



ENVIRONMENTAL STATEMENT 2018

Environmental protection – Environmental
Aspects – Measures - Employee Participation
Environmental Organisations - Neighbourhood

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Introduction



Manager Integrated
Managementsystem
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Laufenberg has worked continually on aspects of environmental protection for many years. In 1990 all production lines were converted and since then only solvent free coatings are used, this was followed by the introduction of solvent free ink for printing and since 1991 all paper and film waste is recycled.

The installation of retention basins in all production areas for our silicone guarantee 100% retention capacity and ensures that the water protection zone, in which Laufenberg is situated, is not compromised.

Over the years continuous investment in technical improvements has led to savings in environmentally relevant resources. Any plan for new developments on site are made taking environmental impact into consideration.

The Environmental Management System helps us to turn our ecological beliefs into concrete actions. Today it is more important than ever to use available resources economically and ecologically. Therefore it is our primary objective to reduce the environmental impact brought about in the production of our products.



Our Company / History

Laufenberg GmbH, a family owned business with tradition

The company was established as B. Laufenberg & Sohn KG in 1947 by Bernhard Laufenberg and has continuously expanded and developed.

Decades of experience and competence in the release liner industry form the basis of our modern, future oriented company.

Historical Milestones

- 1947** B. Laufenberg & Sohn KG, Roofing paper factory founded
- 1952** Reorientation of production to paraffin and wax papers.
- 1960** Specialisation of production of silicone release liners
- 1983** Europe's first coating production line for solvent free silicone built.
- 1990** Reorganisation of production and switch to solvent free silicone
- 1992** Company name changed to B. Laufenberg GmbH
- 1995** DIN/ISO 9001 and 14001 certification
- 1997** DIN ESO 14001 certification and validation according to EMAS
- 2009** Acquisition of paper business from Huhtamaki and expansion to 4 coating lines
- 2012** Introduction of new Corporate Identity and renaming of Laufenberg GmbH
- 2013** Certification according to BS OHSAS 18001
- 2014** Certification of Laufenberg according to DIN EN ISO 50001 and validation according to EMAS III
- 2014** Construction of plant 8 with consolidation of facilities
- 2014** Bridge link built between plants 2 and 8 including a transport system over a public road
- 2015** Fourth coating line (W4) increased capacity



Our Portfolio

Silicone Coated Paper

Paper is a renewable resource and its sustainability, recycling and utilisation are unsurpassable. The diversity of technical paper offers unlimited possibilities.

As well as the more popular types of paper, such as super-calendered, clay coated or PE-Film other types of paper can also be used.

Silicone Coated Film

Rather than using paper or any combination of paper and film some silicone films can also be used. Using solvent free and thermally interlaced silicone systems Laufenberg offers a large number of release values from easy to tight on MOPP, BOPP and PET.

Thanks to specially selected raw materials and Laufenberg's coating technology we have created a range of process liners that are suitable for multiple purposes.

Silicone Coated Paper and Film in general

Silicone coated papers and films are coated with a thin layer of silicone. The distribution of the silicone on the carrier is generally 1-2-g/m². Silicone is resistant to all sticky and adhesive material. The products are referred to as masking paper or film because of this characteristic.

