg's distribution activities.

Emissions of sulphur dioxide and nitrogen oxide (NO_x) from energy production amounted to 136 tons and 80 tons respectively in 1998.

The fumes and aerosols emitted from the vulcanization processes contain many different substances in low concentrations. The combination and effects on health and the environment have been investigated, and a number of hazardous components have been identified. Environmental authorities in several countries show a considerable interest in issues regarding curing fumes.

Discharges to aquatic environments

The discharge of water in the industrial and distribution sectors is relatively limited. Only a few plants have internal wastewater treatment facilities, and in many cases, the factories are connected to municipal wastewater treatment plants. Water conservation issues are a natural part of the ISO 14000 activities.

Waste management

Waste management issues are of great importance in modern society. It is expected that the authorities of most countries will exploit the legal and economic regulatory means at their command to reduce waste quantities. At several Trelleborg plants, successful programs are currently in progress to improve sorting at source and minimize waste, like at Ahlsell central warehouse in Hallsberg. In Sweden, producers responsibility applies to tires, and as a result, Trelleborg must pay taxes to a system for the collection and reclamation of used tires. Via this system, 90 percent of all tires are reclaimed.

Waste quantities within the Group are considerable, and large quantities of waste are still deposited, a total of 17,400 tons during the financial year. Around 7,600 tons were sorted at source and recycled as materials, alternatively through energy extraction. Hazardous waste is reclaimed through destruction at certified plants in various countries. The total amount of hazardous waste was 545 tons in 1998.

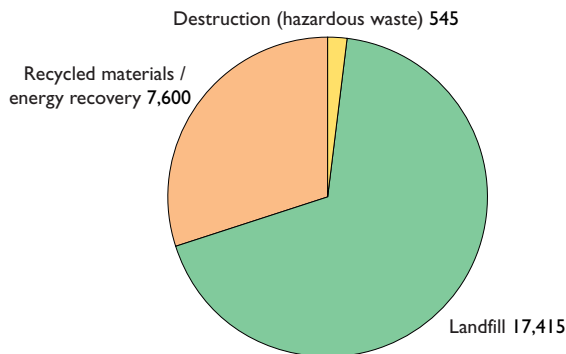
The cost of waste management does not necessarily reflect how effectively a company manages and sorts its waste. More likely, the differences reflect the various policies, laws and fees governing the reclamation of waste in the individual countries. These factors notwithstanding, the costs of the Trelleborg Group for waste management



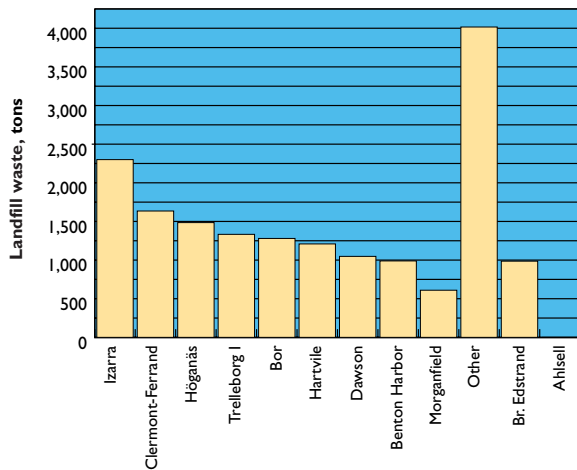
An important issue for Trelleborg is to contribute to recycling of rubber waste.

are substantial and often constitute the largest single cost for environmental measures at the individual plants.

Handling of waste, tons



Landfill waste



Working environment



An example of contributing to improved working environments is our cooperation with ABB on the development of a flow stopper. A “rubber bladder” plays an important part in the renovation of a nuclear power plant.

Health and safety in the working environment are important areas at the Trelleborg Group. Important aspects are accidents, ergonomics, and exposure to chemicals.

The frequency of accidents at many of the plants is normal for the respective sector. At some divisions or factories, however, far too many accidents unfortunately occur. The median frequency at the plants accounted for in the present report is 64 accidents per 1,000 employees in 1998. Most plants have implemented specific safety measures and safety-improvement programs. Naturally, training and systematic risk analyses are important elements in this work. In regards to occupational illness, 98 cases were reported during the year. The most common occupational illnesses were overstrain injuries and chemical-related illnesses, such as allergies. We anticipate that future environmental accounts will provide detailed information on the various steps being taken in the working environment area.

Other environmental aspects and conditions

Other environmental aspects and situations

We have concentrated on the following environmental aspects and situations during last year:

- Incidents involving spills and uncontrolled discharge during the year have been few. A total of ten spills, discharges and fires were reported. Comments on the fires at the Kalmar and Värnamo plants are found on page 14 of this report.
- We received a total of 14 complaints from neighbours and other partners. The complaints mainly concern odours, dust and noise.
- The authorities made visits to and inspections of several plants. Remarks concerning the working environment are discussed on page 14 of the report.
- No environmentally related fines or other penalty fees were assessed to the company during the year. Two factories in Sweden have been charged with violating the environmental protection law and the working environment law respectively.
- During the year, Trelleborg participated in several projects at universities and colleges. The Group's environmental work was presented in national and international forums.
- For many years, Trelleborg has participated in the Responsible Care Program of the chemical industry. During the year environmental data was provided for the annual environmental report of the chemical industry.

