



**Banner**  
**THE POWER COMPANY**

# SUSTAINABILITY REPORT

As at October 2021

**EDITORIAL**



Since its foundation in 1937, with its product portfolio Banner has been able to secure a sustained position in the market. The wishes and needs of our customers, employees, suppliers and society have always been at the forefront of company thinking and owing to our continuous growth, we are not only able to meet the demand of our clientele for high-quality batteries, but also secure a diverse and attractive workplace for hundreds of employees. In particular, our structure as a family business allows us to react quickly to changing circumstances via extremely short decision-making paths. Moreover, a protective approach to our environment is one of our major priorities, as evidenced by the fact that due to a closed recycling loop, our products demonstrate the highest collection rate of all recyclable goods. It is also of note that we support the recovery process with an extremely well developed take-back network.

The Banner Group consists of the two "Automotive" and "Energy Solutions" business units.

The Automotive business unit serves two large market areas, the first of which is the original equipment segment. This contains well-known customers such as BMW, VW, Audi, Mercedes-Benz, Porsche and Roll-Royce, who are supplied with start-stop batteries. The second segment is the retrofit market in which AGM and EFB batteries are also of increasing relevance and rising demand is ensuring sustained growth.

During the past three years, over EUR 30 million have been invested in the Leonding location for the adaptation of production capacities to rising sales. In addition, another location has been opened in Thalheim near Wels, which specifically serves the new Energy Solutions business unit. Some EUR 10 million have been invested in the further development of the production of traction and standby energy storage solutions.

With its business units, the Banner Group has ensured continuous further progress and employment for its 805-strong workforce.

  
**Andreas Bawart**  
 Commercial CEO

  
**Thomas Bawart**  
 Technical CEO

## CONTENTS

<b>1. Our company</b> .....	4
1.1. Responsibility .....	4
<b>2. Economics</b> .....	5
2.1. Strategic positioning with innovative products .....	5
2.2. Sustainable innovations for climate & resource conservation .....	5
2.3. Quality for increased sustainability .....	6
2.4. Services .....	6
<b>3. Environment</b> .....	7
3.1. Closed recycling loop .....	7
3.2. Water .....	7
3.3. Energy .....	8
3.4. Emissions & immissions .....	9
3.5. Waste .....	9
3.6. Transportation .....	9
<b>4. Social matters</b> .....	10
4.1. Safety .....	10
4.2. Commitment to human rights and equality .....	10
4.3. Employee benefits .....	10
4.4. (Further) training as a key factor .....	11
4.5. Good neighbour relations .....	11

### List of illustrations

Abbildung 1 Banner stakeholders .....	4
Abbildung 2 EFB and AGM aftermarket sales shares .....	5
Abbildung 3 EFB and AGM total sales shares .....	5
Abbildung 4 CO <sub>2</sub> and fuel reduction overview .....	5
Abbildung 5 Water withdrawal overview .....	7
Abbildung 6 Lead freight in wastewater .....	7
Abbildung 7 TIWAG electricity breakdown 2019 .....	8
Abbildung 8 Energy consumption per tonne of lead .....	8
Abbildung 9 Recharging percentages .....	8
Abbildung 10 Installation of a 3,000 m <sup>2</sup> PV system at headquarters in Leonding .....	8
Abbildung 11 CO <sub>2</sub> emissions .....	9
Abbildung 12 Dry filter plant .....	9
Abbildung 13 Fig. 13 Annual comparison of waste volumes .....	9

### Fig.

AGM Absorbent Glass Mat  
 EFB Enhanced Flooded Battery  
 UFS Environmental Forum Starter Batteries

**1. ABOUT US****1.1. RESPONSIBILITY**

**B**anner is an innovative, expanding company and Austria's only manufacturer of starter and vehicle electrical system batteries. Since 1937, the company, which is based in Leonding, Upper Austria, has been producing batteries for all types of vehicles.

