



MIXING GROUP



# **Sustainability Report of Harburg-Freudenberger Maschinenbau GmbH Site: Freudenberg, Germany**

Report period: 2016



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## Statement from the Board of Management

Also in 2016, the HF MIXING GROUP commits to a sustainable business activity. In this regard, we interpret the term sustainability very comprehensively. It relates to our Human Resources policy, production methods and energy and raw material consumption. We also extend this demand to our suppliers; we moreover also make it our job to meet the demand of our customers of providing energy-efficient machines with low resource consumption.

We thus subject all our actions to international standards, e.g., to the 10 principles of the UN Global Compact, the Luxembourg Declaration of the EU on the topic of employee health promotion, DIN EN ISO 14001 regarding environmental management, and DIN EN ISO 50001 on energy management.

In the reporting period we succeeded in presenting our energy and resource consumption transparently and in detail, and we developed and implemented important measures for savings. Although value creation has increased substantially in our company, we have hereby succeeded in maintaining the absolute resource consumption constant or even in reducing it.

We will consistently continue on this path in the future. As the report shows, other savings potentials are also available, which we will use consistently.

This report was prepared on a voluntary basis.

In case of questions about the sustainability report and its contents, please contact Ms. Nadine Massuard ([nadine.massuard@hf-group.com](mailto:nadine.massuard@hf-group.com))

Handwritten signature of Dr. Andreas Limper in black ink.

Dr. Andreas Limper  
Management

Handwritten signature of Mark Meulbroek in blue ink.

Mark Meulbroek  
Management



**MIXING GROUP**

## **Organisation profile of Harburg-Freudenberger Maschinenbau GmbH**

Harburg-Freudenberger Maschinenbau GmbH (Freudenberg plant)

Asdorfer Straße 60

57258 Freudenberg Germany

Postcode 11 80

57251 Freudenberg Germany

Tel: +49 2734 491-0

Fax: +49 2734 491-150

Email: [mixing@hf-group.com](mailto:mixing@hf-group.com)

Internet: [www.hf-mixinggroup.com](http://www.hf-mixinggroup.com)

Board of Management:

Jens Beutelspacher, Dr. Andreas Limper, Mark Meulbroek, Günter Simon

Chairman of the Supervisory Board: Dr. Joachim Brenk

Commercial Registry: Court of First Instance Hamburg, Dept. B No. 64651

Registered office: Hamburg

VAT ID No. DE811151610, Tax No. 21 22 290 0900 3



## Locations

The place of business of Harburg-Freudenberger Maschinenbau GmbH [HF MIXING GROUP] is in Hamburg/Germany; the HF MIXING GROUP has premises all over the world.

Main commercial and production sites:

- Harburg-Freudenberger Maschinenbau GmbH, Germany
- Farrel Corporation, USA
- Farrel Ltd., GB
- POMINI Rubber & Plastics srl, Italy
- HF Rubber Machinery, Inc., USA
- HF NaJUS, a.s., Slovakia

Global locations:

- Harburg-Freudenberger Machinery (China) Co., Ltd. • China
- HF France S.a.r.l. • France
- Farrel Sales Office Líbeznice • Czech Republic
- HF MIXING GROUP Sales Office Barcelona • Spain
- HF MIXING GROUP Services S.E.A. Sdn Bhd • Malaysia
- INDUS UTH HF MIXING SYSTEMS PVT LTD • India
- Farrel Asia Ltd. • Singapore

You will find sales partners as well as country and product responsibilities on the website <http://www.hf-mixinggroup.com/contact>

## Products

HF MIXING GROUP develops and produces machines and accessories for the rubber and plastics processing industry, with a high level of technical expertise. In particular, this includes mixers for manufacturers of technical rubber products and the tyre industry. HF also builds discharge units and special machines for these industrial sectors, as well as equipment for mixing rooms – right up to complete automation systems. All over the world, these future-proof products are used in the manufacture of tyre applications, sealing profiles, cables and friction linings, as well as for thermoplastic elastomers and special plastic mixtures.

Information on the products can be found on the webpage:

<http://www.hf-mixinggroup.com/products/>



**MIXING GROUP**

## **Labour practices and human rights**

**A clear commitment to sustainable and responsible corporate governance**

HF distinguishes itself for its high level of overall technical and procedural competence developed over 150 years, its corporate philosophy which focuses on long-term sustainability and its conscious close cooperation with clients and business partners. The result: common and lasting success. The central component of the company's value system is sustainability; an expression of the forward-thinking actions of the group. One logical addition to and continuation of the company's sustainability activities is the signing of the letter of commitment of the Global Compact initiative of the United Nations (UN) in early May 2015.





## The ten principles of the UN Global Compact initiative:

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.
- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.
- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.
- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

[www.unglobalcompact.org](http://www.unglobalcompact.org) | [www.globalcompact.de](http://www.globalcompact.de)



HF integrates the ten principles of the UN Global Compact initiative in its daily activities. At the same time, the company commits to ensuring that its business partners also conduct their business activities in a manner consistent with the ten universally recognised principles in the areas of human rights, labour standards, protection of the environment and fight against corruption. You can read details on how HF achieves all this on the following pages.



## Human rights

HF safeguards employee rights and is against human rights violations. HF integrates people with handicaps and socially disadvantaged people.

## Right to protecting the private sphere

HF guarantees adherence to the right to self-determination of information in collaboration with an external data protection officer and by regular audits in this area. HF relies on employees and thus does not install any technologies for monitoring the private use of e-mail and Internet.

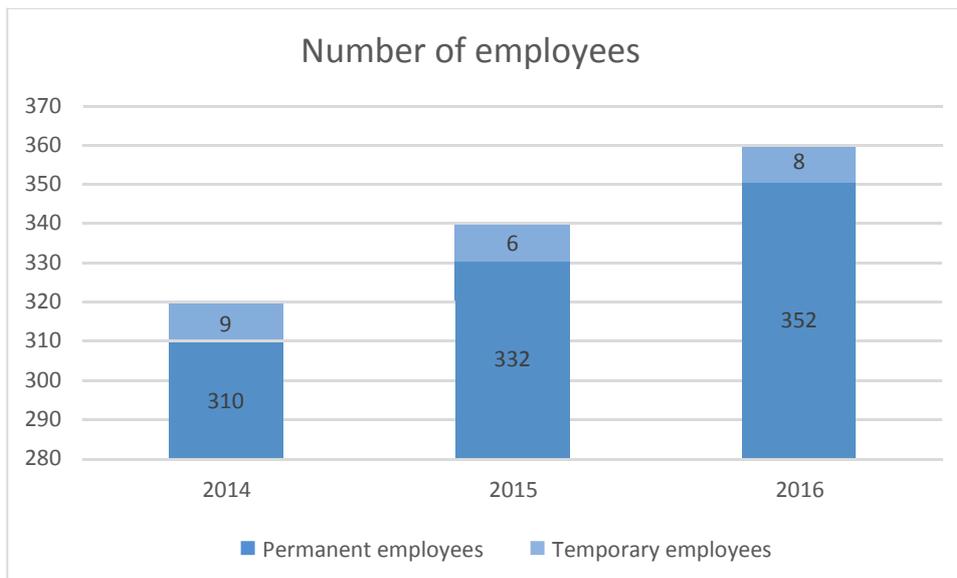
## Right to protecting the family

HF enables employees to find a balance between professional and private life by instituting flexible working hours. Mothers and fathers can take up their work part-time after parenthood, so that their children's care is guaranteed.