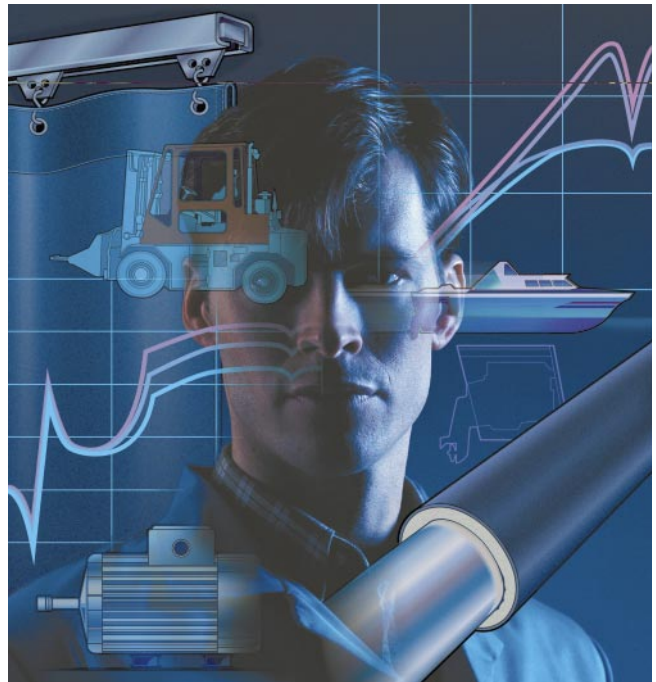
Environmental objectives

Environmental objectives

In consideration of the various commercial activities of the Trelleborg Group, it seems irrelevant at present to establish overall environmental objectives in addition to the measures stated in the environmental policy. However, the individual plants are laying down short and long term objectives within the framework of the environmental management system.

The most important goals are for example:

- to implement ISO 14001,
- to reduce the quantity of waste,
- to reduce the consumption of energy and water,
- to reduce the number of industrial accidents,
- to reduce emissions to the atmosphere.



Contact persons

Country	Plant	No. of employees	Contact person	Telephone number	No. of plants included in the report ³⁾
Head office	Trelleborg Environmental Affairs	-	Torbjörn Brorson	+46(0)41067091	
Sweden	Trelleborg I (City)	818	Bo Roskvist	+46(0)41051483	•
	Trelleborg II (E)	248	Erland Jakobsson	+46(0)41051323	•
	Värnamo I (City)	183	Per Tevebring	+46(0)37048126	•
	Värnamo II (Norregård)	154	Per-Olof Martinsson	+46(0)37048136	••
			Magnus Bergstedt	+46(0)37047025	
	Ystad	110	Stefan Andersson	+46(0)41167975	•
	Bor	84	Arne Ekegren	+46(0)370658716	•
	Höganäs (Mataki)	82	Lars Dahlbom	+46(0)42334000	•
	Rydaholm	99	Kenny Dahl	+46(0)47225856	•
	Sävsjö	37	Jörgen Lagerkvist	+46(0)38261695	•
	Örebro (Sigma)	110	Gunnar Söderberg	+46(0)19164700	•
	Hemse (Sigma)	92	Sam Svännel	+46(0)498484905	•
	Kalmar (Rubore)	64	Ulf Johansson	+46(0)480499400	•
	Sjöbo	72	Jan Johansson	+46(0)41626940	•
	Ahlsell (Hallsberg)	320	Jonas Pettersson	+46(0)58282670	•
	Bröderna Edstrand ¹⁾	523	Henrik Fries	+46(0)11283500	••••••
Denmark	Hadsten	108	Willy Nielsen	+45 87612551	•
Holland	Hoogezand	108	Elzo Doddema	+31 598 315911	•
	Ede	65	Rob Nikkels	+31 318 617112	•
	Ridderkerk	108	Peter Langendoen	+31 180 495555	•
Belgium	Herentals (EWP)	35	Jef Ooms	+32 14 258181	•
	Brugge	61	Marc van de Valle	+32 50 312901	•
	Evergem	309	Hendrik Raes	+32 09 2572327	•
France	Clermont-Ferrand	611	Jean Gravier	+33 473 258180	•
Spain	Izarra (TIBSA, IESA)	261	Jose-Luis Losa	+34 945 437000	••
	Burgos (TAISA)	96	Valentin Gonzales Gil	+34 947 473026	•
	Santander	42	Joaquin San Martin	+34 942 331009	•
Great Britain	Runcorn (Fillite)	31	T.J.Wrigley	+44 1928 566661	•
USA ²⁾	Sandusky	330	Debra Sopczynski	+1 810 6482100	•
	Dawson	185	Rod Millhof	+1 912 9952191	•
	Hartville	240	Rey Cruz	+1 330 8774834	•
	Carmi I (mixing)	58	Rick Estes	+1 618 3825891	•
	Carmi II (moal ding)	133	Dennis Jacobs	+1 618 3822318	•
	Morganfield	143	Dough Harre	+1 502 3891954	•
	Benton Harbor	125	Mikael Leuken	+1 616 9250100	•
	South Haven	90	Larry Lewis	+1 616 6372116	•
Mexico	Santiago Tianguisteno	115	Leif Lindholm	+52 713 36260	•
	Toluca	230	Juan Martinez	+52 72 790251	•
Sri Lanka	Sapugaskanda,	393	Kirthi Wanasinge	+94 1 570338	••

