

## United Nations Global Compact

Harburg-Freudenberger  
Maschinenbau GmbH  
Communication on progress  
2020

**engineering excellence**  
powered by  
***passion.***



## **Endorsement of the United Nations Global Compact**

Harburg-Freudenberger Maschinenbau GmbH [HF] reaffirms its endorsement of the United Nations Global Compact's Ten Principles in the areas of human rights, labour standards, environmental protection and anti-corruption in 2020.

HF integrates the ten principles of the UN Global Compact into its daily activities. At the same time, the company is committed to encouraging its business partners to align their business activities with the principles of the UN Global Compact.

The HF Communication on Progress describes the measures HF is taking to continuously improve the integration of the Global Compact and its principles into its business strategy, corporate culture and daily operations.

The information from the Communication on Progress is disseminated to the company's stakeholders through the company's primary communication channels.

### **Harburg-Freudenberger Maschinenbau GmbH Management**

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

Together with the Harburg-Freudenberger Maschinenbau GmbH management company, HF GROUP is a wholly owned subsidiary of Lübeck-based L. Possehl & Co. mbH. HF supplies the rubber and plastics processing industry with a range of machines for all essential production stages – from raw material preparation to rubber processing and vulcanisation under the umbrella of Harburg-Freudenberger Maschinenbau GmbH. In addition, HF develops and produces machines and equipment for the edible oils industry.

The HF GROUP comprises three business units: HF MIXING GROUP, HF TireTech Group, HF Press+LipidTech.



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## Human Rights (Principle 1 + 2)

- 01 Businesses should support and respect the protection of internationally proclaimed human rights,
- 02 Businesses should ensure that they are not complicit in human rights abuses.

Harburg-Freudenberger Maschinenbau GmbH endorses and promotes compliance with the principles of the United Nations Global Compact → <https://www.unglobalcompact.org/what-is-gc/mission/principles> and respects the human rights declared by the United Nations → <https://www.ohchr.org/>

This is apparent, among other things, in the HF Code of Conduct, which reflects how the company assumes social responsibility within the scope of its activities.

With regard to the topic of human rights, the following points from the Code are worth mentioning as examples ...

... commitment to compliance with applicable laws and regulations in the countries in which HF operates;

... compliance with applicable laws and regulations in the area of IT security and data protection;

... living the principle of “integration instead of discrimination”.

The Code of Conduct of Harburg-Freudenberger Maschinenbau GmbH provides new employees in particular with the principles of honesty and integrity when they join the company. In this way, HF ensures that the company’s name, its reputation and its most important asset – the people who work there – will continue to be empowered and protected in the future. All new employees receive the Code of Conduct when they receive the “Welcome Package” from the Human Resources Department and are additionally trained in this area and made aware of compliance with the principles of the Code of Conduct.

## Labour Standards (Principles 3 to 6)

- 03 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- 04 the elimination of all forms of forced and compulsory labor;
- 05 the effective abolition of child labor; and
- 06 the elimination of discrimination in respect of employment and occupation.

HF is certified according to ISO 9001 : 2015 at the Freudenberg site [HF-F].





Harburg-Freudenberger Maschinenbau GmbH recognises the freedom of association and the right to collective bargaining; employees are permitted to participate in (warning) strikes. In the interests of its employees, HF ensures compliance with applicable laws and regulations, collective agreements and company agreements. A works council has been established in the company for years and the Works Constitution Act in Germany grants it co-determination or participation in social and personnel matters.

HF is bound by collective agreements (IG Metall) and offers its employees flexible working hours, collectively agreed special remuneration such as Christmas and holiday bonuses as well as non-tariff payments.

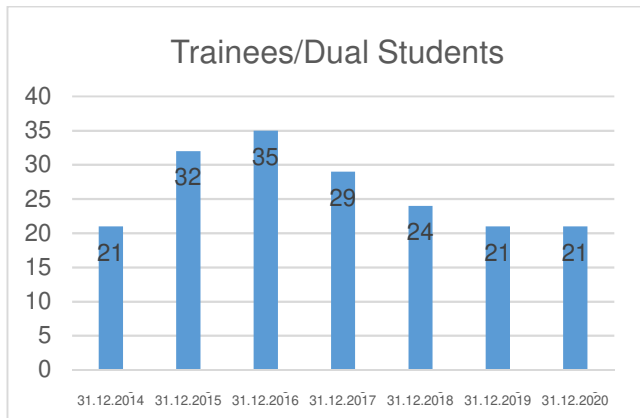
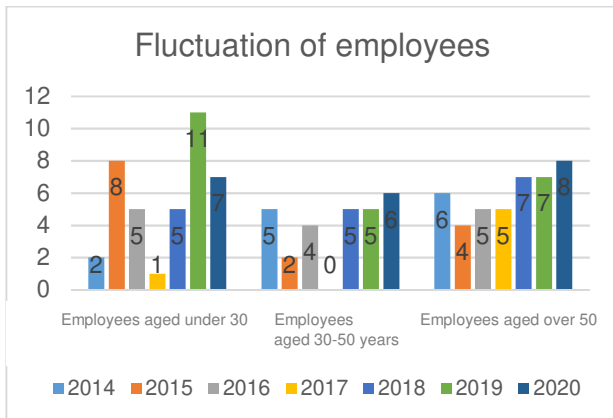
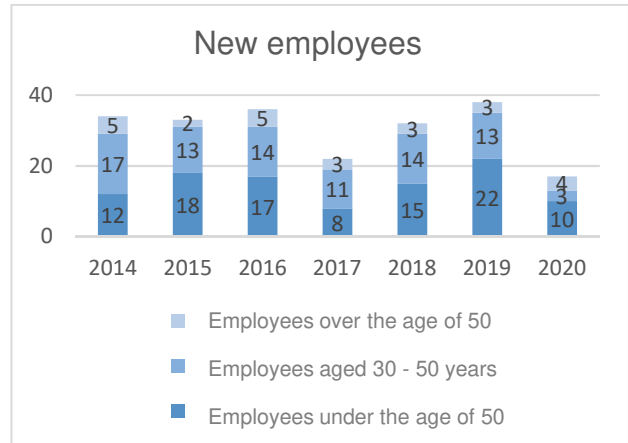
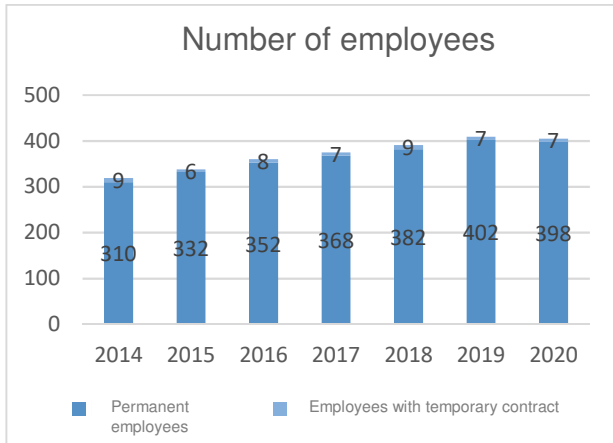
HF ensures equal pay through the reform of collective wage agreements (ERA). Under ERA, jobs, not employees, are grouped into the appropriate pay scale groups, which counteracts discrimination. The previously prepared job description is used when recruiting or reassigning staff, regardless of age, gender identification or actual qualifications.