In the 2020/21 financial year (1 April to 31 March), the family-owned company generated sales of over EUR 270 million. Critical factors in this success include annual investments in research & development amounting to EUR 10 million and spending of over EUR 30 million in the past three years on further company development. The company employs 495 people at its headquarters in Linz-Leonding, 25 employees at the Energy Solutions business unit in Thalheim and 285 employees at 25 sales offices in 14 countries.

With its interdisciplinary character, sustainability plays a very special role in the company's business activities and is part of its philosophy. This contains commitments to the sustainable achievement of profits, long-term cooperation with partners and customers, and a high degree of ecologi-

cal responsibility. With these objectives in view, Banner seeks to fulfil the wishes and needs of all of its stakeholders to the full.

This report is intended to provide an overview of how Banner implements sustainability in the course of its various procedures and the progress that has been

made in the course of time. For these reasons and in order to keep Banner partners up to speed with the latest developments, this report is updated every two years.



Fig. 1 Banner stakeholders

**2. ECONOMICS**

## 2.1. STRATEGIC POSITIONING WITH INNOVATIVE PRODUCTS

Banner convinces with a multifaceted product portfolio and its operations can be generally divided up into the Automotive business unit with its first fitting (OE) and retrofitting (IAM) segments, and the Energy Solutions business unit.

The Automotive business unit offers an extensive product range with starter, vehicle electrical system and leisure sector batteries, as well as technical accessories. This area represents Banner's core business and with a current share of 91%, accounts for the majority of the company's total sales.

Since the 2018/19 financial year, the shares of trendsetting AGM and EFB batteries in aftermarket sales have risen by over 60% (see Fig. 2). The share of total sales (including the OEM sector) has remained at around 30% (see Fig. 3).

In the Energy Solutions business unit, above all the traction, semi-traction and standby product areas are subject to further development. Charging technology, accessories and service round off the range. Energy Solutions currently accounts for 9% of total sales.

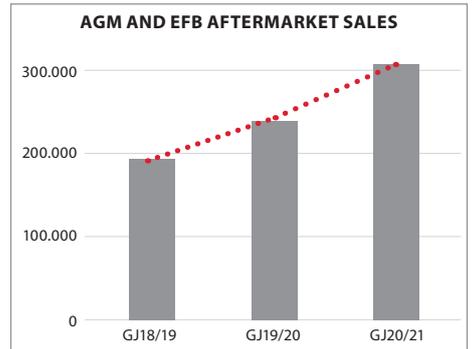


Fig.2 AGM and EFB aftermarket sales shares

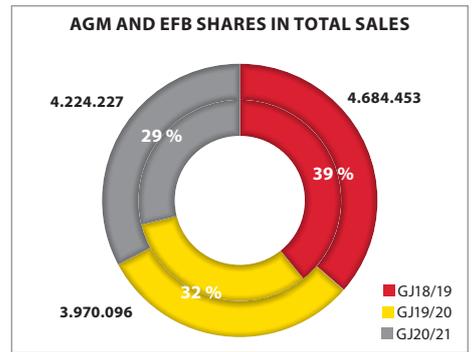


Fig.3 EFB and AGM total sales shares

## 2.2. SUSTAINABLE INNOVATIONS FOR CLIMATE & RESOURCE CONSERVATION

With its products Banner supports resource-conserving and low-emission, social development. As a result of AGM and EFB technologies, which are employed in micro-hybrid drives and pure start-stop applications, in the 2020/21 financial year the company contributed to fuel savings

of up to 100 million litres and hence a cut in CO2 emissions of 250,000 t. Banner is fully committed to this trend and is therefore continually pushing forward the development and production of batteries based on AGM and EFB technologies. Apart from lower costs, these efforts result directly in a marked reduction in

customer-related environmental impact. Moreover, in order to equip its customers with the most modern and environment-friendly technologies, Banner invests EUR 10 million per year in product development