1) Gothenburg, Malmö, Norrköping, Jönköping, Krylbo, Sundsvall (Sweden).

2) Lisa Friedman, environmental coordinator, tel. +1 (610) 253 1164.

3) Number of dots shows the average number of plants accounted for.

The following plants are not included in the report: Ohs, Horda (Sweden), Mjödalen (Norway), Neumünster (Germany), Starckjohann (Finland), Reynolds (France), Goodall (USA, Canada), PAV (Brazil), Minworth (Great Britain), and Trelleborg (South Africa).

Glossary

Accelerator Speeds up the chemical reactions in the vulcanization process.

Antidegradant Slows down the ageing process of rubber.

Antioxidant Prevents rubber from being affected by oxidants in the air.

BLIC Association of European rubber manufacturers

Carbon dioxide (CO₂) CO₂ is formed in all coal combustion processes and is also released through the use of petroleum products. Excessive amounts of carbon dioxide in the atmosphere promote global warming.

EMS The part of the overall management system that includes the organizational structure, planning, activities, distribution of activities, practices, procedures and resources for developing, implementing, achieving, reviewing, and maintaining the organization's environmental policy.

Emission A discharge of foreign substances to the surrounding environment. Understood in the broadest sense, emissions can be water-borne, air-borne, liquid or particulate.

Environmental aspects Elements of an organization's activities, products or services that interact with the environment.

Factor 10 Model for the effective utilisation of energy and materials.

Hazardous waste Waste requiring special disposal techniques. Different countries have different definitions and regulations, and national standards are frequently changed which makes it more difficult to provide a standardised account for hazardous waste.

ISO (International Standardization Organization)
An international organization which has produced an extensive selection of standards that include the ISO 9000 and ISO 14000 series. ISO is commonly accepted around the world for quality and environment work. More than 80 countries are members of ISO.

ISO 9000 A series of international standards for quality assurance. Adopted in 1987.

ISO 14000 A series of international standards for environmental management systems (ISO 14001), life cycle assessment, environmental auditing, environmental labelling, environmental performance evaluation, and environmental terms and definitions. Adopted in 1996.

LCA (Life Cycle Assessment) A management tool to appraise and quantify the total environmental impact of products or activities over their entire lifetime by analysing the entire life cycle of a particular material, process, product, technology, service or activity.

Nitrosamines Substances that can cause cancer in animals and human beings.

NO_x (nitrogen oxides) Gaseous oxides generated in the combustion process through the oxidation of nitrogen. Harmful to health and the environment. Cause acid rain and eutrophication.

PAH Polyaromatic hydrocarbons. Some are carcinogenic.

SGI Swedish Rubber Association (Svenska gummiindustriföreningen)

SO₂ (sulphur dioxide) Sulphur dioxide is formed when petroleum products are burned. SO₂ contributes to the acidification of lakes, streams and fields and causes coniferous trees to shed their needles. Large concentrations in the environment are dangerous to human health.

VOC (Volatile Organic Compounds) The VOC's accounted for in this report consist of unchlorinated and chlorinated solvents. VOC emissions contribute to local atmospheric environmental effects, including the formation of ground-level ozone. Many VOC's are directly hazardous to human health.

Concentration & Expansion

Trelleborg is a globally active group currently undergoing major transformation. With state-of-the-art polymer technology and extensive industrial know-how within the automotive, engineering, offshore, chemicals, forest products, paper and building fields, we are well equipped to meet the challenges of the new millennium. Our basic corporate philosophy is as simple as it is obvious. Our goal is to make things easier and more convenient for our customers and our customers' customers. Through a strategy of concentration and expansion we shall create leading industrial positions.

- The Group has a turnover of more than 25 billion SEK and around 14,000 employees in 35 countries.
- The Trelleborg Group is organised in eight business areas: Trelleborg Automotive, Trelleborg Wheel Systems, Trelleborg Engineered Systems, Trelleborg Building Systems, Ahlsell, Bröderna Edstrand, Reynolds and Starckjohann.
- Trelleborg shares have been listed on the A-list of the Stockholm Stock Exchange since 1964.



Trelleborg AB (publ), P.O. Box 153, SE-231 22 Trelleborg, Sweden
Phone: +46 (0) 410 67000 • Fax: +46 (0) 410 42763
E-mail: info@trelleborg.com
Internet: www.trelleborg.com