HF is a globally active network of companies with people of the most diverse origins, religious beliefs and skin colours. No one is discriminated against or disadvantaged because of their race, gender identification, religious beliefs, skin colour, origin, mental or physical disability, age or sexual orientation or other personal traits. Diversity is part of everyday life at HF.

Harburg-Freudenberger Maschinenbau GmbH rejects child labour and advocates the abolition of all forms of forced labour.

Harburg-Freudenberger Maschinenbau GmbH and its workforce

*Personnel development at the Freudenberg site in figures*



The year 2020 was a special year in terms of human resources work. The corona pandemic posed special challenges for the company and its staff, which had to be responded to quickly.

In order to protect the health of our workforce, in March 2020 all employees with office jobs were offered the opportunity to telecommute; HF was well prepared for this digital way of working from home through the previous introduction of Office 365 at the beginning of the year.

Regular updates on the latest regulations related to COVID-19 were posted on the intranet and noticeboards, and meetings were generally only held in digital format to minimise the risk of staff becoming ill. The company was also in constant contact with the responsible health authorities and the occupational health centre.

In suspected cases of corona, large-scale testing was conducted as quickly as possible in order to reduce the risk at the workplace.





In the area of staff development, some staff members had asked for more language courses to be held. This wish was met with several new courses for different language levels. The courses were conducted in digital format for the first time.

HF is a member of the Possehl Group (L. Possehl & Co. mbH, Lübeck), which has offered a trainee programme since 2017 in which graduates pass through various Possehl Group companies. The individual programme sections are divided into company rotation and project work; in 2020, HF was once again able to welcome two trainees at the Freudenberg site.

At the end of 2018, the “Strategy 2023” project was launched, which also accompanied the corporate group into 2020. The answers to the questions served as the basis for the project work: Where do we stand today? Where do we want to be tomorrow? What are our goals?

Nine roughly formulated topic areas with corresponding sub-topics were defined in a group-wide development of ‘solutions’ to be used to achieve the set goals. In the area of "Labour Practices and Human Rights", one of the projects was the introduction of strategic group-wide human resource planning. The focus of the team’s work was the identification of company-critical positions and the creation of a skills matrix that would make it possible to analyse knowledge-critical positions in the company whilst also providing access to employees’ skills across groups. This solution was finally implemented in 2020.

Due to the corona pandemic, many events in which HF normally regularly and actively participates could unfortunately not take place, and there were also significant restrictions in the area of health management; the company’s in-house gym had to keep its doors closed to the staff for months and physiotherapy could also not be offered as usual.

### *Occupational health and safety documentation*

Harburg-Freudenberger Maschinenbau GmbH cares about the health and safety of its employees. One component to make working conditions even safer for the workforce is the publication of the ABEG operational safety portal at the Freudenberg site in summer 2020.

This is a SharePoint communication website where all staff members have reading rights. ABEG stands for the thematic blocks: **A**rbeitsschutz, **B**randschutz, **E**rste Hilfe, und **G**efahrstoffe (Occupational health and safety, fire safety, first aid and hazardous materials).

The homepage contains basic information on occupational safety, such as the risk assessments of the different areas, instruction templates on various topics, machine operating instructions and the option to report accidents online.

In the Occupational Health and Safety section, you will find an overview of the most important laws, some technical regulations, information on personal protective equipment as well as information on the training offered by the Employer's Liability Insurance Association (BGHM).

In the Fire Safety section, you will find the updated fire safety regulations with parts A (notice), part B (for all employees) and part C (for fire safety assistants), an overview of the currently trained fire safety assistants, a template of the hot work permit and information on handling fire extinguishers.

The First Aid section contains an overview of the currently trained first aiders at the site and a list of the existing first aid boxes and defibrillators, as well as an action guide for first aid and information on the next first aid courses.

The Hazardous Materials section contains the hazardous materials register, the safety data sheets and operating instructions for the hazardous materials used here, as well as the Hazardous Materials Ordinance and some technical rules on the subject.

## Hazard assessments

According to Section 5 of the Occupational Health and Safety Act, the employer must assess the working conditions. For this purpose, risk assessments are prepared per area and regularly updated. Updating the hazard assessments is an ongoing process.

## Accident history

Digital reporting of accidents (accidents subject to reporting, first aid cases and near misses) via the ABEG operational safety portal enables consistent and clear recording and evaluation of accidents. In 2020, 5 accidents subject to reporting were reported to the BGHM, 102 first aid cases were documented, and 1 near-accident was noted. The accident severity is in the medium range with 56 days and 5 accidents subject to reporting.

An analysis of the accidents showed that cuts to the hands/fingers were by far the most common injuries. However, the reportable accidents were often attributed to tripping – slipping – falling (TSF accidents).

As a result, these issues in particular were communicated to the staff via the “Danger Point of the Month” by email or notice on the notice boards:

September 2020	Oktober 2020	November 2020
<p><b>Gefahrenpunkt des Monats</b> <b>Vorsicht! Schwebende Lasten!</b></p> <p>Der Transport von Bauteilen mit dem Kran stellt eine große Gefährdung beim innerbetrieblichen Transport dar. Problematisch sind die beengten Platzverhältnisse und die gemeinsamen Fuß- und Transportwege.</p>  <p><b>Vorsicht! Schwebende Last</b></p> <p><b>DESHALB:</b> <b>Achten Sie bitte auf den Kranverkehr und schwebende Lasten!</b> <b>Halten Sie sich niemals unter schwebenden Lasten auf.</b> Zur Erinnerung wurden an markanten Stellen Warnschilder angebracht.</p>	<p><b>Gefahrenpunkt des Monats</b> <b>Vorsicht! Schnittverletzungen!</b></p> <p>Die meisten Erste Hilfe Fälle stellen derzeit Schnittverletzungen an Händen dar. Diese entstehen in vielen Fällen während der Handhabung von scharfkantigen Teilen (insbesondere durch Grat an Gewinden).</p>  <p><b>DESHALB:</b> <b>Schützen Sie Ihre Hände und Finger durch richtiges Verwenden geeigneter Werkzeuge, Schutzhandschuhen und Hautschutzcremes.</b></p> <p>Nutzen Sie ggf. auch Schnittschutzhandschuhe!</p> <p>Das Schnittschutzlevel erkennt man auf dem Handschuh an der zweiten Zahl unter dem EN 388 Symbol und am Buchstaben nach der letzten Zahl unter dem EN 388 Symbol (siehe Grafik).</p>  <p>1 - 5 (5=höchstes Level); A - F (F = höchstes Level)</p>	<p><b>Gefahrenpunkt des Monats</b> <b>Stolpern – Rutschen – Stürzen (SRS)</b></p> <p>Stolpern, Rutschen und Stürzen (SRS) ist eine der häufigsten Ursachen für Arbeitsunfälle in Deutschland. Auch bei HF entstehen viele Unfälle und Beinaheunfälle durch Stolpern, Rutschen und Stürzen. In diesem Jahr sind 60% der meldepflichtigen Unfälle auf diese Ursache zurückzuführen. (Stand 26.11.2020)</p>  <p><b>DESHALB:</b></p>  <ol style="list-style-type: none"> <li>1) Bleiben Sie aufmerksam!</li> <li>2) Halten Sie Böden trocken und sauber!</li> <li>3) Achten Sie auf sicheres Schuhwerk! (mit rutschfester und profilierter Sohle)</li> <li>4) Halten Sie Ordnung am Arbeitsplatz!</li> <li>5) Sorgen Sie für gute Beleuchtung und freie Sicht!</li> <li>6) Benutzen Sie auf Treppen den Handlauf!</li> </ol>

