



PAMP.
Produits Artistiques Metaux Precieux

**Sustainability Report
2016**

Professionalism, Continuity, Dedication



At PAMP, we are convinced that while innovation and improvement must be among our objectives, it is important to make our efforts enduring, ensuring the continuity of the commitments we have made. This is also the message we want to send with the regular production of the Sustainability Report, the seventh edition of which begins here. However, this report is just the tip of the iceberg for work that goes into much greater depth, and it provides a tangible expression of our social, environmental and economic responsibility, in a context of real continuity.

The report's objective is twofold: on one hand, we want to report on what we have done, show the results we have achieved and explain the reasons for these results. On the other, we are keen to lay out our future direction and the objectives we have set ourselves. The report is divided into three sections, the aforementioned Social Responsibility, Environmental Responsibility and Economic Responsibility, covering all aspects of the business, which of course include people, the ecosystem and local economic interdependency. It is intended for all our stakeholders: employees, the local community, customers, suppliers, institutions, shareholders, companies, organisations and associations, mass media, and competitors. It is intended to be a tool for discussion and an underpinning

for constant improvement, on a basis of transparency.

For us, continuity means, among other things, ensuring a healthy, safe environment for our employees at all times, maintaining commitments made and cultivating connections with the community and its institutions, monitoring the production chain rigorously to ensure that it is sustainable, working constantly to ensure that the impact of our operations on the environment is controlled, establishing long-lasting commercial partnerships, and making far-sighted economic decisions to ensure the business's stability.

In the financial year under consideration, from 1 July 2015 to 30 June 2016, continuity, professionalism and dedication have been ever-present. As a result, we have been able to maintain good performance in all the areas mentioned, at the same time as focusing on constant improvement.

Highlights

Nadia Haroun: PAMP's new CEO

On 1 January 2016, Nadia Haroun, Vice Director and Head of Sales and Marketing since 2009, took on the role of CEO. A native of France and now a proud resident of Ticino, Ms. Haroun has over 16 years of experience and in-depth knowledge of the precious metals sector to draw upon, having worked at various international organisations in Paris, Amsterdam and Sydney.

VERISCAN technology applied to the first official legal tender coin

The Kangaroo coin series, produced in association with the Royal Australian Mint, is the first official legal tender coin that can be verified for authenticity via PAMP's ground-breaking VERISCAN technology. The coin's packaging bears the VERISCAN logo and, like qualifying PAMP products, can be recognised unambiguously, and therefore cannot be counterfeited.

First Chain-of-Custody certified production

In March 2016, PAMP's first fully traceable, Chain-of-Custody certified production took place. The option to manage processes in accordance with this standard testifies to PAMP's commitment to a sustainable precious metals chain. The Chain-of-Custody Certification was presented to PAMP by the prestigious and influential Responsible Jewellery Council (RJC), which regulates participating members as regards the traceability of processed metals (gold, platinum, palladium and rhodium), from sourcing through to final use for investment, or collection or jewellery making purposes.

Development of new rhodium ingots

Throughout 2016 PAMP metallurgists and engineers have developed special fabrication processes essential to the creation of rhodium ingots. One of the six platinum group metals (PGM), rhodium possesses structural and molecular properties that make it one of the most challenging metals to properly formulate in ingot form.

ISO 17025 accreditation for the MMTC-PAMP laboratory

The Indian government's National Accreditation Board for Testing and Calibration Laboratories (NABL) awarded the MMTC-PAMP laboratory this accreditation under the ISO 17025 standard, recognising its compliance with the general requirements for the competence of testing and calibration laboratories. This recognition was granted after a careful assessment of the technical skills and competences of the MMTC-PAMP laboratory, which in turn is supervised by PAMP's senior laboratory personnel in Switzerland.