### Labour practices and employee compensation

HF is tied to labour contracts and offers flexible working hours to employees, special tariff payments such as Christmas and holiday bonuses, and non-monetary perquisites in the form of private laptops, petrol vouchers or e-bike leasing.



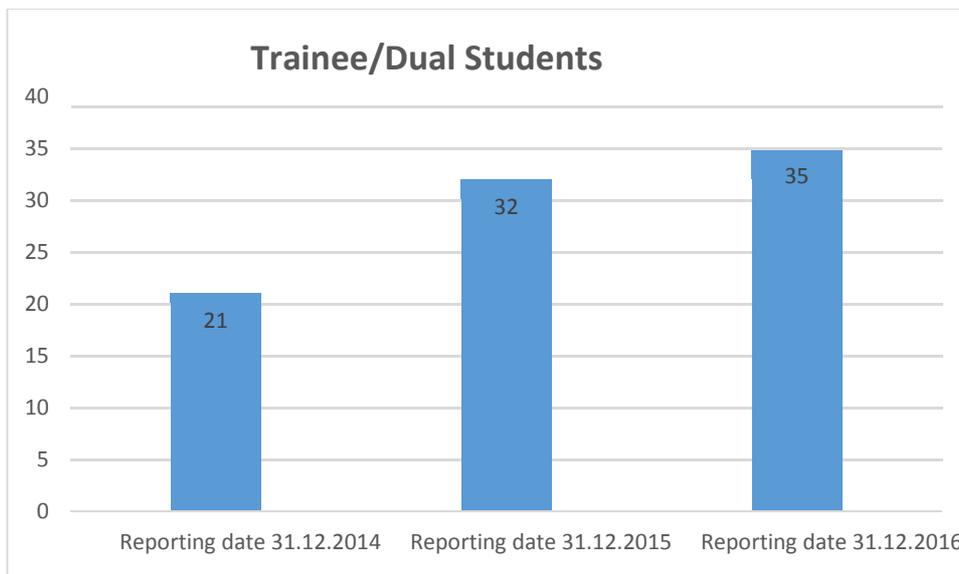
### Anti-Discrimination / Social Security

HF is committed to the UN Global Compact. HF ensures pay equity through the tariff framework agreement (ERA). Workplaces, and not employees, are classified into corresponding tariff groups with ERA. The previously generated task description, regardless of age, gender or actual qualification, is used when deploying or transferring employees. The hourly wage for all employees is significantly above minimum wages in order to offer HF employees appropriate living compensation.



## Training

Sustainability is emphasised as a corporate value at HF. Special attention to training is thus paid by staff management. The share of trainees in the overall number of HF employees was just about 10 percent in 2016. HF is very keen to offer a long-term perspective to trainees, which is why training is only done as per requirement. HF offers training professions in mechatronics engineering, industrial mechanics, construction mechanics, cutting machine operators and technical product designers in the technical and industrial areas. Professions like industrial managers, specialists in warehouse logistics and specialist IT personnel are offered in the commercial area.



HF focussed on other training professions in 2016 after the mechatronics engineering training was restructured. The internal passage through departments of industrial salespersons was adapted, in particular. Since all company areas are highly determined by technology, the areas of production, technology and sales automation were integrated into the process. This training now also includes HF-specific training areas besides the general ones.

The training professions of industrial mechanics, cutting machine operators and construction mechanics were in some parts extended.

Besides classical training, HF also offers dual study curricula in collaboration with the dual universities of Baden-Württemberg (DHBW) besides traditional training.



Industrial engineering and business studies and the process engineering specialisation in the mechanical engineering curriculum.

Two HF students concluded their studies successfully in 2016: They are now taking up tasks of responsibility at HF in the IT and auditing areas.

The company benefited substantially from the HF training days organised in June 2015 for the deployments of the trainees, since nine of the eleven newly appointed trainees visited the training days. HF was even able to benefit from the training days again in 2016, which showed from the letters of application received for 2017.

In 2016, HF took part in the training fair organised by IHK, the “JOBS-SI”, the “Technology Day” and the “W&I Day” of the Siegen University.

A “get-to-know” afternoon was organised in June for young people who were supposed to start their training with HF and for their parents or relatives, since it is important to HF that even parents and other relatives of the trainees are able to get an insight into the organisation. Everyone had the opportunity to get to know each other, the trainees and the organisation better that afternoon. A presentation of the organisation was made after a round of introductions, and then there was a factory tour, so that everyone could form an impression about the forthcoming jobs.

HF offered two jobs in the industrial mechanics and mechatronics engineering professions in 2017; both positions have already been filled successfully.