In order to further sensitise the workforce to various safety topics, information will continue to be provided regularly, and training/instructions will be carried out.

### *Implementation and documentation of instructions*

The quality of the annual safety instructions was improved by making briefing documents in the ABEG operational safety portal available in a central location. In addition to the classic safety topics, general basic training also covered environmental and energy topics as well as emergency management. This briefing template is intended to be increasingly used in future and will therefore always be kept up to date.

The CAPS software is used to document the instructions. This ensures that supervisors receive a reminder email when the briefing is due and that the instructions are thus carried out on time.

### Emergency management

#### *Documentation in the ABEG Operational Safety Portal*

The fire safety regulations with parts A (notice), part B (for the entire staff) and part C (for fire safety assistants) were updated in 2020 and filed in the ABEG portal for the entire staff.

In addition, there is also an overview of the fire safety assistants and first aiders. These are also posted on the notice boards.

#### *Sharing experiences and recommendations for action*

The fire safety officer, together with the fire safety assistants, conducted two exchanges of experience and carried out a number of inspections in the various areas. This has resulted in three main areas of action:

- 1.) An evacuation drill should be conducted annually. As this is new for the staff, it should be announced in advance and the seriousness of the measure should be pointed out. The practicability of emergency alerting by means of megaphones should be examined.
- 2.) Training of the fire safety officers is still pending and should take place in the very near future.
- 3.) Some of the refresher courses for fire safety assistants are overdue. Training must now be carried out every 5 years according to the new guidelines.



### *Education and training*

The fire safety assistant courses have been scheduled for spring 2021. Additional fire safety assistants have been recruited from the Technology Centre and Automation. This means that training is scheduled for a total of 30 staff members in 2 sessions.

The same applies to first aiders. Additional staff members have also been recruited here, so that a total of 50 participants will receive the training in 5 sessions in spring 2021.

## Environmental Protection (Principle 7 to 9)

- 07 Businesses should support a precautionary approach to environmental challenges.
- 08 Businesses should undertake initiatives to promote greater environmental responsibility.
- 09 Businesses should encourage the development and diffusion of environmentally friendly technologies.

The Freudenberg site is certified according to DIN EN ISO 50001 : 2018 ...



... and DIN EN ISO 14001 : 2015.



With the environmental management system in line with **DIN EN ISO 14001 : 2015**, HF actively protects the environment and contributes to the conservation of natural resources (soil, water, air). This is done by taking a holistic view of the impact of the products and their production on natural livelihoods. The company's environmental performance is thus constantly improved.

During the external audit in 2020, the company's conformity of the environmental management system with DIN EN ISO 14001:2015 was assessed:

- 19× fulfilled, 2× basically fulfilled, and 1× not fulfilled or improvement potential mentioned
- Assessment: 1.1
- A subordinate non-conformity was found. →Confirmation of the proper professional construction of the WHG approved specialist company was submitted for the washing bay. The question of a required periodic inspection according to AwSV remains unresolved.

The following key areas for action resulted from the audit carried out:

- Central documentation of instructions
- Observe small quantity regulations for hazardous materials
- Improve record keeping for hazardous waste in accordance with the Ordinance on Record Keeping (proposal: Filing of acceptance certificates with the UMB)
- Checking that escape and rescue plans are up to date
- Grounding hazardous materials cabinets
- Private electrical appliances were not tested
- Weekly in-house inspections of the compressed air condensate in accordance with chapter 5 of the type approval are not carried out.

A total of 8 potential improvements were noted by the auditors in the area of environment. These have been largely implemented.



In view of rising prices and dwindling resources worldwide, the responsible use of energy is becoming increasingly important. The growing demand for energy with limited natural resources presents everyone with the challenge of using energy as efficiently, environmentally friendly and sparingly as possible. To meet this responsibility, HF has established an energy management system at the Freudenberg site in accordance with the globally applicable **DIN EN ISO 50001 : 2018** standard.

Conformity of the energy management system with DIN EN ISO 50001:2018 was confirmed during the external audit in 2020.

- 15× fulfilled and 8× basically fulfilled (with potential for improvement)
- Assessment: 1.3
- No deviations were found.

The following key areas for action resulted from the audit carried out:

- Audit management/Internal audits – standards chapter 6.5 and 6.6 missing
- Repair compressed air leaks promptly
- Klichta Hall – examine heating control more closely for savings potential
- Legal cadastral register – ENEV missing
- Take greater account of SEUs (= significant energy use) when setting targets.
- Perform normalisation of the SEUs (power consumption)
- More differentiated consideration of base load consumption (e.g. lighting, compressed air).

A total of 10 potential improvements were noted by the auditors in the area of energy. These have been largely implemented.

In the area of energy, the auditor positively noted the methodology used to determine the SEUs.

The following deviations were identified during the internal audits in the area of environmental and energy management:

- Strategic and overarching quality, environmental and energy goals must be broken down transparently at the department level. Measures, responsibilities and deadlines are to be documented by the respective departments themselves.
- Environmental and energy targets: Targets and programmes for implementation are to be defined or written down.
- Employees must be trained in handling hazardous materials.
- Waste management and waste separation must be improved.

In addition, some potential for improvement was uncovered:

- Improve labelling of hazardous materials.
- Ensure storage of liquid hazardous materials on drip pans.
- Ensure that operating instructions for machinery and hazardous materials are up to date.
- Energy team meetings should take place more than once per year.
- Prepare documentation of energy projects regularly.

The listed potentials for improvement have largely been implemented.

## What's new in 2020

As a result of the internal and external audits and HF's fundamental endeavours to continually optimise themselves, a great deal has again been done in 2020 at the Freudenberg site in terms of the environment and energy. HF was able to make improvements in the areas of

- ... communication and instructions
- ... waste management
- ... energy data collection
- ... recording of compressed air consumption and
- ... hazardous materials management

which is shown in detail as follows:

### *Communication and instructions*

Establishment of a central occupational safety documentation known as the "ABEG portal", which, in addition to the classic occupational safety topics, also contains information on hazardous materials, first aid and fire safety topics.