Contents

Who We Are

The Company and the Production Processes
Business Activities and Recognition

1. Social Responsibility

- 1.1. Employees
 - 1.1.1. Staff Composition
 - 1.1.2. Training
 - 1.1.3. Health and Safety
- 1.2. Local Community
- 1.3. Production Chain

2. Environmental Responsibility

- 2.1. Resources
 - 2.1.1. Energy
 - 2.1.2. Water
- 2.2. Environmental Impact
 - 2.2.1. Waste
 - 2.2.2. Emissions

3. Economic Responsibility

- 3.1. Results
- 3.2. Indirect Economic Impact
 - 3.2.1. Suppliers
 - 3.2.2. Tax, Investments and Sponsorships

Who we are

The Company

Core values:

- **Excellence in products and services:** we pay careful attention to every detail in all phases of processing and in every activity where we play a role;
- **Professionalism and reliability:** we are committed to both providing high-quality products and services, and guaranteeing a transparent, ethical production chain;
- **Respect for the environment and the local community:** we work with institutions and maintain open dialogue with the community;
- **Innovation and the search for the best technical and process-related solutions:** we invest consistently in research and development;
- **Protection and development of our human resources:** we work to make the working environment safe and tranquil.

PAMP stands for Produits Artistiques Métaux Précieux, or artistic precious metals products. PAMP SA is part of the Geneva-based MKS PAMP GROUP, which comprises four brands with 14 offices in 12 different countries.

In addition to the PAMP and MMTC-PAMP refineries (the latter a joint venture between PAMP and the Metals and Minerals Trading Corporation of India), the portfolio includes MKS, which provides financial, physical and commercial services to a global customer base, and coin and

ingot distributor MTB, which operates in the United States.

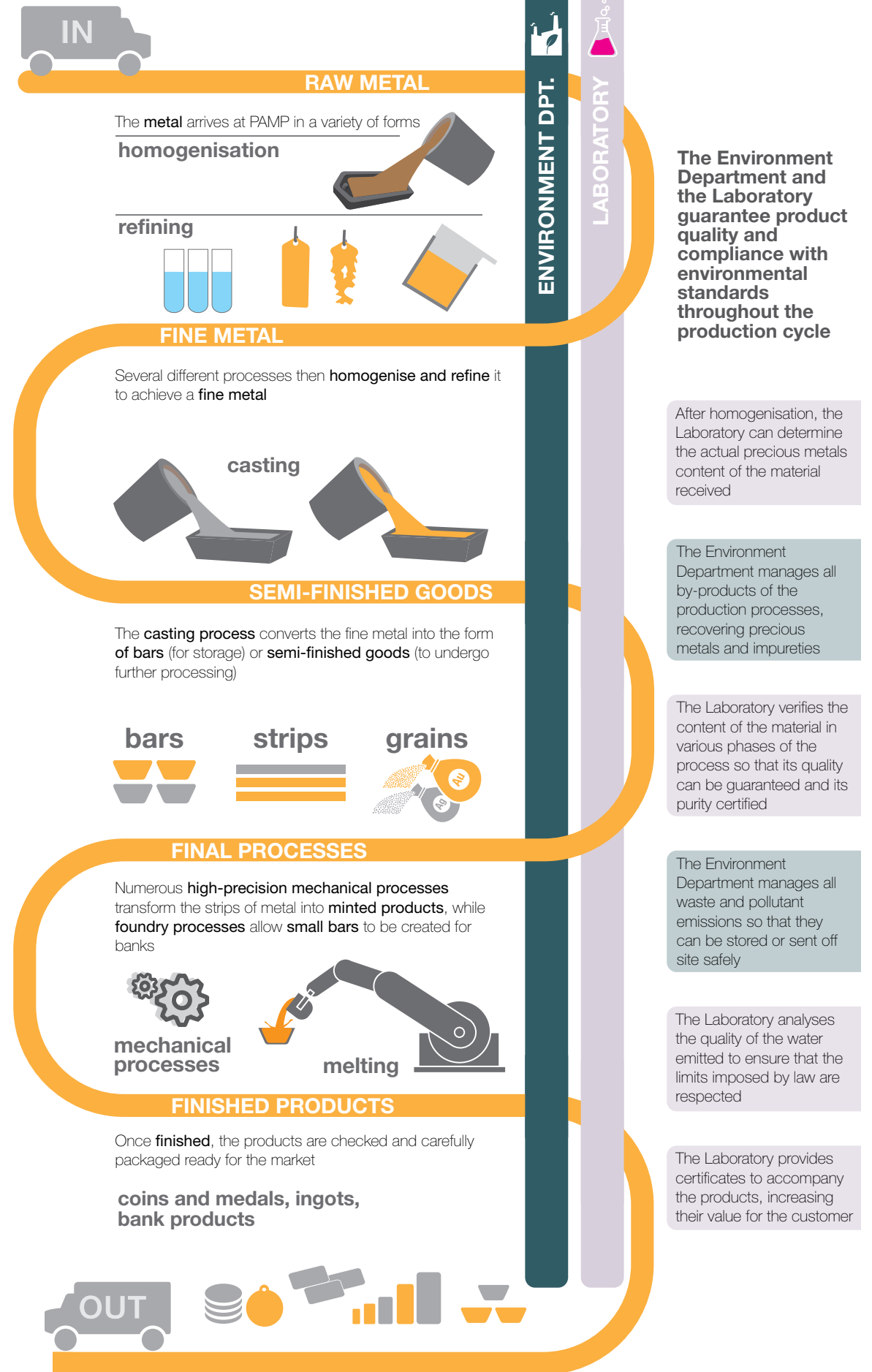
« Our clientele is global and very diverse, including central banks, commercial banks, Government Mints, mining companies, manufacturers of and dealers in jewellery and watches, asset management and trading companies, commodity trading advisors (CTAs) and private investors, ingot traders and national postal regulatory authorities. »