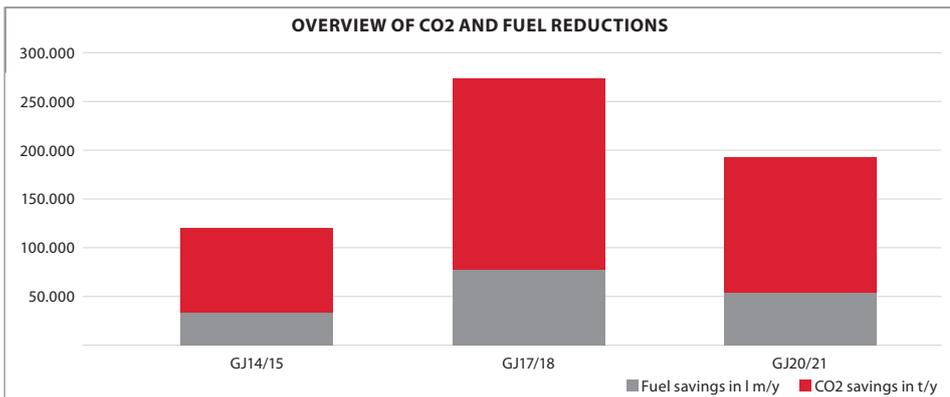


Fig. 4 Overview of CO2 and fuel reductions since 2015



## 2. ECONOMICS

### 2.3. QUALITY FOR INCREASED SUSTAINABILITY



**B**anner sees sustainable business activities as meaning the provision of its customers with top quality products in order to preserve the resources of our planet in an effective manner. The company possesses the very latest ISO 9001 and IATF 16949 certifications, which involve an examination process in which every company procedure of relevance to quality is sub-

jected to the closest scrutiny and evaluation. In addition, complete adherence to the related stipulations is checked at periodic intervals.

The Banner brand stands for quality products, as is evidenced clearly by low complaint ratios, which in the 2020/21 financial year were reduced still further: Only 0.04 %

in the first fitting segment. In the aftermarket segment, the ratio of technically justified complaints amounted to a mere 0.2%.

As a result, Banner has succeeded in becoming firmly established in the premium class as a quality manufacturer.

### 2.4. SERVICES

**I**n line with the concept of sustainability, Banner wishes to describe some of its special services in the Energy Solutions business unit:

- The short- and long-term rental of energy storage solutions in the traction, semi-traction and stand-by areas help to provide ef-

fective protection of the earth's resources.

- Banner demonstrates to its customers the potential for energy and CO<sub>2</sub> savings that can be achieved through the use of the latest charging and battery technologies.
- A spare parts service helps Banner to prevent premature wear. This ensures optimum safety and minimum downtimes and

thus secures reliable operational readiness.

With these activities, Banner also endeavours to be a competent and above all reliable partner for its customers on a service level.

3. ENVIRONMENT

# 3. ENVIRONMENT

Banner is a lead processor and therefore has a special responsibility to the environment and society. Accordingly, it possesses ISO 14001 certification and has an environmental management system in place in order to minimize envi-

ronmental impact. As a strong and recognised sign of its market and value orientation, Banner was once again certified as a leading Austrian company. Following a comprehensive qualifica-



tion process, this designation is awarded to exemplary enterprises that are committed to sustainable corporate success, innovation and social responsibility.

## 3.1. CLOSED RECYCLING LOOP

Since its foundation, Banner has sought to encourage the recycling of spent batteries through their collection and the return of the reprocessed materials to the production process. Banner is a founder member of the Environmental Forum (UFS), which over the past 25 years has been able to collect around 20 million used vehicle batteries across Austria and thus recover some 210,000 t of lead. In total, this means that 95 - 98% of the lead employed in the battery production process has been recycled!

80% of the polypropylene used in the battery boxes also derives from recycle. Moreover, the sulphuric acid collected from spent batteries is processed into sodium sulphate, which is utilised for the production of detergents and glass (UFS, 2015). Banner is thus part of a closed recycling loop and makes a lasting contribution to the conservation of resources. Banner obtains its lead exclusively from within the European Union.