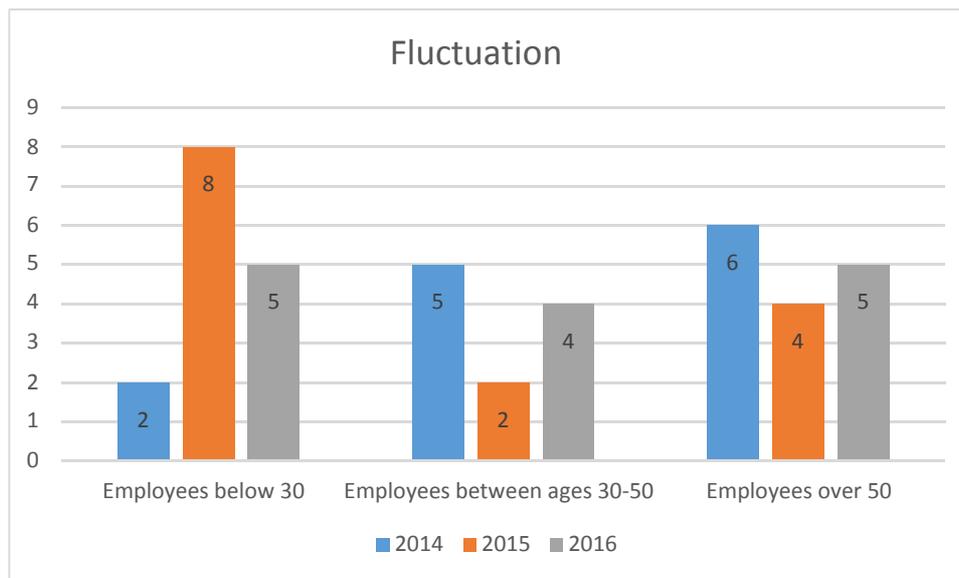
### Employee retention

In order to safeguard human capital sustainably, it is important that HF retains employees in the company over the long term. The employees are therefore offered various development options and social services. There is an option to become active in sports in the fitness centre run by the company, avail of physiotherapy services and lease e-bikes.

Besides these offers, a summer festival held using the principle of rotation is organised in collaboration with all European locations, which gives the employees the occasion to be able to visit the other locations once. A football tournament in which all locations establish a team is traditionally organised. These teams then compete against each other.



HF relies on flexible working hours to enable employees to have a stress-free balance of their private commitments and jobs. All employees get a share in profits besides special tariff payments.



All these aspects are reflected in the low fluctuation rate; it was at just 4.26% in 2015 and fell further to 4.01% in 2016. The fluctuation rate of male employees was 3.26% in 2015; 4.56% in 2016. The fluctuation rate of female employees was 4.35% in 2015; no female employee left the organisation in 2016. The rate of new appointments rose from 9.76% in 2015 to 10.00% in 2016.

### Personnel development

HF was recertified as per the standard DIN EN ISO 9001-2015 in 2016. The training management system introduced in 2015 in the area of field service jobs could in 2016 already be used as the basis for the capacity planning system, which had been introduced in 2015 as well. Data is still being collected currently with the help of data collection forms and managers in other areas. The first focus is on the technical areas.

A training machine on which HF employees and customers can be trained in the areas of mechanics, hydraulics, automation, repairs and technical innovations was purchased. The last modifications are still being made currently for the machine to become entirely operational in 2017.



### Health management

Healthy employees ensure a healthy organisation. A trainer exchange took place in 2016 in the fitness studio STARK run by the company, in which even family members of employees, besides the employees themselves, are given the opportunity to train. Physiotherapists are now deployed on four of the five weekdays due to the increased demand for physiotherapy care, and they even conduct sports classes, besides the treatments. An experienced fitness trainer offers courses in various areas on one day in the week.



Health management was extended to the health and social hotline of the Südwestfalen Deaconry in December 2015. HF employees and their relatives have the opportunity to use the hotline in all questionnaires regarding topics like care, social matters and medicine anonymously. This offer was availed of by many employees even in 2016.

Due to a change of the labour protection law, the Employer's Liability and Insurance Association demands from companies since 2013 to not only make traditional physical risk assessments, but also to consider the topic of mental stress at the workplace. Therefore, at the end of 2016, a survey was started specifically concerned with psychological stress. The process is in cooperation with the safety-technical service of Occupational Medicine Center Siegerland registered association. The survey is scheduled to be made and evaluated in early 2017.

During regular corporate campaigns employees can choose for themselves whether they wish to receive a part of their share in profits as a monthly petrol voucher or e-bike leasing. The first campaign was launched in 2013; 129 employees decided to avail of the e-bike offer in it. In 2015, 21 bicycles were handed out in addition to the 129. The leasing period is for three years. The bicycle can then be bought by paying a discounted amount. The period of the first campaign ended in 2016. Employees could then decide whether they wished to lease another e-bike or receive their share in profits as a monthly petroleum voucher again. 25 employees decided to take another e-bike.

In principle, there is an overall prohibition against smoking in the entire building premises and grounds and all rented and buildings in use, spaces and outdoor areas. The six areas marked smoking zones are exceptions.

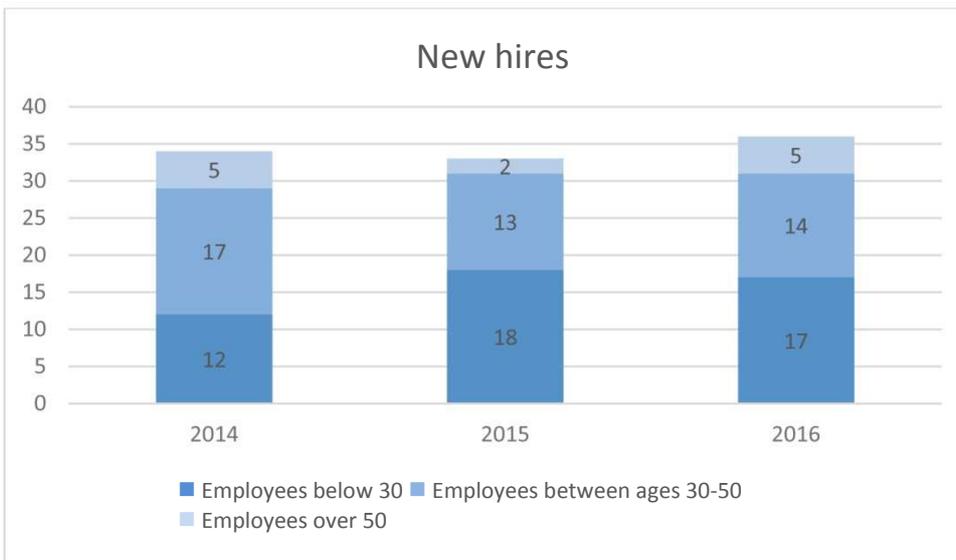


HF wishes to prevent addictions among employees and support them in overcoming any such addictions. The company has got an employee trained to be an addiction counsellor for this reason. Besides strategies for dealing with the problem on an industrial scale, he has also obtained knowledge in the area of prevention strategies and successfully passed an internship in an addiction clinic.

HF does not support employees only in curing addictions by notifying addiction clinics, rather it also offers them a perspective in the organisation subsequently.

### Employer Branding

The demand for well-trained skilled workers has risen continuously in recent years. A good order book position and restructuring in various areas required new appointments, even for key positions which were difficult to fill. 36 new employees in particular were appointed in the technical area in 2016.