Our business, based in Castel San Pietro, Ticino, is the leading refiner and fabricator of precious metals (gold, silver, platinum, palladium and rhodium) in the sector, within which it is **the world's leading bullion brand**. Over nearly 40 years in operation, PAMP has always stood out for its high quality standards, its focus on innovation and an ever stronger sense of social responsibility, towards both the community where it is based and all the people affected by its operations in any way, throughout the production chain.

History

- 1977: PAMP founded in Chiasso
- 1981: acquisition by the MKS Group
- 1984: move to Castel San Pietro headquarters
- 2008: creation of MMTC-PAMP, a joint venture with the largest Indian public trading company, the Metals and Minerals Trading Corporation of India (MMTC)
- 2012: beginning of the partnership with UNESCO for the commemorative coin program
- 2014: MKS Group name updated to MKS PAMP GROUP

Production Processes



Business Activities and Recognition

Recognition:

- London Bullion Market Association (LBMA) **Ordinary Member**.
- Our assay laboratory is one of three **Good Delivery Referees** authorised by both the London Bullion Market Association and the London Platinum and Palladium Market (LPPM) to analyse and evaluate bars sent by candidates for Good Delivery certification.
- Our products are recognised as **Good Delivery** by the following bodies:
 - LBMA, the London Bullion Market Association;
 - LPPM, the London Platinum and Palladium Market;
 - BNS, the Swiss National Bank;
 - TOCOM, the Tokyo Stock Exchange;
 - COMEX, the New York Commodity Exchange;
 - DMCC, the Dubai Gold and Commodities Exchange;
 - CME, the Chicago Mercantile Exchange;
 - SGE, the Shanghai Gold Exchange.
- We are a **Full Member** of the London Platinum and Palladium Market, an **associate member** of the Tokyo Stock Exchange, and a **non-clearing member** of the New York Commodity Exchange and the Chicago Mercantile Exchange.
- We abide by **FINMA (Swiss Financial Market Supervisory Authority) regulations** in relation to combating money-laundering and the financing of terrorism, throughout the production chain.