## 3.2. WATER

At its headquarters in Leonding, Banner has its own wells and therefore an autonomous water supply. Nonetheless, during the last two years the company has reduced its daily water withdrawal volume by around 14% to 1,300 m<sup>3</sup>. Furthermore, the seepage of unpolluted cooling water back into the groundwater means that actual water consumption has been cut to roughly 255 m<sup>3</sup> per day.

Banner produces a total of just under 50 m<sup>3</sup> of wastewater per day. This is purified in a modern treatment plant and then fed into the public sewer system in the purest state that is technically possible. In the last financial year, the lead content in the wastewater was lowered by 52% to 0.128 mg/l, which is well below the mandatory limit of 0.5 mg/l.

Continuous chemical analyses are used to ensure high quality treatment and the use of chemical flocking agents has also been

greatly reduced by means of precipitation process optimisation.

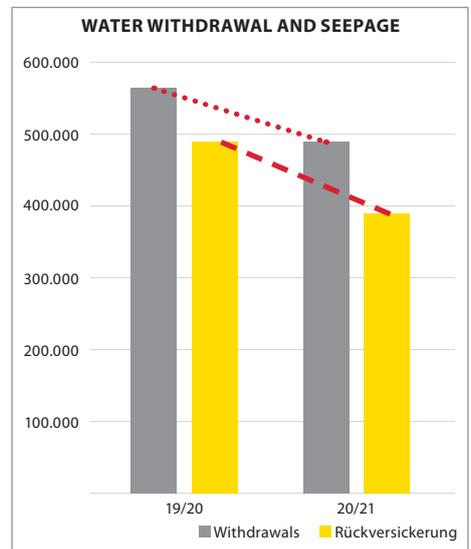


Fig. 5 Water withdrawal overview

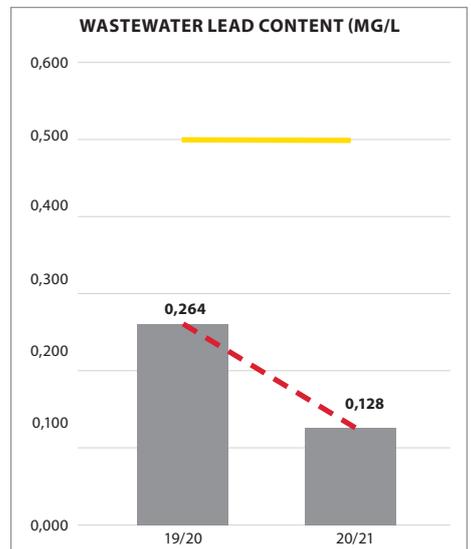


Fig. 6 Lead freight in wastewater

### 3. ENVIRONMENT

## 3.3. ENERGY

In 2015, Banner became a partner of TIWAG\* and since then has been obtaining its electricity from 100% renewable energy sources (see Fig. 7).

Consequently, Banner does not generate any CO<sub>2</sub> emissions or radioactive waste due to its electricity consumption. 79.22% of the certificates of origin employed come from Austria and 20.78% from Norway.

66% of Banner's electricity consumption is utilised for battery charging. As a result, the company also sees itself as an energy provider that supplies its customers with 100% green energy.

As Fig. 8 shows, last year there was an increase in electricity consumption per tonne of lead. This can be explained partially by the fact that a higher number of batteries were manufactured and charged. In addition, the more economical use of lead in individual batteries resulted in increased consumption of electricity per tonne of metal. However, the fall in the quantities of lead required culminated in lower gas consumption during the melting processes.

Banner is making major efforts to achieve a lasting reduction its electricity consumption, as the following short list illustrates:

- Waste process heat is used for production hall heating in the winter months.
- Electrical efficiency has been increased to a constant 98% through innovations in rectifier IGBT technology.
- Idle energy has been cut along with pressure demand through the use of new control systems in the compressor area.
- The employment of energy-saving LED lights in parts of the production halls.
- The ongoing conversion of the internal vehicle fleet to e-mobility and the commissioning of six charging stations on the company premises.
- The generation of solar energy through the installation of photovoltaic systems on roofs and facades at the Linz-Leonding lo-

cation (475kWp).