With the slogan “It’s all about the mixture – build a future at HF”, the company intensified the collaboration with local schools and sports associations in 2016. As part of the collaboration with the football association SV Fortuna Freudenberg-Büschergrund, an interview training programme, among other things, was offered to the players. Even schools accepted the offer of professional information afternoons and factory visits very well.



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In addition, HF remains committed to the “Luxembourg Declaration for Workplace Health Promotion in the European Union” that it has already signed in 2014, and which is meant to promote and maintain the health of employees.

## Luxembourg Declaration

for Workplace Health Promotion in the European Union



### **Fair business practices**

#### **Anti-corruption**

HF has developed a guideline in the matter of anti-corruption. In 2016, employees were successfully trained in this area. In order to make the grade in this matter in the future as well, dealing with our guidelines is regularly referred to in the context of departmental meetings.

During their initiation phase, new employees are introduced to the topic in critical organisational areas by their managers.



## Environment and climate

### Environmental management

Protection of environment and climate have high significance when we manufacture our products. Besides cost-effectiveness, sparing use of resources and conservative handling of environment-related issues are significant factors in HF's corporate actions.

Management of Harburg-Freudenberger Maschinenbau GmbH is responsible for protection of the environment. This transfer of corporate responsibilities is guaranteed by the fact that every manager is informed about the responsibility of complying with environmental protection in the organisation.

Application and maintenance of the environment management system is the responsibility of the officer appointed for environmental management by the company's management. This officer advises the managers in the company when implementing legal and official requirements and promotes employee motivation and training. He ensures that deadlines for statutorily required measures are complied with and supports in testing and releasing new raw materials and additives under environmental aspects before using them in production. Training and continuing education of agents and managers helps keep their knowledge of environmental education updated on a regular basis.



## Water

Water is supplied by the city of Freudenberg. Water from the local supply network is consumed for cooling test facilities in HF's Technical Center, in production for cooling down components heated by steam and in the social facilities (kitchen, showers, toilets) of the organisation.

More than half of the city's water consumed in recent years was used for cooling the test facilities. The greatest efforts to reduce water consumption were thus made in this area. Thus, water consumption in the Technical Center could be lowered by about 50% through more responsible behaviour of the employees in this area and a lower number of tests conducted. A project on water flow in the supply circuit is additionally being planned.

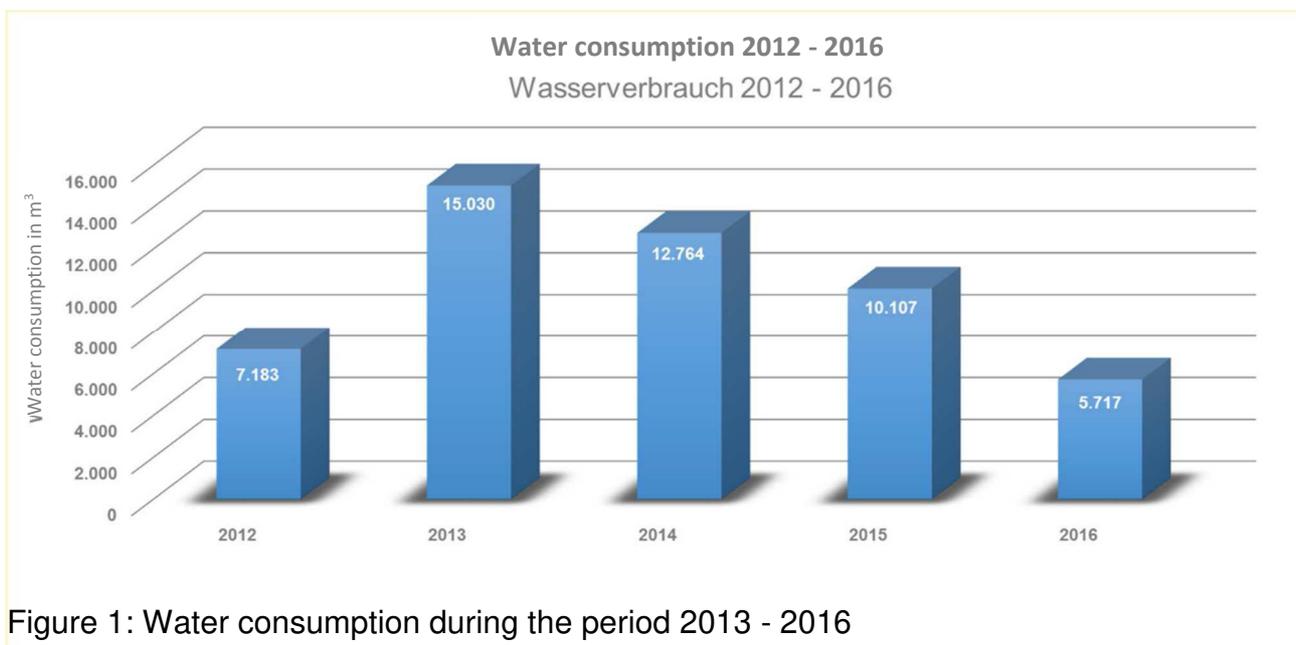
The city's water was also consumed in testing the pressure of water-conducting components. The components brought to the test temperature with steam needed to be cooled down with cold water so that it could be recirculated immediately if possible into



the manufacturing process. After flowing through the hot components, the water is directly drained into the canalisation.

By using a recooling tank, from which the cold water could now be used, cold water consumption in this area could be reduced to virtually nothing. Some optimisation measures (new recirculating pump, laying supply and drain pipelines, increasing pipe diameters) were necessary to improve the cooling properties of the tank in such a way that trouble-free production could be ensured.

Water consumption in the entire organisation could be reduced sustainably by more than 60% in the last 3 years with the measures mentioned here (Figure 1).



Waste water was drained into the canalisation of the city of Freudenberg while complying with the city's waste water thresholds. Waste water resulting from the process was not accumulated.

### Waste

Special emphasis was laid on waste management as part of HF's environment management system. This was done by a detailed recording of all waste, regularly checking for alternatives and exhausting all options for reducing the waste quantities and substituting hazardous waste by non-hazardous alternatives.



### Waste quantities

Waste quantities accumulated in the entire organisation are listed in Figure 2 - separated into hazardous and non-hazardous waste.

Drilling emulsions used to lubricate tools in mechanical processing are the primary sources of hazardous waste. They make up 95% of all hazardous waste. The quantities were reduced by 16% in comparison with the previous year.