PAMP offers its customers a wide range of products and services:

- **Refining:** the department is operational 24 hours a day, with an annual production capacity of more than 450 tons of gold, 600 tons of silver and 30 tons of platinum group metals;
- **Analysis and sampling:** our assay laboratory operates as an independent entity under the remit of the Swiss Central Office for the Control of Precious Metals and holds ISO/IEC 17025 accreditation, recognition of the fact that the laboratory meets the standards requi-

« Numerous certifications testify to our commitment to quality and a high level of service, to environmental protection, to the health and safety of our employees, and to the ethical nature of the production chain. We are the only refinery in Switzerland to hold ISO 9001, ISO 17025, ISO 14001, OHSAS 18001 and SA 8000 certifications at the same time. »

red for carrying out analyses using accredited methods, and can therefore issue various types of certificates;

- **Cast bars and ingots:** these are produced in gold, silver, platinum and palladium with specific characteristics in terms of dimensions and purity;
- **Minted ingots:** these are produced in gold, silver, platinum, palladium and rhodium in weights ranging from 0.3 g to 1 kg;
- **Finished and semi-finished products with traceable origin:** optionally, we can manufacture batches of our products using segregated processing and equipment, ensuring full traceability of the precious metal throughout the chain;
- **Gifts and collector's items:** pendants, collector coins and other items in gold, silver, platinum and palladium;

UNESCO World Heritage International Coin Program

Since 2012, we have been the exclusive UNESCO partner for the coordination, production and/or distribution of commemorative coins as part of the World Heritage International Program. We work with government mints and central banks on the **concept, design, packaging and distribution of coins and medals** to celebrate world cultural heritage and other UNESCO related topics.

From July 2015 to June 2016, we had the honour of expanding our program with:

- *Het Van Nelle*, the euro coin depicting the factory of the same name – an icon of 20th century industrial architecture – which is the fourth issue in a



Some of the coins produced within the program

ten-year series from the **Royal Dutch Mint**;

- The commemorative coin for the *Te Wahipounamu* park, minted by the **New Zealand Post**: the first New Zealand coin produced as part of the programme;
- The set of four coins minted in association with the **South African Mint** celebrating the *Kogelberg Biosphere Reserve*;
- The third and final issue of the **Fábrica Nacional de Moneda y Timbre 15 Cities of Spain** commemorative coins;
- The coin produced to celebrate the Guatemalan national park, *Parque Nacional Tikal*, by the **Central Bank of Guatemala**;
- *The new Musée d'Orsay & Petit Palais* collection, part of the *Rives de Seine* series on the beautiful architecture along the bank of the Parisian river, produced by **Monnaie de Paris**.

• **Coins and medals:** concept, design, minting, packaging and distribution;

• **Semi-finished goods for industry:** we supply chemical, electronics, pharmaceutical and automotive industries with pure precious metals, gold alloys, components, and salts and solutions containing platinum group metals;

• **Storage service:** in Switzerland, the United States and India;

• **Retail solutions:** our partners can make use of a platform and our know-how to support the retail sale of a range of products, without taking on risks or having specific knowledge of the sector;

Added-value solutions: one example is proprietary VERISCAN technology, which instantly scans the micro-surfaces of bullion and coins for verification as authentic PAMP or brand-partner products. VERISCAN greatly reduces the risk of counterfeits, and in turn may reduce buy-back costs for distributors and investors alike.

Financial services: as part of the MKS PAMP GROUP, we are able to offer customers access to expertise in relation to precious metal quotes, physical trading of precious metals, unallocated trading, location and purity swaps, a web-based trading application (WTA), web-based reporting and daily market reports.

Social Responsibility

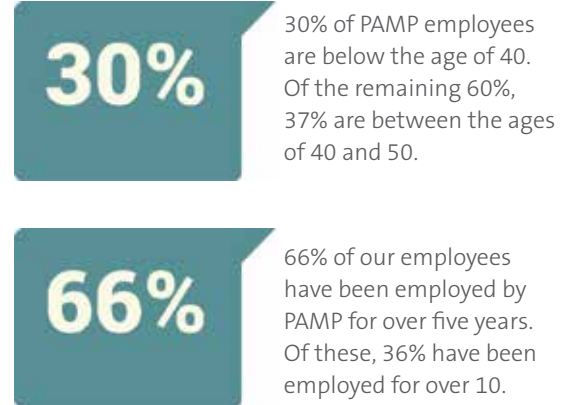
Our approach to social responsibility is all-encompassing, with a commitment to everyone who comes into contact with PAMP whether directly or indirectly. As a result, we work constantly to achieve a collaborative, safe working environment, we maintain a dialogue with institutions and support local organisations, and we are actively, diligently involved in supervising the production chain through both thorough checks on our partners and compliance with international regulations and certifications.