An essential component of this documentation system are instruction documents that are available to all supervisors. In addition to general safety instructions, the basic instruction also includes environmental, energy and fire safety topics, so that the entire workforce is instructed on these topics. Furthermore, there is additional instruction content, which is designed for hazards at the respective workplace.

The documentation of the instructions carried out is done in the CAPS system, which ensures that in future the supervisors are automatically informed by email about the due date of the next instruction and can plan and carry it out accordingly in good time.

In addition to the ABEG portal, a further communication tool has been set up in the form of a page on the "Integrated Management System", which is also installed on the company's intranet; this page contains interesting facts on environmental and energy management in addition to quality information. Plans are in the pipeline to further optimise and update this page in the coming year.

## *Waste*

In the area of waste management, the waste disposal contract with Remondis was fundamentally revised and adapted in 2020. In this context, the number of containers was adjusted and could thus be slightly reduced. In addition, the achievement of the separate collection rate of at least 90% was again clearly exceeded; it was 93%.

## *Energy data collection*

In recent years, various gas meters have been installed to determine natural gas consumption, so that precise data can now be determined and analysed.

To determine power consumption, the energy quantities at individual distributors were recorded with two mobile energy meters and extrapolated for the entire year. This has led to an improvement in the measurement data, which nevertheless contain measurement inaccuracies. In addition, stationary measuring devices were installed at a number of locations, including in the mechanical production area, as this is where a large proportion of the electricity demand is generated.

With the help of this measure, for example, a lathe with a very high base load could be identified, which was then shut down at the end of the year. Another stationary measuring device is located on the compressor.

## *Compressed air*

Compressed air consumption could be determined consistently for the first time in 2020. In this context, it was possible to determine whether the compressor was regularly switched off at weekends. The compressor switch-off rate was 70% in 2020.

In addition, the process for determining compressed air leakages was revised, documented and the results stored centrally in the energy management area.

### *Systems for handling hazardous materials (AwSV)*

Within the framework of hazardous material management, a special focus was placed on the topic of “Systems for handling hazardous materials”. A detailed cadastre was prepared showing the individual systems and their specific tests. The cadastre also serves to improve the management of these systems. The documentation was filed in 2020 in the ABEG Operational Safety Portal in the Hazardous Materials section.

### *Environmental impacts and the goals derived from them*

The environmental impact assessment identified the following medium priority action areas in 2020:

- a) Water consumption in the Technology Centre
- b) Emissions from power consumption
- c) Processing emulsion (hazardous waste)

### *Environmental goals*

Among other things, the environmental impacts were discussed in the environmental management team meeting and the following agreements have been reached:

- a) Water consumption in the Technology Centre: The high level of water consumption in the Technology Centre was reduced by installing a water re-cooling machine. A quotation for realising this project was available in 2017. However, due to the current tight order situation, a renewal of the quotation and further steps are to be refrained from at the moment.
- b) Emissions from power consumption: The future use of a CHP (combined heat and power) unit will significantly reduce emissions.
- c) Processing emulsion (hazardous waste): The cooling lubricants used were regularly transported in a 1000-litre IBC container (Intermediate Bulk Container) to a hall rented by HF, where they were drained into the underground basin and sucked out from there approximately once a year with a gully emptier.

Transport and double handling were reduced in mid 2020 by direct extraction in the main factory. The waste disposal company is informed when two IBC containers with the processing emulsion are ready for disposal.

In addition, the following goals for the Freudenberg site were communicated and discussed in 2020:



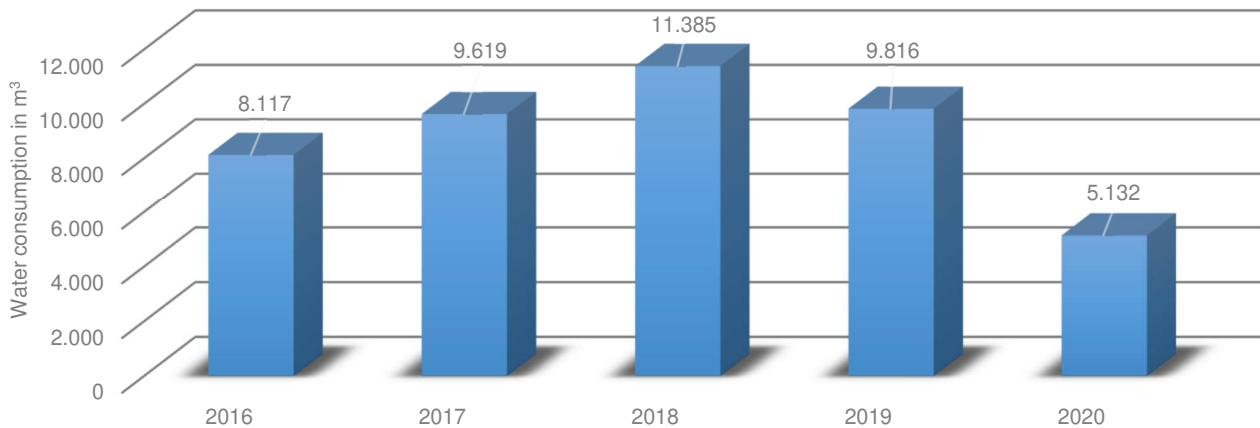
Strategic goal	Operative goal	Measures
Legal certainty	Ensure legal certainty through legal cadastre	Continuously maintain legal register
Resources	Reduce paper consumption	Digitization project - introduction of software for data storage in the various departments, see UMM31-20
Resources	CO2 reduction	Planting trees on the lawn in front of the parking garage
Water consumption	Reduce fresh water consumption	Use of well water in Klichta hall --> Klichta company does not apply for permission --> Use of fresh water
Legal certainty	Legally compliant extraction of the well water in the Klichta hall	Obtain permission to use well water --> Klichta company does not apply for permission --> use fresh water
Water consumption	Reduce water consumption in the Technical Center	Implementation of a water recooling machine --> not to be pursued at present due to order situation
Waste	Ensure a separate collection rate of at least 90%.	Minimize residual waste, through intensive waste separation
Waste	Ensure a separate collection rate of at least 90%.	Revision and adjustment of the waste disposal contract with Remondis
All	Involvement of all employees	regular employee information and qualification

The goals are to be further optimised, specified and communicated in future.

Environment and energy in figures (Freudenberg site):

### Water consumption

Water consumption was reduced by 4586 m<sup>3</sup> in 2020. This is largely due to the small number of customer trials in the Technology Centre. There alone, water consumption has dropped by about 60%.



By installing several water metres, it was possible for the first time to carry out a detailed analysis of water consumption in the Technology Centre. Water consumption in September was noticeable, which could be explained by the very high number of customer trials carried out compared to the other months.