Product Use

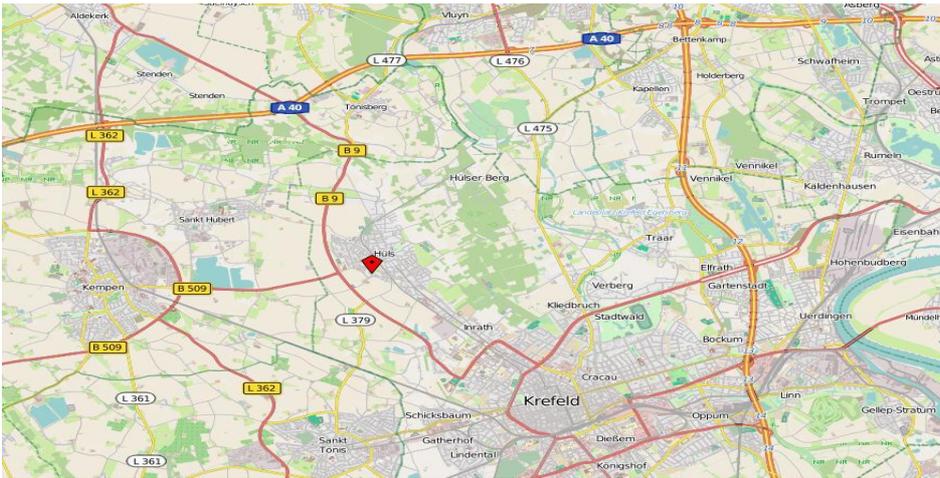
The use of these products is almost unlimited. The following industrial uses can be highlighted:

- Automotive Industry and their Suppliers
- Building Industry
- Consumer Electronics
- Aerospace Industries
- Electronics Industry
- Medical Industry
- Plastics Industry
- Hygiene Industry
- Packaging Industry
- Advertising Industry

These types of products have become indispensable in the private sector too. All self-adhesive products are generally protected with a masking paper. The masking paper is removed and disposed of and the adhesive part sticks (stickers, carpet tape, window seals and many more).

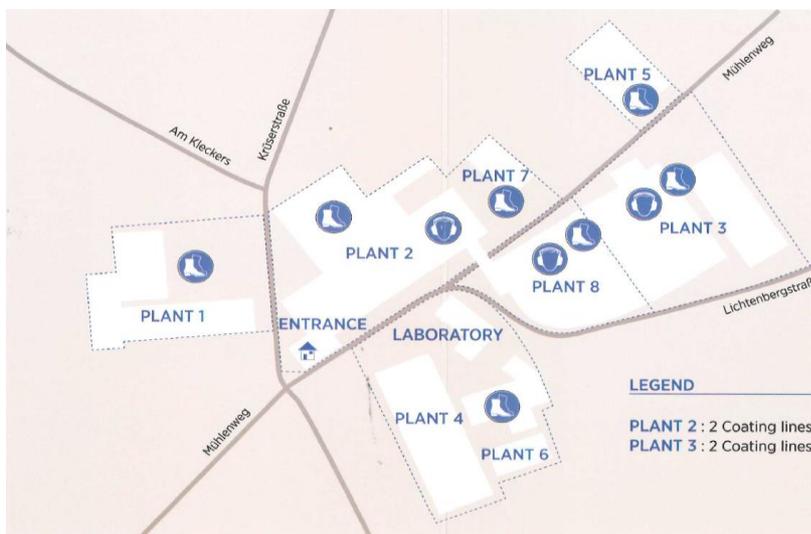
Location

Laufenberg's production site is found in an industrial estate on the outskirts of Krefeld-Hüls within the water conservation area III A1 and A2.



„Map data© OpenStreetMap contributors“

The site is located close to an excellent transport network with direct access to the B9 and the motorway network. Laufenberg covers an area of 42.164 m² of which 62% is built-up. There are 8 individual plants connected via public roads and one large warehouse. Plants 2 and 3 have 2 coating lines using only solvent-free silicone. The processing of goods to order takes place in plant 8. The other plants house storage for raw materials and working materials, finished products, the administrative offices, and technical laboratories.



Location overview

Company Policy / Environmental Policy

Our Company Policy

- We commit ourselves to improve our performance in quality and environmental issues, in health and safety issues and in all energy related issues by actively considering all risks.
- We are committed to the observation of all valid laws and legal regulations and requirements.
- We ensure that we source all paper pulp from verified legal sources.
- We involve our employees, contract workers and suppliers actively in the improvement of performance and in the compliance of requirements.
- We involve external companies on our sites to actively improve performance and in the compliance to regulations.
- We take all principles, core values and regulations of the International Labour Organisation into consideration in all our activities. We insist on freedom of association, the right to collective bargaining, the elimination of forced labour, the abolition of child labour and the ban of discrimination in respect to employment and occupation both within our own organisation as well as in the organisations of our partners.