We are proud to have a prestigious international company like PAMP in our municipality. More importantly, we are very happy with the relationship that has taken shape through a variety of projects over the years. Open dialogue and a healthy desire to work together have paid off, in terms of both protection of the environment and the local area, and support for local organisations. This commitment from the company and the shared projects that have been undertaken undoubtedly make a tangible difference to the good of the community.

Alessia Ponti,
Mayor of Castel San Pietro



EMPLOYEES



TRAINING



HEALTH AND SAFETY



LOCAL COMMUNITY



PAMP renewed its sponsorships of both Istituto Sant'Angelo di Loverciano for special needs children, and the Ticinese football team AS Castello.

PRODUCTION CHAIN



40% of our active suppliers (covering more than 90% of our purchases) were inspected in accordance with the procedures set by the SA8000 voluntary certification.



1.1. Employees

1.1.1. Personnel Composition

Figure 1 Number of employees

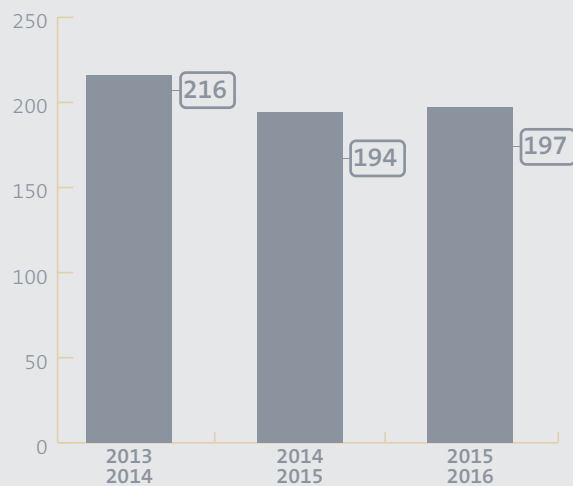


Figure 2 Personnel composition by gender

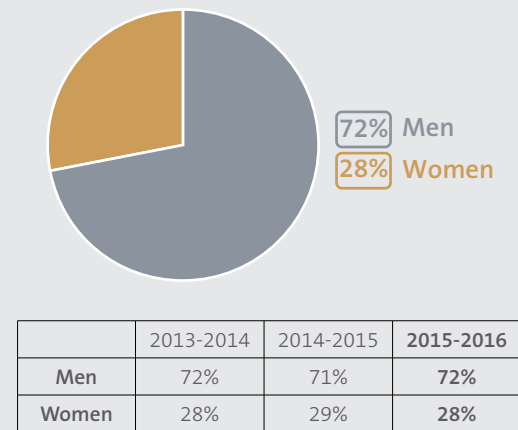


Figure 3 Personnel composition by age

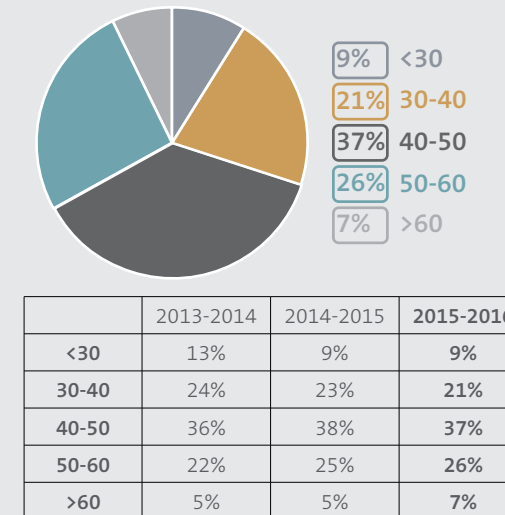
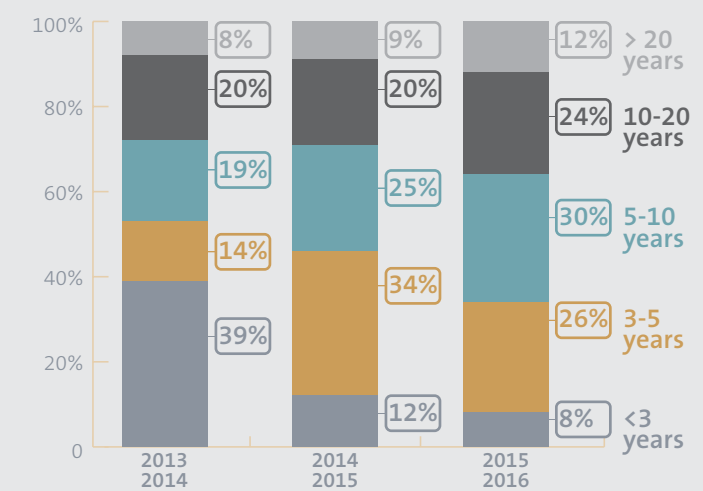