## Emissions

Carbon emissions of the entire company are made up of the carbon emissions generated by the following processes (Figure 1):

1. Generation of the electricity consumed (29%)
2. Combustion of natural gas (heating, process heat) (44%)
3. Diesel combustion (automated guided vehicles) (1%)
4. Combustion of diesel and petrol (company vehicles) (7%)
5. Combustion of jet fuel (air travel) (19%)

Due to the global Corona pandemic, significantly fewer business trips were made by air in 2020; this represents a significant component in the reduction of carbon emissions at the Freudenberg site, which is almost 50% overall (2019: 2515 tonnes of CO<sub>2</sub> --> 2020: 1343 tonnes of CO<sub>2</sub>).

In contrast to previous years, the majority of carbon emissions in 2020 were generated by the combustion of natural gas (44%) for heating the factory and administration. The use of electricity also accounted for a significant share of carbon emissions. Air travel represented only 19% of emissions in 2020. Emissions resulting from the use of company vehicles and industrial trucks remained at a comparatively low level.

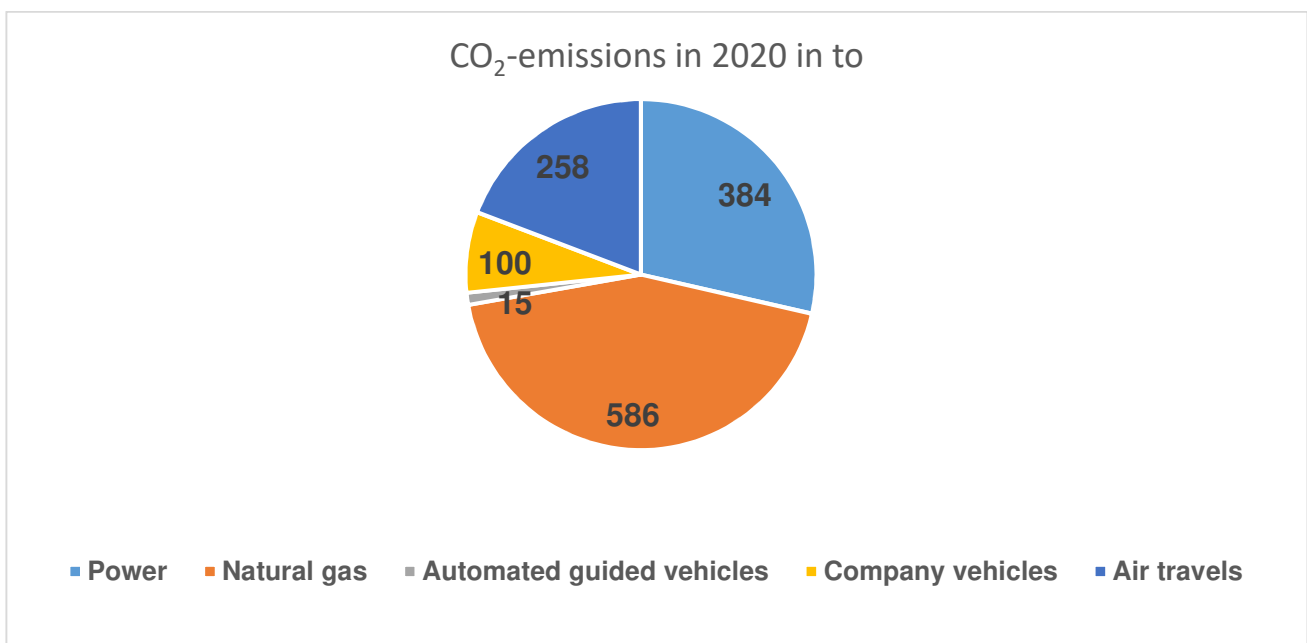


Figure 1: Carbon emissions at the Freudenberg site 2020



## Waste

The waste generated at the Freudenberg site in 2020 (in the main facility plus three rented halls for service, assembly and storage) amounted to 710 tonnes. These consisted of 89% non-hazardous and 11% hazardous waste. Compared to the previous year, the amount of waste has decreased by 20%, which can be attributed to the lower production hours and the low attendance hours of the employees due to the Corona pandemic. The downward trend will continue in 2021. The following overviews show the waste quantities and the waste ratio of the different waste types.