Quantities of non-hazardous waste increased by 40%. This could be attributed to the good order book position and the accompanying increase in utilisation in manufacturing, since a higher occurrence of metallic waste essentially resulted in the significant increase. In addition to this, a new service hall was commissioned. When moving from the old hall into the new one, many unnecessary old components were scrapped.

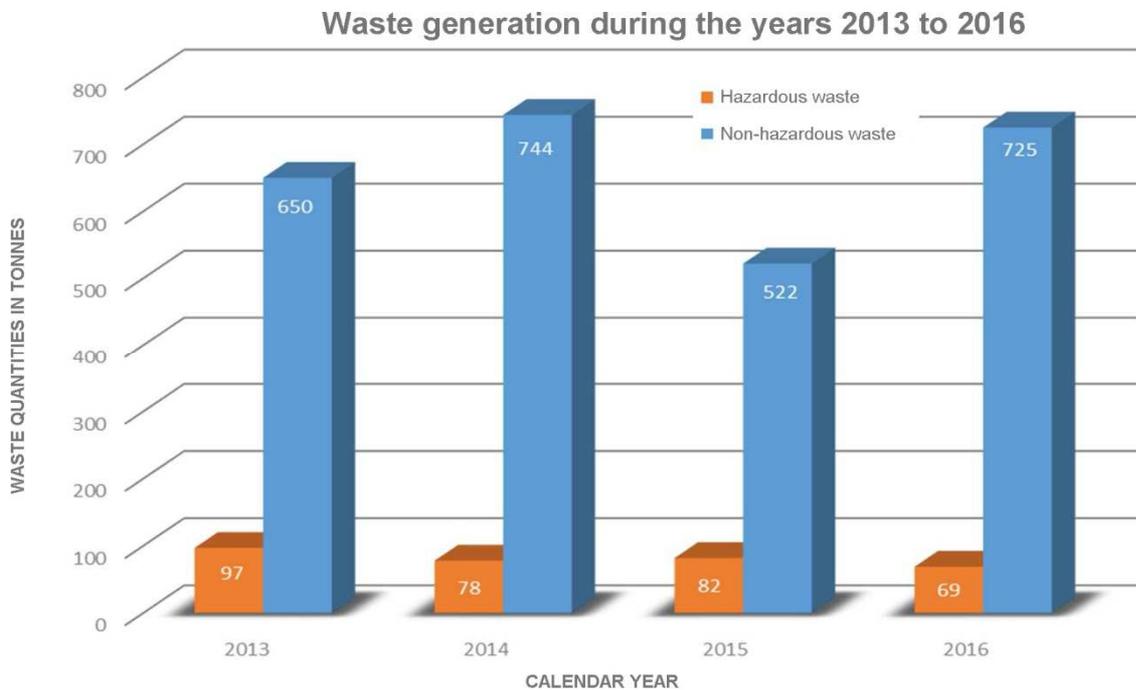


Figure 2: Waste generation during the years 2013 – 2016



### **Sustainability in waste management**

One of our disposal partners made out a sustainability certificate in waste-related matters for 2016 as part of our efforts to improve waste management. Waste flows disposed of by our disposal partner were considered in this certificate. The calculation model for accounting for primary raw materials, energy and greenhouse gas emissions by disposal and utilisation of waste materials is methodically based on ecological accounting as per DIN EN ISO 14040. The model considers the below process steps:

- Recording
- Transport
- Pre-treatment
- Utilisation

Primary raw materials savings increased from 87 tons in 2015 to 155 tons in 2016. The quantity of primary raw materials saved by recycling was considered for the waste streams utilised for materials.

An overall energy savings of 752 MWh was possible for 2016. This represents an increase of more than 100% compared to the previous year. The quantity of energy generated by burning or fermentation was considered for the waste streams utilised for energy.

Savings of CO<sub>2</sub> emissions was equivalent to 101 tons of CO<sub>2</sub>. All ventilation and exhaust were considered for the saved greenhouse gas emissions.



Sustainability Certificate 2016



# Sustainability Certificate

**Harburg-Freudenberger Maschinenbau GmbH, Freudenberg**

made invaluable contributions in the collaboration with the REMONDIS Group in 2015 for the environment.\*

- Primary raw materials savings of 155 tonnes
- Power recovery and savings of 752 MWh
- CO2 savings of 101 tonnes of CO2 equivalent

As per the Waste Balance Sheet of 2011, the following waste flows were compiled and considered separately:  
Mixed waste for recovery // Paper, paperboard, cardboard boxes // Films, plastics // Wood // Mixed construction and demolition waste // Colour and paint waste.

The environment thanks you. We thank you for your collaboration.

REMONDIS SE & Co. KG

Thomas Conzendorf  
Chairman

REMONDIS Assets & Services  
GmbH & Co. KG

Herwart Wilms  
CEO

\* The data was notified by the REMONDIS Group by using a calculation model, which was prepared by the Frankfurt Institute for Environment, Safety and Energy Technology UMSICHT, Sulzbach-Rosenburg Branch.



### **Projects for waste reduction**

Normal disposable cleaning materials were used for cleaning our machines. Since these rags are contaminated with substances containing oil, they needed to be disposed of as hazardous waste. This procedure was implemented in a recycling process well known in the market in 2016. The contaminated cleaning rags were picked up by a service provider, properly cleaned and then returned to the organisation. The contaminants washed out were minimised by downstream waste-water treatment and the residues remaining were correctly disposed of. Provided the cleaning rags remain in the service circuit, they are not waste pursuant to European Waste Legislation. The occurrence of contaminated cleaning rags decreased by 40% by introducing this recycling process. HF protects the environment by the reusable principle and contributes to saving resources and minimising waste with this service system.

A preserving agent applied from aerosol cans was used for preserving metallic blank components. The empty aerosol cans then needed to be disposed of as hazardous waste. Until now, different preserving agents and application procedures were tested as alternatives. No procedure could however be implemented practically; thus, this project is being continued.



### HF Energy Management

In view of rising prices and globally dwindling resources, responsible handling of energy is becoming increasingly more important. Growing energy demand with limited natural resources poses the challenge of using energy as efficiently and sparingly as possible in an eco-friendly manner. An Energy Management System is practised in the company as per the standard DIN EN ISO 50001 applicable worldwide, in order to live up to this responsibility.