Figure 4 Trends in personnel composition by length of time working for the company (years)



During the financial year in question, the number and demographic characteristics of our employees have remained all but unchanged: most notably, the number of people employed has stabilised over the course of the last two financial years, going from 194 in the period July 2014 to June 2015 to 197 in the financial year that ended on 30 June 2016 (Figure 1). We can consider the ra-

« A greater female presence in the company's senior management is worthy of note, resulting from the new organisational structure that took effect in January 2016. The MKS PAMP GROUP is keen to nurture the talents and special skills of every professional regardless of gender. »

tionalisation phase that saw a staff reduction of 22 between 2013-2014 and 2014-2015 to be over; during the year, we replaced personnel as necessary further to the updating of certain processes that required personnel with specific skills, and hired fixed-term contract workers to handle unexpected market fluctuations. Almost all our employees are employed under permanent contracts.

In terms of the percentages of men and women, the figures are also broadly stable: there was a 1% increase in the proportion of men to 72%, as shown in Figure 2, with the percentage of women now at 28%. This is obviously due to the predominant role of production in PAMP's activities. In terms of our employees' age, variations are minimal, with a reduction in the number of personnel aged less than 50 (from 70% to 67%), and a corresponding increase in personnel aged 50 plus (from 30% to 33%, Figure 3).

In relation to length of service at the company, the trend observed in recent years has continued, with **an increase in the percentage of employees who have worked at the company for several years**: in more detail, 34% of employees have been with the company for less than five years, i.e. 12% lower than 2014-2015 and 19% lower than 2013-2014. 30% of employees have worked for the company for between five and ten years (5% higher than in 2014-2015 and 11% higher than 2013-2014); and finally, 36% of PAMP employees have been with the business for over 10 years (up 7% from 2014-2015), 12% of them for over 20 years (Figure 4).

We find these data encouraging as they demonstrate our employees' loyalty, while at the same time serving as an incentive to make sure that we offer our employees a healthy, safe working environment, individual skills development and, no less importantly, transparent, constructive communication. To achieve this, we hold regular meetings

with Worker Representatives and support the use of the internal communication tools available to personnel, such as the Suggestion Box (for any suggestion or complaint, anonymous or otherwise) and the Ideas Register (to collect proposals from staff who want to contribute to a variety of aspects of company life).



Nadia Haroun
CEO PAMP

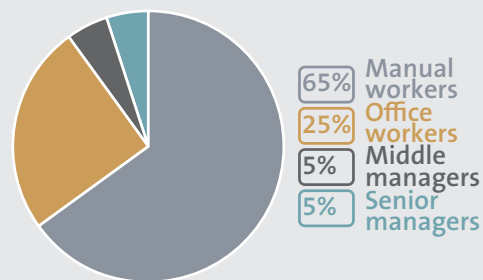
Senior management expanded to encompass all areas of the company's activities

As of January 2016, in conjunction with the appointment of Nadia Haroun to the role of CEO, PAMP's senior management underwent additional changes to its organisational structure. Key roles and personnel have been identified and further defined in the security, sales & marketing, metallurgical, mechanical, engineering, laboratory, and administrative departments, and are now more fully incorporated into the management structure. That integration allows for more fluid management of communication between the various areas and allows managers to act in greater synergy with one another, and to make better use of the knowledge of other departments.