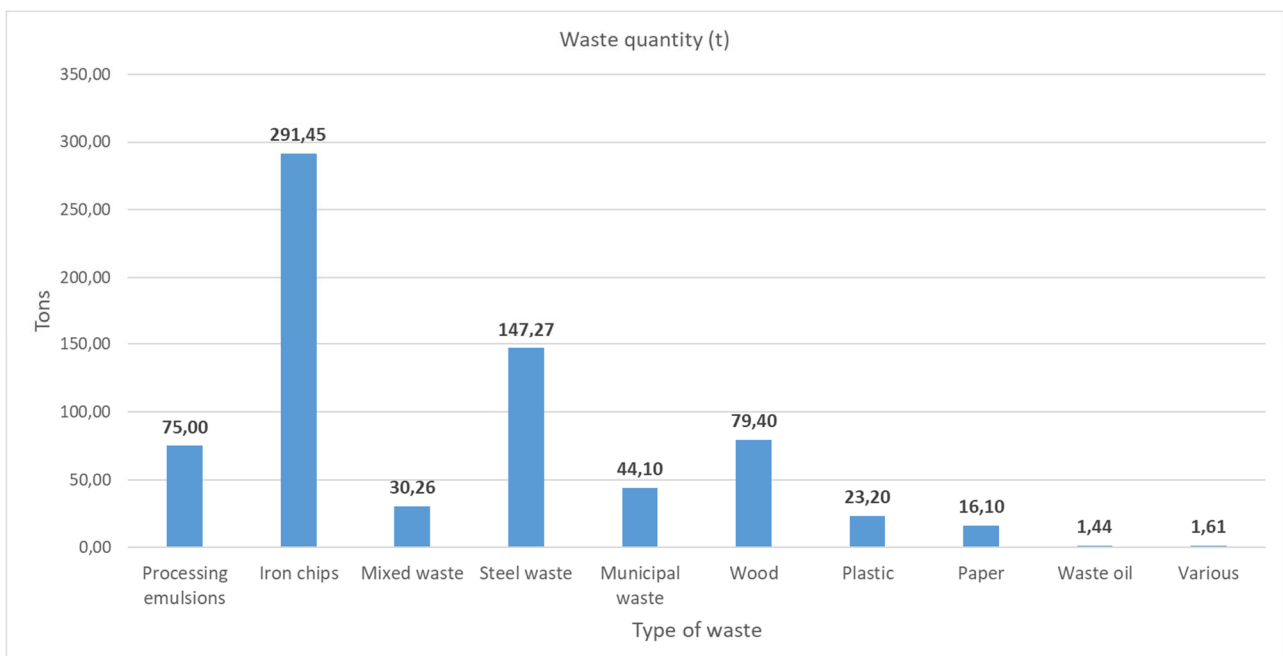


Figure 2: Waste quantities 2020 by waste type, Freudenberg site

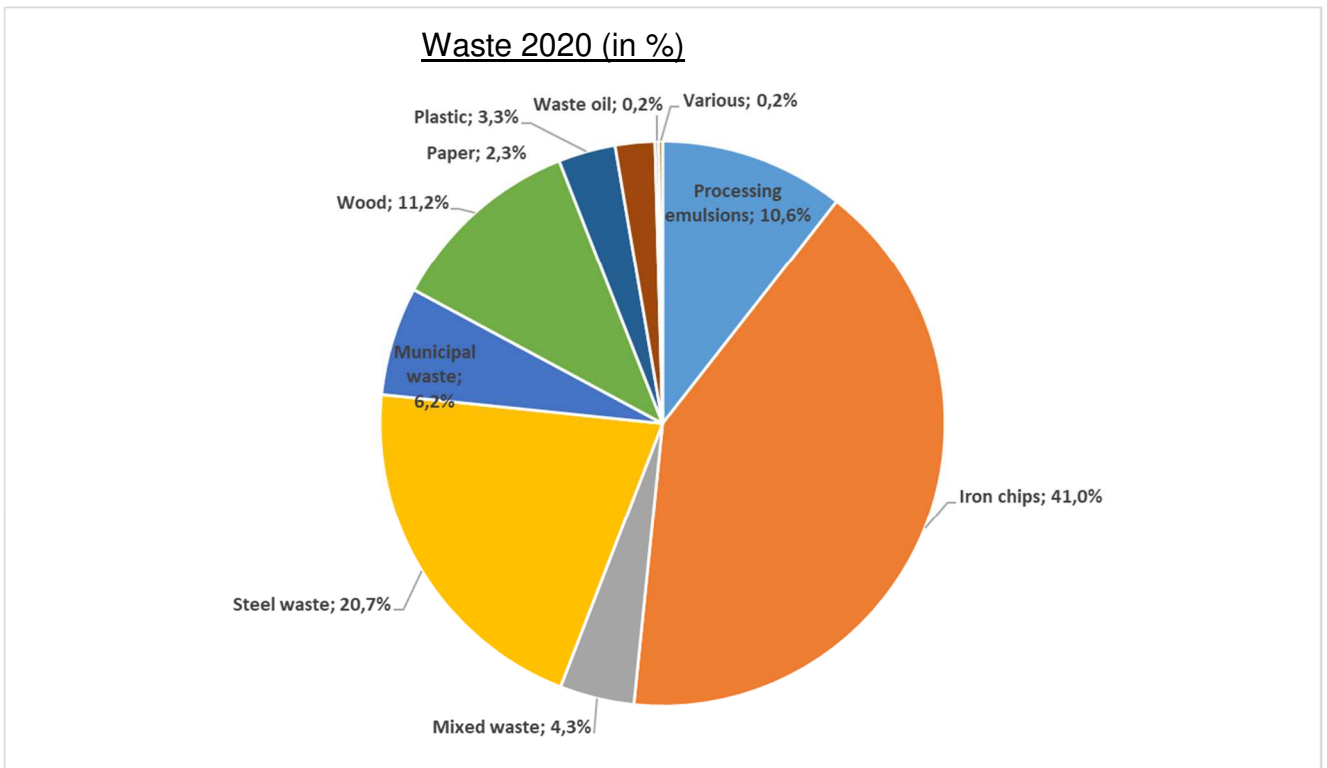


Figure 3: Waste 2020, Freudenberg site

HF also worked with the certified waste management company Remondis in 2020, ensuring proper disposal. In connection with the revision of the contract with Remondis, the container concept was optimised in mid 2020, as previously mentioned; in addition, the labelling of the containers was improved, which will be continued at the main facility in 2021.

Following the amendment of the Commercial Waste Ordinance, it is important to calculate the separate collection rate annually; this is presumably above 90%. This is intended to further expand the separate collection and recycling of commercial municipal waste. This value was achieved in 2019. In 2020, a separate collection rate of 93% was achieved.

## Energy

### Introduction

Total power consumption at the Freudenberg site was 3,526,100 kWh (1,496,000 kWh electricity, 1,982,100 kWh natural gas and 48,000 kWh diesel). An energy assessment for the year 2020 was carried out separately for the electricity and natural gas consumers.

### Power consumption

Power consumption at the Freudenberg site fell by around 13% compared to the previous year. This result can be explained by the reduced production hours due to the order situation in the 2020 financial year. Furthermore, electricity consumption is subject to certain fluctuations throughout the year due to different workloads (e.g. holiday season in summer, Christmas period). Specific power consumption (kWh/manufacturing hour) increased sharply due to low production hours – about 25% less than in the previous year.

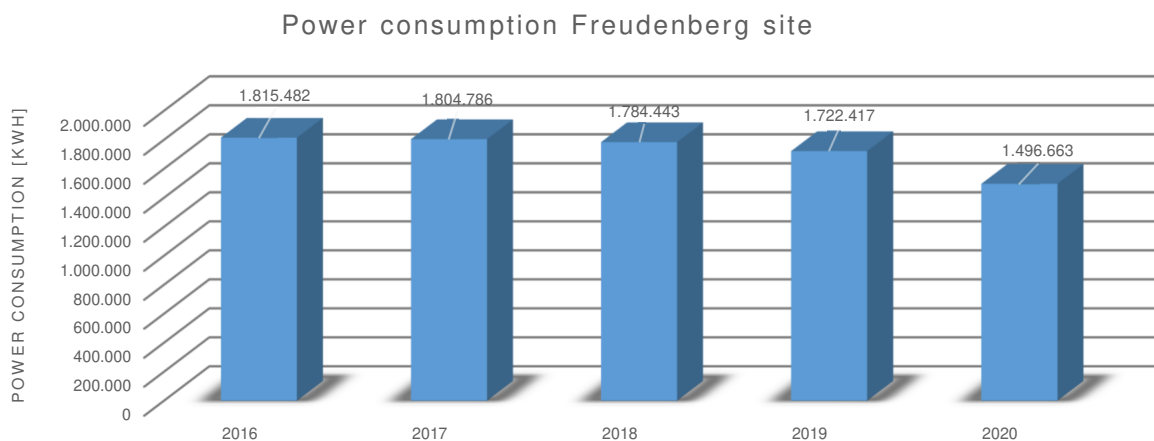


Figure 4: Annual power consumption 2016–2020.

### *Electrical energy audit*

The areas with the highest power consumption and thus the highest importance are:

1. **Welding:** this includes all welding equipment, welding robots, heating furnace and high-frequency equipment (current converters for grinding machines) (20.3%)
2. **Mechanical Production:** includes all production machines (14.6%)
3. **Compressor:** separate measurement for the compressor (10.1%)

In welding, time relays, e.g. on the high-frequency system, have already reduced energy wastage. Furthermore, the awareness of the employees is to be further raised through communication and employee motivation. A notice was posted in the appropriate place for regular shutdown of the compressor, among other things. In addition, it is currently being examined whether a timer can also be used here.