Quality Policy

- We develop products that the market needs now and in the future.
- Our release liners are manufactured using modern, efficient and effective production lines.
- Our process-oriented organisation guarantees our customers punctual delivery of products, in the ordered quantity and with guaranteed quality. Our status as Quality Leader ensures our performance and long-term sustainability and the independence of the company.
- All employees are responsible for the delivery of the required standard.

Environment and Energy policy

- We are committed to minimizing any negative environmental impact.
- We proactively assess risks that could accompany our products or our actions.
- We encourage and demand the efficient use of both raw materials and energy.
- Our primary intention is to avoid waste.
- We avoid using raw materials and production processes that cause pollution and we work actively to reduce the use of such substances.
- The nature and extent of deployment and use of raw materials are appropriate and we aim to continually improve resource related performance. We make sure that information and resources are provided to achieve our strategic and operative targets.
- Strategic and operative environmental and energy targets create a framework to support the purchase of energy and environmental products always keeping an improvement in overall performance in mind.

Health and Safety at work

- Healthy and motivated employees are a key to sustainable economic success. We aim we show that we meet the challenges of our social responsibility.
- We do everything within our power to reduce the risks of injuries, accidents and work related illnesses of employees and we continually improve security and health at work by implementing suitable methods and instruments within the framework of our management systems. We ensure more safety at work.

Structure of Integrated Management / Environmental Management System

All ISO Management systems, regulations and standards are combined into one **Integrated Management System (IMS)**. Our company complies to the following standards and regulations:

- ISO 9001:2015 (Quality Management)
- ISO 14001:2015 (Environmental Management)
- EMAS III; Environmental Management and Audit System (EMAS) according to Regulation (EG) Nr. 1221/2009 of the European Parliament and Council, EMAS – Environmental Management and Audit System.
- BS OHSAS 18001 and ISO 45001:2018 (Occupational Health and Safety)
- ISO 50001:2011 (Energy Management)
- Pest-Control (Insect control)
- AEO (Registered economic operator)

Environmental protection according to the requirements of ISO 14001 and EMAS have been implemented at the plant in Krefeld-Hüls since 1997. The IMS covers all working activities in Krefeld-Hüls. All employees are informed regularly about changes within the IMS and are requested to implement and actively support changes accordingly.

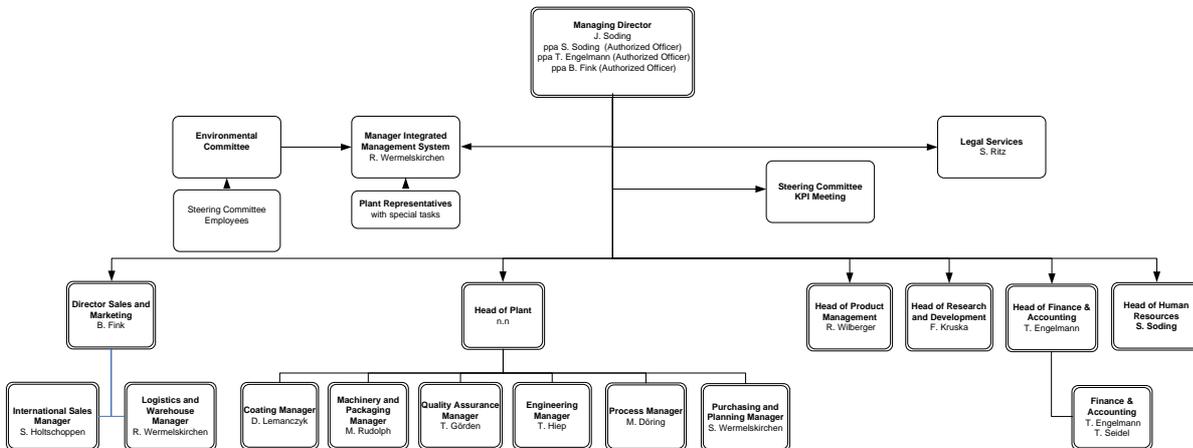
Responsibility and Communication

The executive board manages the company and defines our environmental policy. They offer financial support and provide sufficient resources for our Integrated Management system ensuring that employees have enough time to fulfil the requirements of the IMS.