This explains a **change in the composition of personnel by professional category**: as Figure 5 shows, the percentage of employees in senior management has increased from 2% to 5%, with a corresponding reduction in the

percentage of middle managers, from 8% in 2014-2015 to 5% in the year under consideration. The percentages of manual workers and office workers remained unchanged, however, at 65% and 25% respectively.

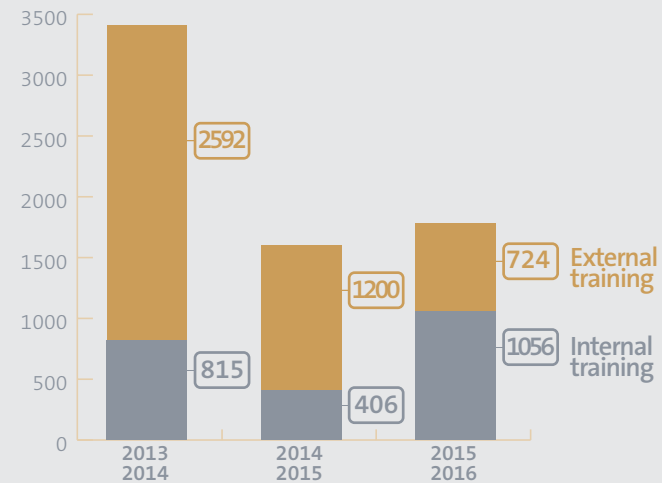
Figure 5 Personnel composition by professional category



	2013-2014	2014-2015	2015-2016
Manual w.	66%	65%	65%
Office w.	25%	25%	25%
Middle man.	7%	8%	5%
Senior man.	2%	2%	5%

1.1.2. Training

Figure 6 Hours of training



During the financial year 2015-2016, the total number of hours of training went up by 174 hours, from 1,606 to 1,780, an increase of over 10% (Figure 6). Compared to previous years, a reversal of the trend in the subdivision of these hours is notable: hours of internal training, normally a much smaller percentage than external training, predominated this year. The reason for this is that a more structured approach to training initiatives meant we could **make the most of the knowledge and skills of internal specialists**, who delivered a variety of courses. In future, we intend to continue this project and with it the growth trend, progressively increasing the number of hours of training provided per capita.

« At PAMP, we place a high value on training for our employees. This ensures that they are well equipped to handle the challenges presented by their work calmly, at the same time as offering them not only professional but also personal growth. »

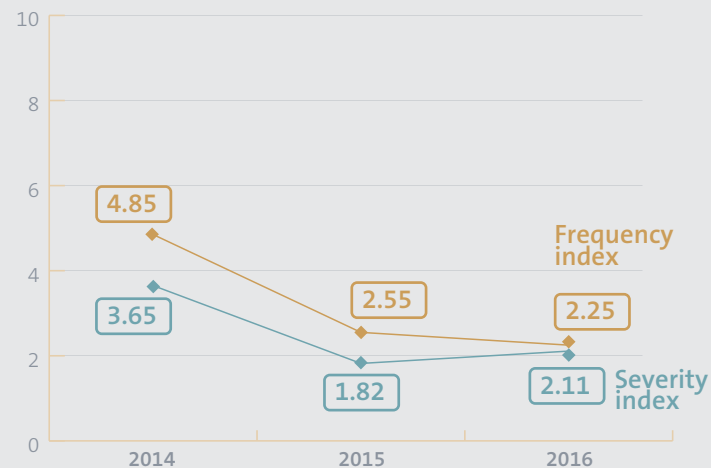
Enriching background knowledge

During the year, we asked various employees with special training and expertise in their area of activity to spend part of their working time preparing and delivering courses for their colleagues, with the aim of sharing some of their very specialist knowledge. These were generally courses without a specific operational focus, but useful both for employees' background knowledge and for the performance of various tasks within the company underpinned by greater understanding. For example, the metallurgy course, delivered by an employee with a PhD in the subject, allowed participants to deepen their knowledge of the behaviour of metals and the technical processes involved in obtaining and processing them. Other courses delivered by PAMP employees covered IT, training on the hazards associated with handling chemicals, and external logistics. The various courses were popular with employees and attracted considerable interest.