### *Natural gas consumption*

Natural gas is used to heat the buildings and factory halls, to produce hot water for the showers and in the manufacturing processes (heating furnace, preheating of components at the submerged arc welding system).

While gas consumption for hot water supply and process heat depends exclusively on the intensity of production, gas consumption for heating the buildings depends on the weather. This gas consumption must therefore undergo a weather-related correction (climate adjustment).

Climatic conditions and the intensity of operation (number of production hours) play a significant role in the fluctuations over the years.

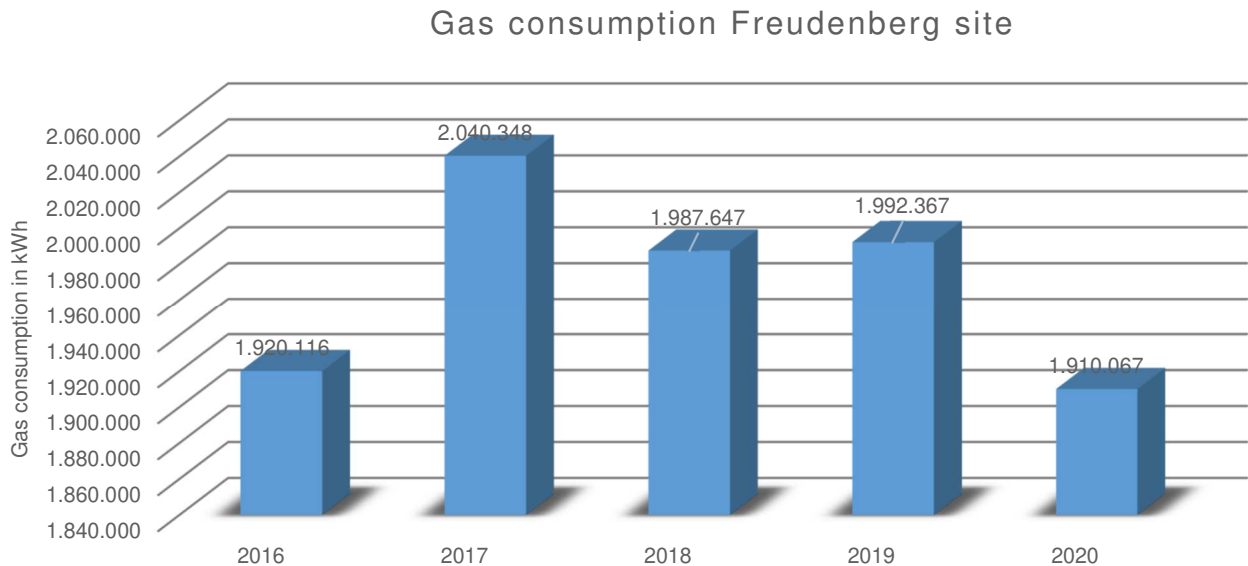


Figure 5: Annual consumption of natural gas 2016–2020.

### *Natural gas energy audit*

The areas with the highest natural gas consumption and thus the highest significance are:

- 1) Heating of office buildings, changing rooms and mechanical production (21%)
- 2) Circulating air heating for mechanical production (19%)
- 3) Heating and dark radiators in the Technology Centre (11%)

In particular, the heating consumption in the office building will be reduced from 2021 onwards with the installation and use of the CHP unit. At present, there are no plans to use this efficient energy generation for the production halls as well. Furthermore, the building structure of the production halls is outdated (single-glazed windows, no insulated roof), so that natural gas consumption for heating the halls could be improved through structural engineering measures. The only way we can minimise heat loss is by reducing the door opening times.

## **A new location for HF in Hamburg brings an environmentally friendly and modern working environment**

### *Environmental protection in Hamburg*

After all HF Group Hamburg employees had moved into the new building in Schlachthofstraße in September 2020, an initial assessment of the building's energy requirements was able to be made at the end of the year. The aim was to save a large part of the previous emissions with the most modern heating technology, the combined heat and power generation of the installed combined heat and power unit and the exclusively installed LED lighting. A particular challenge arose from the fact that the work areas are supplied with an illuminance of up to 1,000 lux over the entire area. The latest findings on the positive influence of increased illuminance on the well-being and performance of employees were the reason for doubling the previously usual 500 lux.

Looking at the relatively short 3-month period from September to November 2020, the measured powered consumption already speaks for itself in an impressive way when compared to the consumption of the previous year's sites:

As a result, power consumption was reduced by 34%. Instead of 213,000 kWh in 2019, only 140,000 kWh were consumed in the same period in 2020.

Gas consumption fell by an impressive 87% over the same period, from 1,891,000 kWh in 2019 to 235,000 kWh in 2020.

Thus, in the 3 months under consideration, a total of 393 tonnes of CO<sub>2</sub> were saved compared to the previous year.

In addition to the positive environmental aspects, this is also a success in financial terms: In the 3 months under consideration alone, €63,000 could be saved on electricity and gas compared to the same period last year.

### *Staff in Hamburg*

With the move into the new building, HF Hamburg also successfully went live with the office concept that does not require individually assigned office workstations. Following the concept, digitalisation has also catapulted work forward. At HF, every employee has a notebook and a smartphone, as well as access to a modern IT infrastructure and software landscape so that they can work from anywhere and at any time. HF is thus following the trend towards more flexibility in the world of work and expects to sustainably increase both its innovative strength and its attractiveness as an employer.

Ongoing staff training is particularly important to HF. With the establishment of the "HF Academy", HF provides employees with an innovative place for further training that is accessible from anywhere.

With the move into the new building, employees who had been spread over two locations for the last few years have now been brought together in one location, which promotes cohesion and internal communication.

Even before moving into the new location, the IT infrastructure was changed so that every employee can work from any location. This is the only reason why HF was able to successfully manage customer service with spare parts supply as well as the processing of machine orders outside the company headquarters. So we were lucky in that we were able to successfully maintain the business model during the pandemic and lockdown phases.

## **Energy projects show positive results in HF`s production site in Belišće, Croatia**

### *Environmental protection in Belišće, Croatia*

Environmental principles and requirements are taken into account in all phases of the product life cycle in HF Belišće.

Continuous compliance with environmental regulations and the monitoring of environmental changes, constantly updated risk assessments with regard to all aspects of the environment, the improvement of environmental protection and the avoidance of environmental damage are a constant concern of the management and employees of HF Belišće.

The promotion of a proactive corporate culture and the awareness of employees for the environment as well as the implementation of training programs to inform and actively design an effective environmental management system help to continuously optimize the use of natural resources.

Energy projects of the last 5 years will continue to be consistently pursued:

- Energy savings through renovated office buildings
- Replacement of all lighting on site
- Complete conversion from gas heating to hot water ceiling heating
- Installation of a solar power plant
- Use of electric forklifts instead of gas and diesel forklifts
- Much of the steel cutting is done by underwater plasma cutting
- Replacement of the lighting to the latest generation of LED technology

So far HF Belišće`s projects have saved about 1.275 t of CO<sub>2</sub> per year or 43% of the previous emissions in the last 5 years. The aim is to be completely CO<sub>2</sub> neutral by 2030.