- Planning improvements, which in the 2020/21 financial year resulted in a significant reduction of 7% in the proportion of batteries from production requiring recharging.
- A progressive reduction in process-relevant electricity consumption by means of continuous optimisation.

Apart from electricity, natural gas is Banner's second most important energy source. By using this raw material sparingly, in spite of the continuous expansion of production capacities, natural gas consumption is falling. Banner has achieved this feat through innovations such as the following:

- Product development is a top priority and the company therefore focuses on conserving resources. For example, by continuously optimising the lead content in certain products, savings are achieved in the melting processes and thus in gas consumption.
- The use of waste heat from compressed air generation saves around 445 MWh of energy per year.
- In addition, 70% of pallets for shipping are now packed using the wrapping process and only 30% using the shrink process. This has saved large quantities of natural gas and 40% of film material.

In order to make an active contribution to the promotion of renewable energy systems, a 3,000 m<sup>2</sup> photovoltaic system is being installed at the Linz-Leonding headquarters during the current 2021/22 financial year. This will enable the location to be supplied with almost half a million kilowatt hours of emission-free solar power annually. Modules with a total output of 485 kWp are to be installed on the roofs and in some cases on the facades of the Banner plant buildings. These will generate 485,000 kWh of electricity, which the company will use entirely for the production of starter and vehicle electrical system batteries. This amount of power is equivalent to

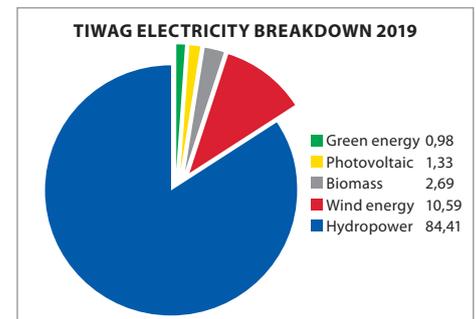


Fig. 7 TIWAG electricity breakdown 2019

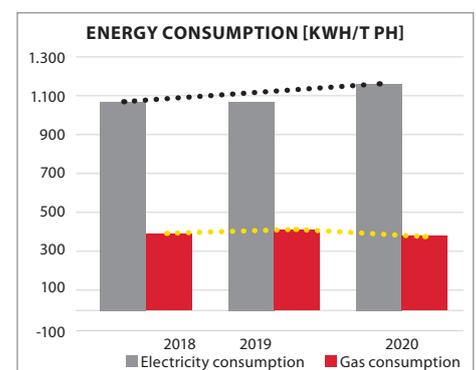


Fig. 8 Energy consumption per tonne of lead

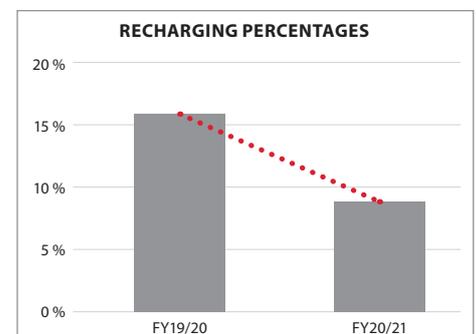


Fig. 9 Recharging percentages



Fig. 10 Installation of a 3,000m<sup>2</sup> PV system at headquarters in Leonding

the annual electricity consumption of 200 households.

### 3.4. EMISSIONS & IMMISSIONS

Banner is highly committed to reducing its energy-related emissions and the switch to 100% demonstrably green electricity in 2015 means that the only remaining major source of CO<sub>2</sub> is natural gas consumption (see Fig. 11). During the last four years, the specific value has constantly been between 70 and 80 kg CO<sub>2</sub>/t of lead.

#### Lead dust emissions

As a lead processing company, Banner is subject to numerous official requirements regarding compliance with mandatory emission levels. The last measurements taken once again confirmed that the emissions of lead dust met all the stipulations of the official ordinance. Additional investments in filter systems have supported efforts in this connection as demonstrated by the fact that Banner was able to undercut the legal limit by a factor of more than

10. The company's next goal is to eliminate the more emission-intensive wet scrubbers from pre-production and in future solely clean waste gas streams by means of state of the art, dry filter systems.