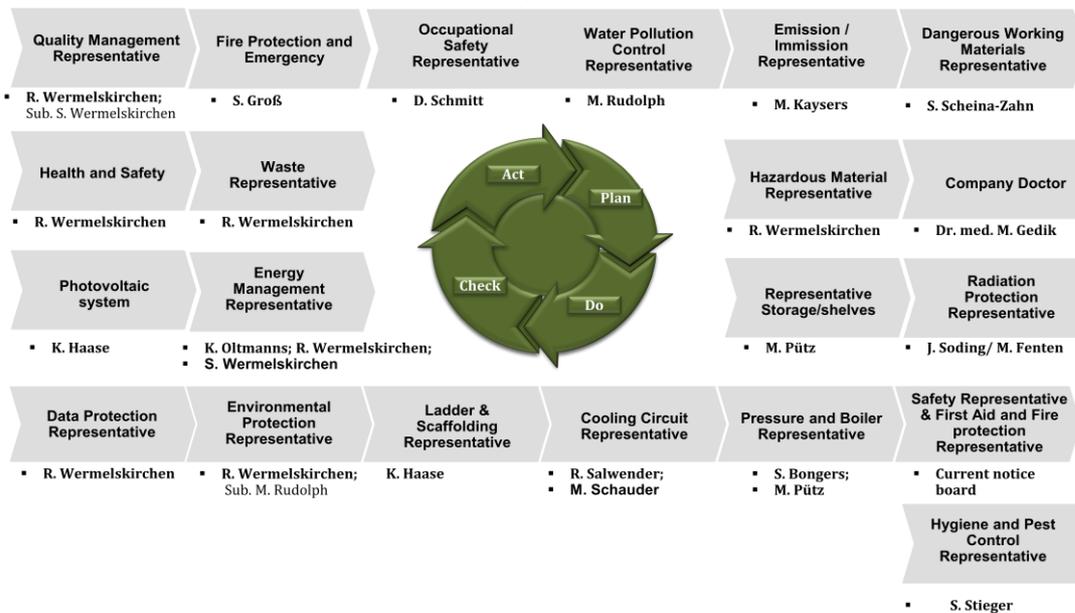
The executive board nominates employees responsible for environmental protection.

The Environmental Management Officer draws up the Environmental Programme and coordinates all activities. He supervises the plant manager and ensures compliance to all regulations within the IMS according to ISO 14001 and EMAS. The steering committee meets monthly to support all processes. Our management is responsible and must ensure that all activities concerning environmental protection (compliance to regulations, all operations including environmentally sustainable purchasing) are completed and fulfilled. They are supported in their function by our management and plant manager. Monthly meetings of the financial steering Committee monitor all environmental activities within the company.

People responsible for Environmental Protection



Representatives Chart



The management board is responsible for all external communication of environmental issues (queries, complaints, communication with customers, contractors and authorities). Department heads, working groups and steering committees are responsible for communication internally. Prior to important investments employees are consulted to ensure that their technical knowledge and organisational experience is taken into consideration.

Documentation

All documentation concerning the IMS is stored on a central server and can be found easily in the Profit-Database. All data is stored and a back up is made daily. Relevant data, fire brigade operations, and environmental data can be easily accessed via the IMS user interface (Navigator). Diverse protocols and supporting documents are stored in all the departments correspondingly.