**CERTIFICATE**

for the Energy Management System as per  
**DIN EN ISO 50001 : 2011**

The proof of application compliant with regulations was provided and is certified pursuant to TÜV NORD CERT procedures for

**Harburg-Freudenberger Maschinenbau GmbH**  
Asdorfer Straße 60  
57258 Freudenberg  
Germany

 MIXING GROUP
 

**Area of application**

Development, build, manufacture and assembly of production machines for manufacturing tyres and technical rubber goods as well as maintenance, spare parts and repair services

Certificate Register No. 44 104 100491	Valid from	2015-06-04
Audit report no. 3515 0647	Valid till	2018-06-03
	First certification	2015-06-04

*Jenssen-Landolt*  
Place of certification  
of TÜV NORD CERT GmbH

Essen, 2015-06-04

This certification was conducted as per TÜV NORD CERT procedures for auditing and certification and is regularly monitored.

TÜV NORD CERT GmbH      Langemarckstraße 20      45141 Essen      www.tuev-nord-cert.de



Deutsche  
Akkreditierungsstelle  
D-384-13/07-02-01



The energy processes in the organisation were analysed as part of the Energy Management System (EnMS). Energy flows were recorded and evaluated so that savings potentials and corresponding measures for energy savings could be introduced. Furthermore, awareness was created for employees to deal sparingly with energy in the organisation.

HF documented a huge amount of energy awareness and thus supports the positive image of the company by maintaining and further developing the Energy Management System. Simultaneously, the competitive position in the global market was reinforced. The company is considered to be a competent contact point for questions related to energy.

Sources of energy in the organisations are electricity, natural gas and diesel. Electricity is required for operating machines and facilities, natural gas is almost exclusively needed for heating the building and hot water supply and diesel is used to operate the vehicles employed within and outside the factory. Below, you will find some more detailed considerations about these three sources of energy as well as the measures for energy reduction introduced and implemented by HF.

### Power

Annual power consumption in the organisation rose continuously in the period 2009 - 2013 due to strong sales growth and the resultant higher production utilisation (Figure 3). The peak was exceeded in 2013 and has remained about the same since, with an increasingly higher utilisation. Energy-saving measures, which could contribute to a significant reduction in energy, are still in the initial phase.

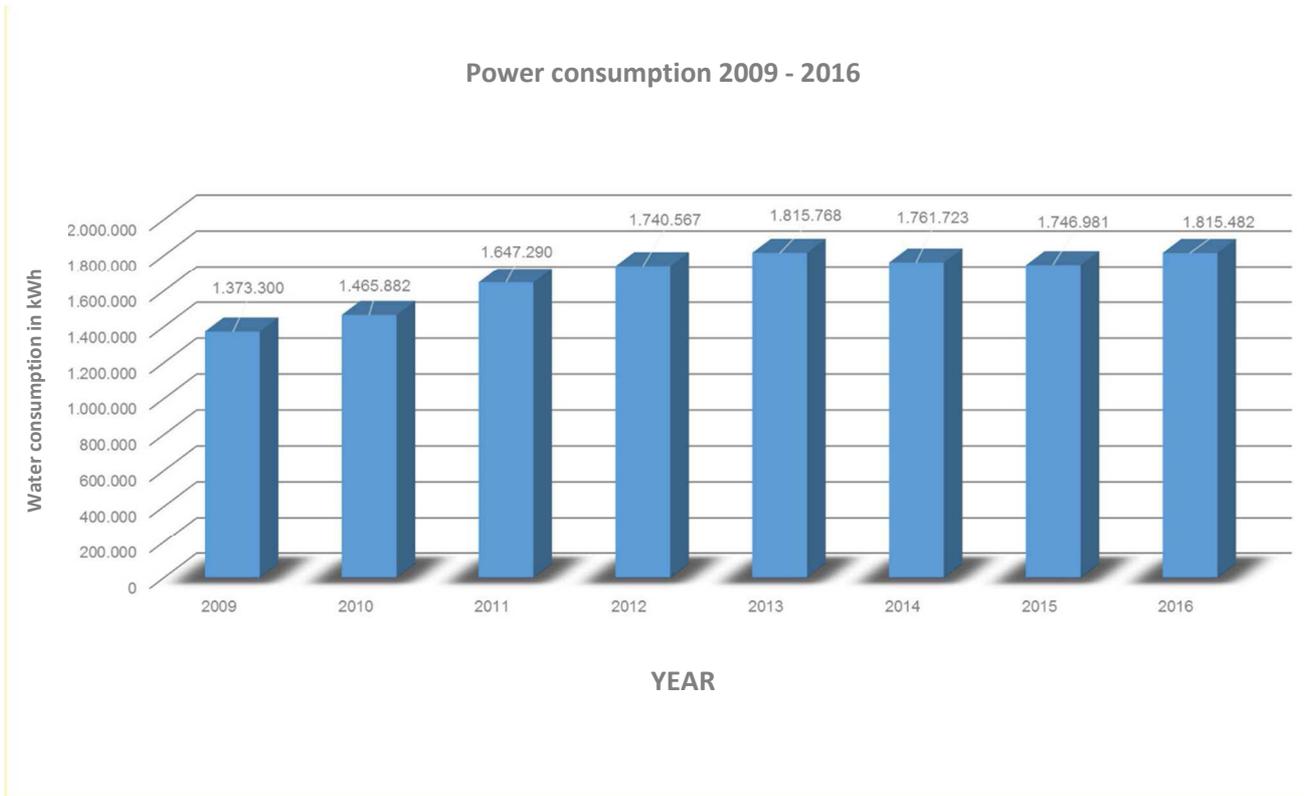


Figure 3: Power consumption during the period 2009 - 2016

A distribution of power consumptions over individual consumers was not initially possible since we lacked the technology to measure it. A mobile measuring device for energy measurement in electrical systems was procured for this reason and a concept was developed for continuously identifying power consumptions in the entire organisation. The consumption measurements were intensified to such an extent that reliable measurement values of all consumers could be recorded within one year. Thus, a more precise estimate of annual consumptions was possible at individual systems or for summarised consumption areas.

Stationary energy measurement could be retrofitted at few consumers (e.g. heating furnaces) in the short term. Other consumers will also be equipped with energy measuring points in the coming years.



## **Savings projects**

As part of a bachelor's thesis it was found out that significant energy savings were possible in the area of compressed air technology. In the first stage, the formerly available system for compressed air generation was to be exchanged for a new and more efficient working system. In addition, using the waste heat resulting from compressing air for heating the adjoining assembly room was planned. A technical specification for such a new system was developed based on the available measurements in the old system, and corresponding offers obtained. A new compressed air system was ordered at the end of the year.

Two electrically operated chamber furnaces were used in the organisation for pre-heating components. An analysis within a bachelor's thesis showed that power consumption in these installations could be reduced by up to 50% by optimising the working method. This was implemented in collaboration with the employees working at the furnace and recently led to savings of about 2% in annual power consumption.