#### Lead immissions

Since 2015, among other organisations, AGES GmbH has been continuously monitoring lead immissions using standardised grass culture (active bio-monitoring). These checks have also indicated a steady fall in lead content and as compared to the measurements from 2015, an average decrease of more than 60% has been achieved. The results were thus clearly below the maximum content for green forage stipulated by the EU Directive 2002/32/EC.

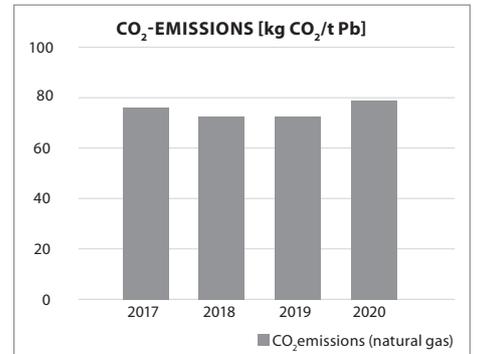


Fig. 11 CO<sub>2</sub> emissions



Fig. 12 Dry filter plant

<sup>1</sup> Note. Changed calculation methodology as opposed to the previous version

### 3.5. WASTE

At Banner, a responsible approach to resources does not end with the recycling of spent batteries, but continues with the reduction of production waste and its recycling or disposal in an environmentally compatible manner.

In terms of an annual comparison, the

volume of non-hazardous waste in 2020 was 11.3% below the 2018 figure. Above all, Banner has encouraged this trend by raising employee awareness levels with regard to the handling of this sensitive issue. Moreover, hazardous waste has been reduced by over 58%.

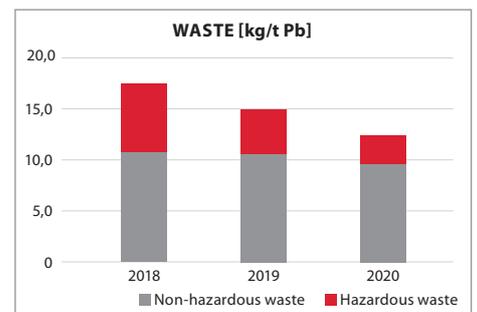


Fig. 13 Annual comparison of waste volumes

### 3.6. TRANSPORT

In the goods purchasing area, Banner employs trucks for around 90% of its transports and the railways for the remaining roughly 10%. The proportion of outgoing goods transported by truck is also 90%, with the remaining 10% being handled by ship.

However, Banner is making every effort to increase the shares of low-emission rail transports and shipping by means of combined transport systems, which is why the company has already been awarded a CO<sub>2</sub> reduction certificate in this connection.

Banner is not only working on the redesign of its freight systems, but also general transport savings. For example, it is seeking to achieve this goal by utilising the entire load capacity of trucks and the production of additional battery parts in Linz.

## 4. SOZIALES

### 4.1. SAFETY

At Banner, work safety and health care are seen as being of paramount importance. Therefore, all employees are provided with personal protection equipment tailored to their respective activities and Banner undertakes

the complete cleaning of this equipment as a matter of course. As a lead processor, the company also regards the issue of lead hygiene as being a major priority. This involves comprehensive safety instructions and employee training, as well regular

blood checks by the company physician. Moreover, in order to furnish employees with maximum protection against unnecessary lead exposure, working procedures are continuously optimised on the basis of the evaluation of blood lead levels.

### 4.2. COMMITMENT TO HUMAN RIGHTS AND EQUALITY

Banner demands adherence to human rights in every respect. It condemns any type of child or forced labour and also demands this of its suppliers. These are subject to the imposition of stringent requirements and are subjected to a thorough internal audit prior to any approval. For Banner, non-compliance with human rights is a 100% exclusion criterion!