Evaluation of Environmental Aspects

We evaluate both direct and indirect environmental aspects concerning our activities and products at least one a month or when any significant change occurs. We take the following evaluation criteria into consideration:

- Use of resources and flow of materials
- Legal and any other new requirements
- Environmental affects
- Processes with environmental relevance (Appropriateness and level of technology)
- Importance to employees, customers, neighbours and customers
- Costs for processes and resources

Important Environmental Aspects

The most important environmental aspects on site are:

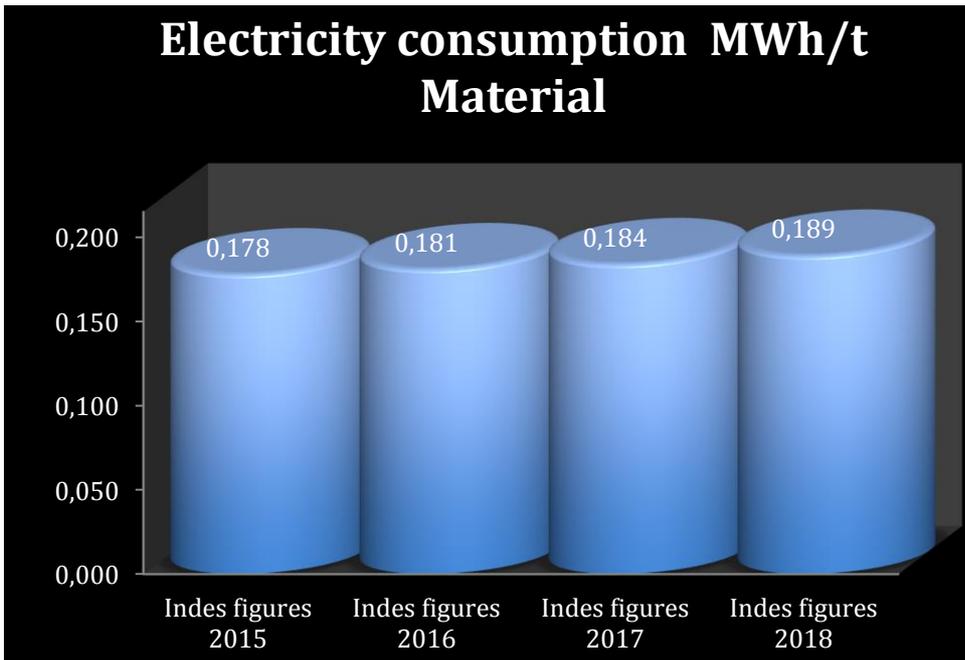
Key Areas	Direct Environmental Aspects
Energy Efficiency	Energy consumption, electricity and gas
Material Efficiency	Mass current carrier, silicon and printing ink
Fresh water	Water consumption
Cooling water	Bore hole water consumption
Waste	Amount of waste split into waste types
Biological diversity	Use of land space
Emission	Green house gases

Energy Efficiency – Electricity

Electricity is the main source of energy used to power the production lines.

Power Savings:

- 2015, plant 2 (Exterior area and cooling tower) was equipped with LED light technology. In plant 2 (production area) part of the plant line (lighting directly for machines) was equipped with LED technology. During the optimisation process of the compressed air line a new energy efficient compressor was installed. In 2015 the PV-systems produced 230.357,00kWh of electricity.
- 2016, in all modernised areas LED light technology was introduced this included the lighting in the raw materials warehouse, plant 2 including ramps, Pilot Coater in plant 1, car park attached to plant 6, air lock plant 2, 3,8 and the loading ramp of the warehouse in plant 3. All drives on the W5 coating machine were replaced with frequency-controlled drives. In 2016 the PV systems produced 208.428,00kWh of electricity.
- 2017 - 2018, by implementing frequency controlled drives a 34 % savings on electricity was achieved on coating production line W5. Total electricity use increased slightly per t of material due to improvement processes introduced to the coating machines.
- In 2017 205.328,00 kWh of electricity and in 2018 227.493 kWh of electricity were produced by the photovoltaic systems.