*HF Belišće in figures:*

Electric Energy (machine power/ lightening/ others)

<b>CO2-t-SUM</b>	ME	Year	MWh	Pollution coefficients	CO2 t per year
<b>1.830</b>	404	2013	3.605	235	<b>846</b>
<b>2.124</b>	398	2014	4.873	235	<b>1.144</b>
<b>2.050</b>	507	2015	4.993	235	<b>1.172</b>
<b>1.893</b>	476	2016	5.299	235	<b>1.244</b>
<b>2.002</b>	476	2017	5.798	235	<b>1.361</b>
<b>2.190</b>	513	2018	6.610	235	<b>1.552</b>
<b>2.190</b>	513	2019	5.880	235	<b>1.381</b>
<b>1.744</b>	179	2020	4.160	235	<b>719</b>
<b>1.004</b>	355	2021	5.000	235	<b>0</b>



Green certificate for Valpovo location ~15% less CO2  
Green certificate for complete HFB ~100% less CO2

Natural gas (heating for painting facility Belišće and Valpovo location)

Year	MWh	Pollution coefficients	CO2 t per year
2013	3.504	220	<b>772</b>
2014	3.466	220	<b>763</b>
2015	2.986	220	<b>657</b>
2016	1.930	220	<b>425</b>
2017	2.016	220	<b>444</b>
2018	2.064	220	<b>454</b>
2019	1.987	220	<b>454</b>
2020	1.482	220	<b>326</b>
2021	2.500	220	<b>877</b>




New heating system with hot water



New Furnace with gas power


LPG (Gas cutting work/ forklifters)

Year	MWh	Pollution coefficients	CO2 t per year
2013	409,6	261	<b>107</b>
2014	576	261	<b>150</b>
2015	576	261	<b>150</b>
2016	576	261	<b>150</b>
2017	486,4	261	<b>127</b>
2018	435,2	261	<b>114</b>
2019	410	261	<b>107</b>
2020	246,7	261	<b>64</b>
2021	190	261	<b>49</b>

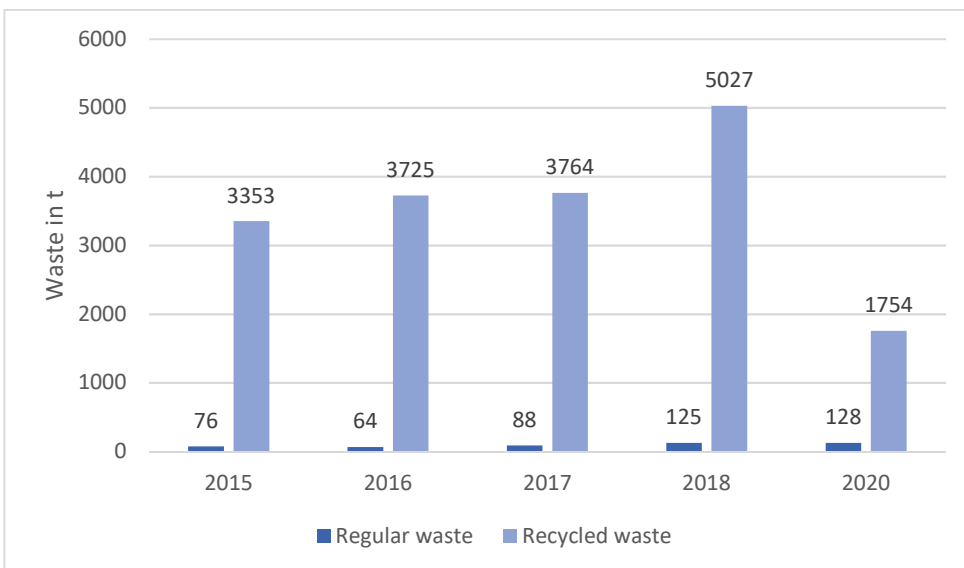
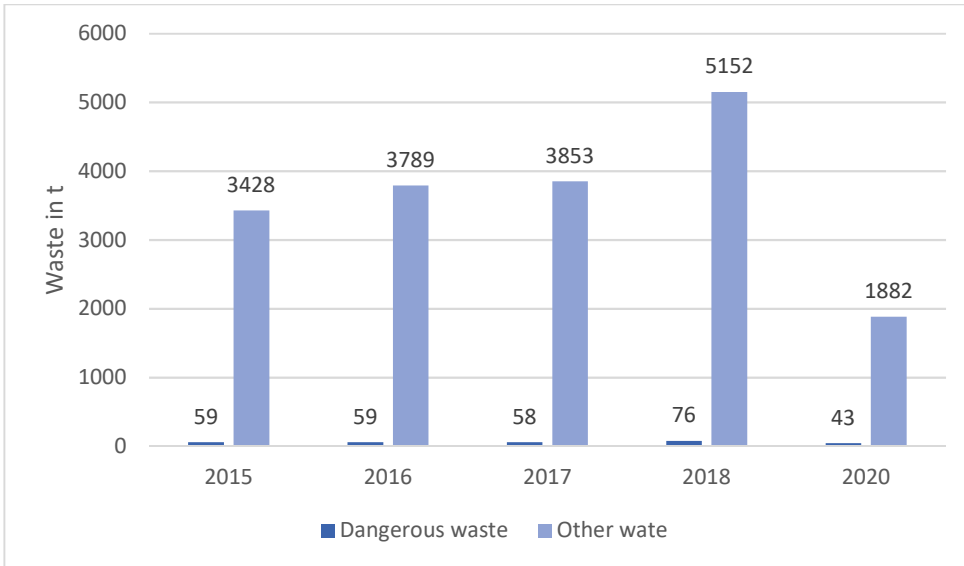

 New forklifters on electric power  
 One gas cutting device less (replaced with plazma)

Diesel (forklifters)

Year	MWh	Pollution coefficients	CO2 t per year
2013	337,5	310	<b>105</b>
2014	212,5	310	<b>66</b>
2015	225	310	<b>70</b>
2016	237,5	310	<b>74</b>
2017	225	310	<b>70</b>
2018	225	310	<b>70</b>
2019	200	310	<b>62</b>
2020	64	310	<b>20</b>
2021	32	310	<b>10</b>


 New forklifters on electric power

Waste in Belisce





## **Anti-Corruption (Principle 10)**

**10** Businesses should work against corruption in all its forms, including extortion and bribery.

HF has already addressed the issue of anti-corruption and compliance in its Code of Conduct. However, as this issue is of fundamental importance and reflects one of the principles of the UN Global Compact, the company has also developed an anti-corruption policy to provide the best possible support to employees in this area as well. HF rejects any kind of corruption, bribery, theft or extortion and expects the same from its employees. The current anti-corruption policy remains valid.

Further information on how HF assumes corporate responsibility can also be found in the sustainability reports on <http://www.hf-mixinggroup.com/>