The company also regards the issue of

equal rights as being of great importance, which is why the principle of "equal pay for equal work" is applied. In addition, Banner gives persons with disabilities the opportunity to regain a firm foothold in the labour market. Furthermore, as this matter is particularly close to the company's heart, for many years it has surpassed mandatory requirements, which means it is not obliged to offer any compensatory payments.

These principles are firmly anchored in a code of conduct, which is binding upon every Banner employee and sets obligatory standards for daily working practice.

### 4.3. EMPLOYEE BENEFITS

Banner employees enjoy numerous benefits, which amongst other effects contribute to a significant improvement in the working atmosphere. For example, in winter the company provides free fruit and in the summer months free mineral water.

Furthermore, for many years Banner has been active with an internal "Generation Management" initiative, which ensures that employees are able to work from the moment they join the company and helps them stay fit until the official age of retire-

ment. To this end, the company has implemented numerous measures in the areas of work, know-how, values and health. This initiative has been assessed by the Austrian Health Insurance Fund (ÖGK) and awarded the "Company Health Promotion" seal of approval for the period 2021-2023.

In addition, Banner offers its employees supervised summer holiday weeks for children, an attractive flexitime model for white-collar personnel, discounts at partner companies, massages, interest-free loans and many other benefits.

The Austrian business magazine "trend" has also recognised this comprehensive commitment by awarding Banner the title of "Top Employer 2021".



#### BEWUSST UND LÄNGER LEBEN

These efforts have resulted in a high level of job satisfaction within the company, which above all is reflected in the long periods of service amongst the workforce. Overall some 50% of Banner employees have been with the company for more than 10 years. This is not only a very special distinction, but also means that Banner has a very high proportion of experienced employees, whose know-how is an important factor in the company's success.



## 4.4 (FURTHER-)TRAINING AS A KEY FACTOR

Training constitutes a key element in Banner philosophy and a long-term commitment in combination with the following activities has contributed to the company's success:

- The training of apprentices as wholesale administrators and IT system engineers. In the course of these educational activities, Banner participated successfully in the "Best Training Companies - Fit for Future 2015" national prize competition and in addition has been awarded the INEO seal of approval for exemplary apprenticeship training by the Austrian Chamber of Commerce on numerous occasions.
- The training of skilled workers (electricians, mechanical engineers, mechatronics engineers) is carried out in cooperation with the Chamber of Commerce via the Dual Academy and in teamwork with

AMS (Austrian Employment Service) and the Upper Austrian provincial government via the AQUA scheme.

- Regular participation in career information fairs.
- The possibility for cooperation with regard to bachelor, master's and doctorate degrees, which also enables students to establish initial contacts in the professional world.
- The foundation in 2014 of the Banner Academy for the training of new and already serving managers in the technical and commercial areas. The aim is to prepare managerial personnel for future challenges and growth.
- Since 2017, Banner has also offered training via e-learning. So-called Power Learning makes it easy for Banner em-



ployees to obtain the information they need to carry out their daily assignments within the company.

## 4.5. GOOD NEIGHBOUR RELATIONS

Banner attaches great significance to good neighbour relations and cultivates open communications with regard to current concerns.

The annual Christmas punch party also offers residents an opportunity to talk about their worries, wishes and problems with Banner personnel in a convivial atmosphere. In this connection, noise barriers, silencers, noise insulation and greenery have all been installed.

Furthermore, company neighbours are provided with regular information regarding new developments at the Linz location.





# Banner

**THE POWER COMPANY**

## **PATENTS**

**Double lid**, joint patent with Moll U - 02027 9204 (procedure still in progress, also filed in the USA)

**Screw connection** for double lid, joint utility patent with Moll 202 18730.6

**AGM valve plug**, joint design patent with Accumalux

Banner GmbH, Banner Straße 1, A-4021 Linz - Österreich

Phone: +43/(0)732/38 88-0, Fax: +43/(0)732/38 88-21399

E-Mail: [office@bannerbatterien.com](mailto:office@bannerbatterien.com)