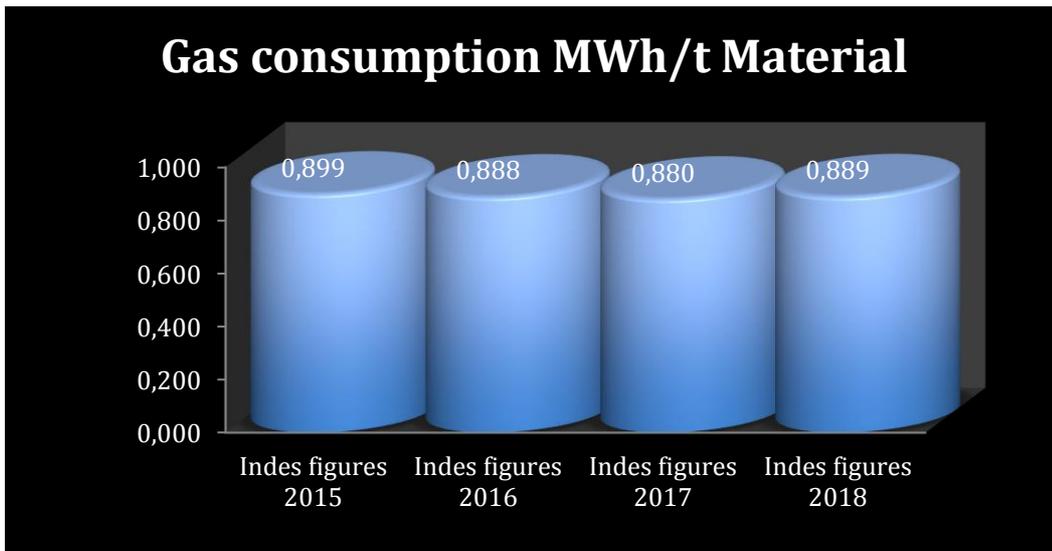


Energy Efficiency Gas

Natural gas is used to heat buildings and in the drying process of all coating machines. The furnaces are checked by an authorised chimney sweep.

Savings on gas

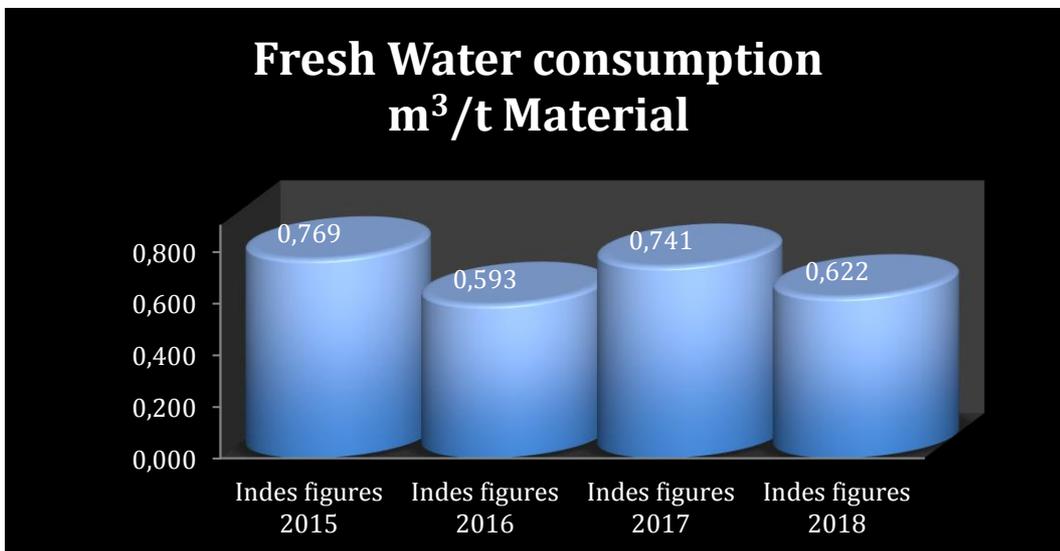
- 2015 and 2016 a rotary heat exchanger was set up in Plant 2 and in the course of the expansion in capacity of W4 was put into operation in 2015.
- In 2016 and 2017 specific gas consumption remained stable.
- In 2018 specific gas consumption increased slightly due to other improvements in processes.