Modern lighting technology presents not only a huge potential for saving energy, but also helps in improving the quality of lighting. CO<sub>2</sub> emission could thus be reduced in recent years, while simultaneously increasing the visual comfort and well-being of employees, through needs-oriented lighting. Estimates of the level of power consumed in the area of lighting technology concluded that lighting was responsible for about 20% of the total power consumed in the organisation. This was also an argument for reducing power consumption by replacing old technology in this area. The hall's lighting, where old mercury vapour lamps (HQL lamps) were still being used, was replaced to start with. Both reduction of power consumption and improvement in the visual comfort of employees were achieved by replacing this outdated lighting technique with modern LED lighting. All old HQL lights were replaced by LED lighting in the last 3 years.



## Natural gas

About 95% of the natural gas consumed is used to heat the building and to supply it with hot water. Only a small percentage of the natural gas is used to heat components in production. As a result, natural gas consumption (Figure 4) depends largely on the weather conditions in the respective years and on operational utilisation in the organisation.

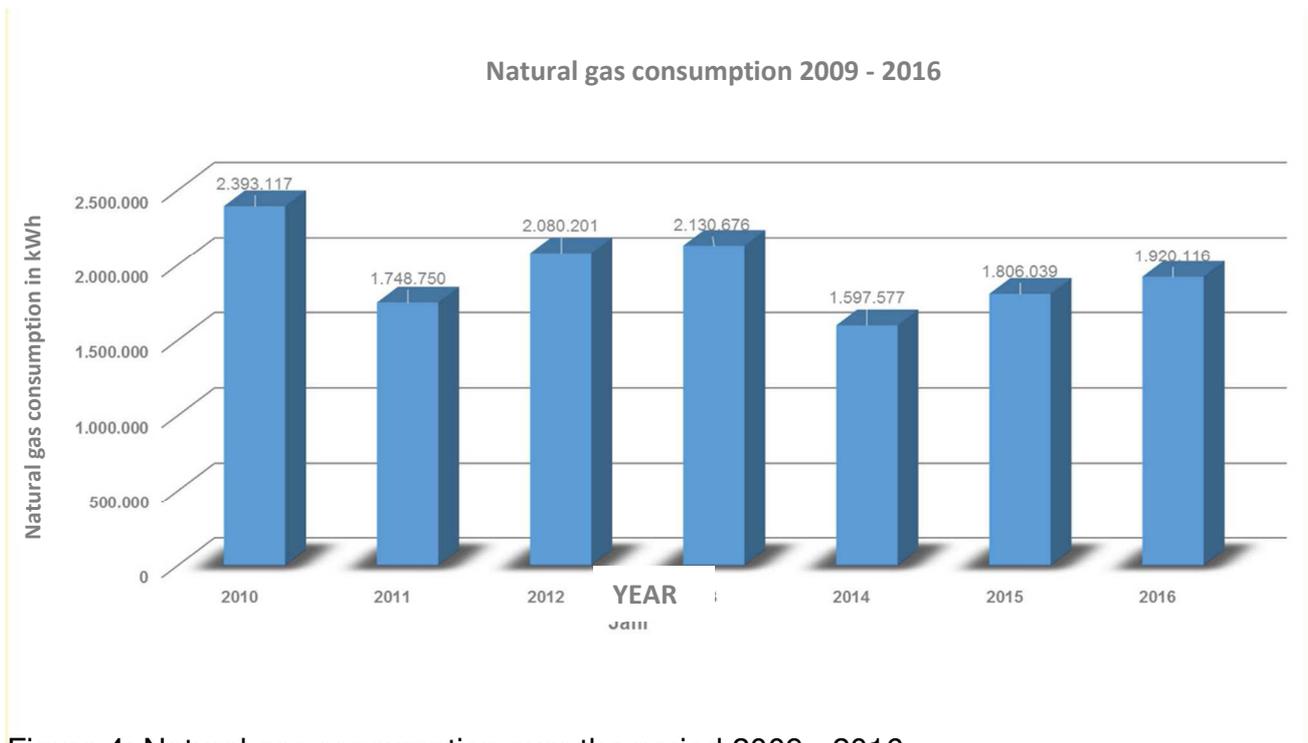


Figure 4: Natural gas consumption over the period 2009 - 2016

Knowledge of the consumption structure within the company is relevant for reducing natural gas consumption. This consumption structure was however not known when the Energy Management System was introduced. Neither individual measurements of gas consumption nor information on gas distribution in the premises were available. The total consumption was recorded using a main meter. A partition of the natural gas consumed by individual consumers was thus only possible using a rough estimation.

In the first year after its introduction, the Energy Management System aimed to obtain insight into the distribution of natural gas by individual consumers in the organisation. Suitable measuring devices were selected and put to use first for this purpose. The reading of the natural gas consumed was done monthly.



By the end of 2016, 50 - 60% of the natural gas consumed could thus be allocated. Other measurement points will follow in subsequent years. By the end of 2017, the target is to be able to allocate at least 90% of the natural gas consumption to the corresponding users.

If the quantities consumed are known, a consumption analysis can follow as the next step. Potential for reducing gas consumption can be worked on in this analysis. Provided they are cost-effective, measures for reducing gas consumption can be initiated and implemented.

Savings in natural gas consumption can be achieved by using more efficient heating technologies, better insulation of the building envelope, and by motivating employees to conduct themselves more responsibly when dealing with energy. Moreover, further effects can be identified, e.g., the use of waste heat for heating.

Ideas to reduce natural gas consumption were already highlighted (buildings, gates, heating technologies, power/heat co-generation) as part of a bachelor's thesis. However, further considerations are required, e.g., for using new heating technologies such as condensing-boiler technology and / or possible measures for limiting waste heat over the building envelope. The options envisaged herewith will be subject to financial assessment for subsequent years.

### Energy-efficient technologies for customers

HF does not only think how energy consumption can be reduced internally, rather it also offers customers progressive technologies with which they can save energy when operating their facilities. An example of this is energy-efficient temperature-controlled systems which are offered to customers both in case of new facilities and when modernising existing ones. These systems are automatically adapted to the respective cooling requirements of the machines and perform their task with minimum energy consumption. Trials at production facilities in the tyre industry have shown that these intelligent temperature-controlled systems save more than 50% energy when compared to traditional systems.



## Sustainable procurement

HF continued its work at constantly and efficiently improving its sustainability aspects in the area of purchase also in 2016. The focus here was on the subject of REACH (chemical regulation) and conflict minerals, where there is great demonstrable concern in the world market with respect to humane and environmentally responsible extraction resp. use of these materials.