Gas consumption per t of used material

Fresh Water

Fresh water is used in all sanitary installations, in all social areas and for steam production. In 2010 a new high-speed steam generator was installed in plant 3.



Fresh Water consumption per t of used material

Water Cooling (bore hole water)

Water for cooling machines is sourced from a bore-hole at the plant and is discharged in small amounts into the public sewage system. The consequent connection of all production plants to one closed circuit cooling system has led to a reduction in the use of bore water since 2001. In 2010 an additional coating line was added to the cooling system in plant 3. The water quality following ultrasound treatment deteriorated leading to an increase in the amount of water used for cooling, this led to a switch to ~~bi-side treatment~~

Waste

Waste material occurs in the production process. Paper, film, cardboard, wood and municipal waste is recycled wherever possible. Other waste from the coating machines occurs too, this can be coating material residuals, additives and other materials.

Biological Diversity

The plant covers an area of 42.236 m² of which 62% is developed.

Emissions

The natural gas used in our company produces emissions. This includes carbon dioxide, steam and to a small degree nitrogen oxide. These emissions are negligible and are therefore not listed. Annual emissions of carbon dioxide are calculated based on the amount of electricity and gas used.

Noise Emission

Little noise emission is recorded off company grounds. Minimal noise emission is caused by the transport of goods within normal working hours. Immission regulations according to the German Technical Guidelines for noise reduction (TA Lärm) are specified for the location but there is no written obligation to measure them. In the course of building permits sound technical examinations were requested and completed. During routine measurements, or when it was suspected that immission values were violated, it was proved that values of designated sites within the company (including vehicle traffic) did not exceed any immission levels. Based on this we do not include noise emission in any environmental statistics.

Other Environmental Effects

In plants 1 and 2 technical facilities were installed in 1986 to decontaminate the ground water from trichloroethylene that the company used in the past. Experts have monitored both decontamination areas and in plant 1 target values have remained below the target level of 60% for years. In 2018 the decontamination process was phased with agreement from the responsible authorities.

Indirect Environmental Aspects

The most important indirect environmental aspects at Laufenberg are:

Key Areas	Indirect Environmental Aspect
Development	All developments take environmental and energy resources into account
Energy sourcing	Purchase of energy
Procurement	Evaluation and assessment of suppliers, and service providers taking environmental criteria into account
Transport	Sporadic noise and emission loads

Procurement is a focal point of our integrated management system. It influences many environmental issues during the product life cycle and begins with the selection of the right raw materials during product development and the conservation of scarce raw materials such as platinum catalysts.

Further aspects are taken into account such as the sourcing of environmentally friendly energy, raw, auxiliary and operation materials and well as their later disposal or recycling.

All criteria are listed and followed in the process description in the Integrated Management System. All environmentally relevant suppliers are continually evaluated and we encourage our suppliers to introduce a suitable management system.

Summary of Core Indicators

Key Area	Index figures 2016	Index figures 2017	Index figures 2018	Index figures 2019/ targets
Turnover [Mio. €]	75,4	76,9	78,8	80,5
Energy Efficiency	MWh/t Material Input	MWh/t Material Input	MWh/t Material Input	MWh/t Material Input
Electricity	0,181	0,184	0,189	0,180
Gas	0,888	0,880	0,889	0,887
Material Efficiency	t Material Input/ Mio. € Turnover			
Material Input	369,09	364,27	359,44	339,97
Fresh water efficiency	m³/t Material Input	m³/t Material Input	m³/t Material Input	m³/t Material Input
Fresh water efficiency	0,593	0,741	0,622	0,591
Cooling water (Bore hole water)	m³/t Material Input	m³/t Material Input	m³/t Material Input	m³/t Material Input
Bore hole water	0,196	0,152	0,184	0,184
Waste	t	t	T	t
Total	2.853,04	2.847,07	3.343,92	3.144,44
	t Waste/ t Material Input			
Wastel	0,103	0,102	0,118	0,115
Biological Diversity	Land use / built-up area [m²]			
Built-up area / Total area [%]	62%	62%	62%	62%
Emissions	Co₂/t Material use	Co₂/t Material use	Co₂/t Material use	Co₂/t Material use
CO ₂	0,297	0,296	0,301	0,296

To protect confidentiality of our business secrets we choose not to show our complete material use nor our total use of electricity and gas.

Environmental share / participation of employees

We include employees and suppliers alike in the improvement of performance and in the fulfilment of requirements. We also include external companies in the active improvement of performance and in the fulfilment of requirements through strict guidelines for our production site.

Employees are continually trained and given all necessary information to ensure that active participation in the Environmental Management System is possible. Employees work actively within internal working groups on environmental issues and are involved in internal audits, and meetings to support and optimise our Environmental Management system and our environmental performance. A financial recognition programme further supports all of this. Employees are involved in the decision making process of new projects particularly if they are directly affected by plans and decisions made.

Public Relations

We are always accessible to the public. Via our Homepage www.laufenberg.info we report all news. At regular intervals and on special occasions we host an open day. Independent of these offers we are open for anybody to contact us.

Security and Legal Obligations

In 2018 no environmental violations were noted. Small discrepancies from the standards of our Management system were adjusted and corrected and no environmental damage was registered. We commit ourselves in all of our activities to an improvement in quality, environmental, health and safety and energy related performances.

Environment Programme and Issues

Environmental Issue	Environment Target / reduction according to Key Indicators 2018	Measures	Status February 2018
Electricity	Reduction in electricity consumption by 0.009 MWh/t material input in comparison to 2018	Reduction in stoppage times of machines and machine breakdowns, realisation of other projects, 5S, SMET; use of cameras to avoid mistakes; extension of monitoring of measures to support employee participation; employee motivation to reduce electricity consumption	Continuous work monitored monthly
Gas	Reduction in gas consumption by 0.002 MWh/t material input in comparison to 2018	Reduction in stoppage times of machines and machine breakdowns, realisation of other projects, 5S, SMET; use of cameras to avoid mistakes; extension of monitoring of measures to support employee participation; Continuous use of new air-air-heat-exchange with self-cleaning process, employee motivation to reduce gas consumption	Continuous work monitored monthly
Material Input	Reduction in waste by 0.037 t waste/t material input in comparison to 2018 - Carrier - Silicon - Ink	Optimisation of production processes and material input; employee participation and motivation to reduce waste materials	Continuous work monitored monthly
Fresh Water	Reduction in amount of fresh water used by 0,031 m ³ /t material in comparison to 2018	Reduction in amount of fresh water used by 0,003 m ³ /t material in comparison to 2017	Continuous work monitored monthly

Environmental Verifier's Declaration on Verification and Validation Activities

Dr. Wolfgang Ulrici,

with EMAS environmental verifier registration number **DE-V-0120**,

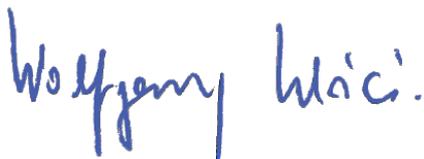
accredited or licensed for the scope **17.12.0 Production of Paper, Carton dan Cardboard** (NACE-Code)

declares to have verified whether the site or the whole organisation as indicated in the environmental statement of **Laufenberg GmbH** with registration number **DE-137-00035** meet all requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) and the Commission's Regulation (EU) 2017/1505 of the 28.08.2017 amending annexes I, II, III and the Commission's Regulation (EU) 2018/2026 met by the 19.12.2018 amending Annex IV of VO (EC) 1221/2009

By signing this declaration, I declare that:

- the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009,
- the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,
- the data and information of the environmental statement.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.



Dr. Wolfgang Ulrici

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Krefeld on 20.02.2019



Ralf Wermelskirchen, MSc, MBA

Note:

The contents and meaning of the original German Environmental report prevails over the English translation.