In order to comply with the information requirement of the so-called Substances of very high concern (SVHC), HF wrote to the most important suppliers primarily concerned and requested them to issue a statement on the subject of REACH. At the start of the year, in addition, the employee responsible for purchase in the CSR area was thoroughly trained in the seminar “Guaranteeing and documenting REACH compliance: The requirements for 2016” at the Herkert Academy. Moreover, an upgrade to the premium edition of the REACH manual was concluded, which henceforth offers direct and quick access to all relevant news and information as an online edition.

Business partners were also confronted with the topic of conflict minerals, the so-called 3TG (tantalum, tin, tungsten and gold) minerals. The aim of the enquiry was and is to prove and ascertain that these minerals were extracted under ecologically and socially responsible conditions. The majority of these materials come from the regions of conflict in the Congo Republic and adjoining countries. The 3TG mineral is often extracted there using work methods and manufacturing processes unworthy of humans and detrimental to the environment. The Conflict Minerals Reporting Template, for short CMRT, applies as basis of evaluation and proof of conflict-free procurement of these minerals. This template was to be filled out by suppliers and evaluated by the purchase department.

Both the evaluations made until now as concerns REACH compliance of suppliers and the handling of the 3TG conflict minerals showed an entirely positive image. No HF supplier has demonstrable deficits in these areas.

The documents received were systematically stored and maintained in purchase. The list was also updated and monitored at regular intervals. In case of ambiguities, documents required clarification, or, in cases where there was no feedback from the supplier, the respective supplier was contacted to discuss the respective concern and to resolve it to the mutual satisfaction of both parties.



Likewise, supplier self-information on the topic of Corporate Social Responsibility was conducted for the third consecutive year, and implemented as a fixed part of supplier evaluation since 2015. A letter was addressed to suppliers who have recently been added, and for whom no filled out questionnaire was yet available, in which they were requested to fill out the supplier self-information form and return it.

The following conclusions can be drawn from this:  
(In all, 144 questionnaires were answered and evaluated.)

The maximum score achievable in the various parts ranged from:

- Part I: Environment 90 marks
- Part II: Occupational safety and health 70 marks
- Part III: Energy management 30 marks
- Part IV: Operating and business practices 50 marks

In summary, the following results were achieved on an average for the evaluated questionnaires:

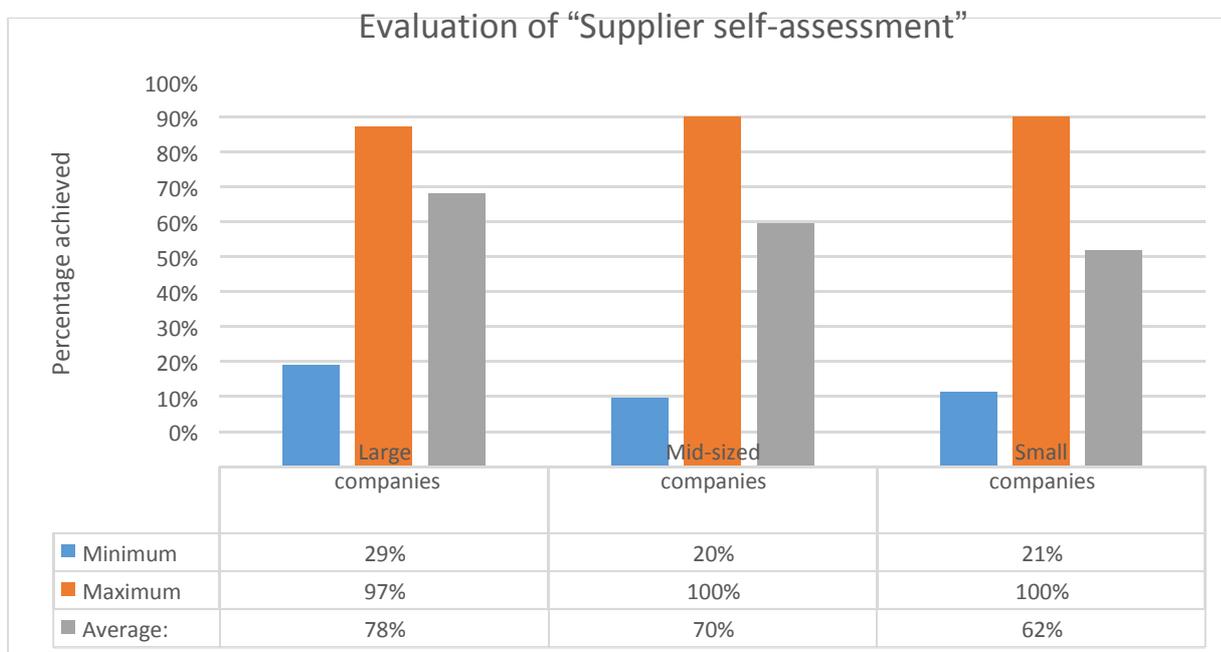
	Part I:	Part II:	Part III:	Part IV:
Avg. marks scored:	49,85	51,1	16,7	38,1
Avg. percentage value:	55 %	73 %	56 %	76 %

The following weighting factors were considered once again to evaluate the overall result of individual suppliers more fairly.

<u>Large companies</u>	<u>Mid-sized companies</u>	<u>Small companies</u>
Employees >= 250	Employees 50 -249	Employees <= 49
Factor x 1	Factor x 1.1	Factor x 1.2



This gives the following conclusion:



The distribution of company sizes was given as follows:

Large companies: 50  
 Mid-sized companies: 53  
 Small companies: 41

The result appears extremely positive, as already seen in previous years. Every HF supplier is active over and above the minimum statutory requirements with respect to social and ecological action concerns. HF continues to work on further developing suppliers and business partners in the area of social responsibility. E.g., this is done by the annual evaluation of all relevant suppliers, targeted discussions with business partners or general assistance as concerns the CSR area.

Furthermore, a completely new concept was developed for supplier audits in 2016. These audits should further extend and qualitatively enhance the management of HF's suppliers. The objective is positive and continuous supplier development, which optimises the quality and efficiency of processes and products also in considering the perspectives of sustainability and the environment.



Inherent part of the supplier audits is the already mentioned supplier self-assessment regarding the topic Corporate Social Responsibility (CSR). This information has a fixed weighting as concerns the concluding evaluation of suppliers.

HF in this regard reports and evaluates the organisational and technical performance of suppliers. Any improvements or defects are documented in the audit log and then a measures plan is developed along with the business partner.