Compared to 2013-2014, when the number of hours broke the ceiling of 3,400, we would also highlight a smaller number of employees, the end of highly vocational courses for individuals, and the first block of ethics training further to our SA8000 certification. The courses we offer cover knowledge of the Management System, quality and processes, safety, and personal and professional growth.

1.1.3. Health and Safety

Figure 7 Accident indices



During the year, our workplace accident index figures were positive, and once again **below the average for the sector**. As Figure 7 shows, the frequency index (number of accidents per 100,000 hours worked) fell to 2.25, compared to 2.55 in the previous financial year. The severity index (number of working hours lost due to occupational accidents per 1,000 hours worked), however, rose slightly to 2.11, compared to 1.82 in the previous financial year.

Bearing in mind the substantial number of hours worked – 354,236 – we can only be

« The health and safety of our employees are our top priority. We have therefore reinforced our organisational structure with a role dedicated exclusively to health and safety at work and the external environment. »

satisfied with the result, although our commitment to bringing these indices down to near zero is unchanged. To achieve this, new standards have been introduced alongside a well-structured monitoring system which,

by constantly mapping when and in which department accidents happen, allows us to analyse possible causes and take steps proactively to resolve the issue.

Further to the monitoring audit, we maintained our OHSAS 18001 voluntary certification, which, as an international standard, requires the application of a clear system to guarantee compliance with the rules in force and to carry out careful checks on employee health and safety.



The new pipes installed to transport hydrogen



The new air ducts

Enhancing safety through systems improvements

In accordance with the ATEX directive, which sets out measures to prevent explosions, we implemented various improvements to the hydrogen distribution system. Based on consultation with an external specialist and internal analyses, we replaced the pipes and reviewed the gas distribution logic to make the equipment even safer. It is however important to emphasise that the main element ensuring the safety of the system is the presence of hydrogen generators, which mean that the gas is not stored but rather produced as needed, and if any issues arise, production can be halted immediately.

A second initiative looked at the extraction and air filtration systems, which underwent improvements. The first of these systems ensures better air quality within the facility, while the second contributes to ensuring that the air emitted by PAMP is environmentally friendly.

1.2. Local Community

Our partnerships with the local area

- **Department of the Environment:** working closely together to protect the environment;
- **Municipal Authority of Castel San Pietro:** holding periodic meetings;
- **Vivigorla e Dintorni local association:** regular meetings and contact;
- **Inhabitants of Castel San Pietro:** direct communication channel available to local inhabitants;
- **Istituto Sant'Angelo di Loverciano school:** support for special projects;
- **Associazione Sportiva Castello local football team:** main sponsor.

PAMP has always been unwavering in its desire to be an integral part of the community around it, generating value for the local area over and above purely contributing by paying tax. As a result, over time we have built strong relationships with local institutions and the Vivigorla e Dintorni association, the neighbourhood committee for the area where we are based.

We discuss various issues such as roads and environmental protection openly and transparently, and we try to make a contribution wherever possible.

« For us, being part of the community means generating added value for both the community itself and the area around us, through constant attention, open communication, and where possible, a tangible contribution. »

In relation to managing environmental impact, we also work closely with the **Department of the Environment of Bellinzona**.

Once again this year, we decided to support the two organisations closest to us – the local football team with a sponsorship, and the Istituto Sant'Angelo di Loverciano special school. We believe in the AS Castello team because of the healthy, genuine values they promote among young people. In relation to Istituto Sant'Angelo, we have seen our relationship strengthen over the years, with our contribution giving rise to major educational projects by offering new incentives.



A welcome invitation to Istituto Sant'Angelo

The workplace education project at the Istituto Sant'Angelo di Loverciano

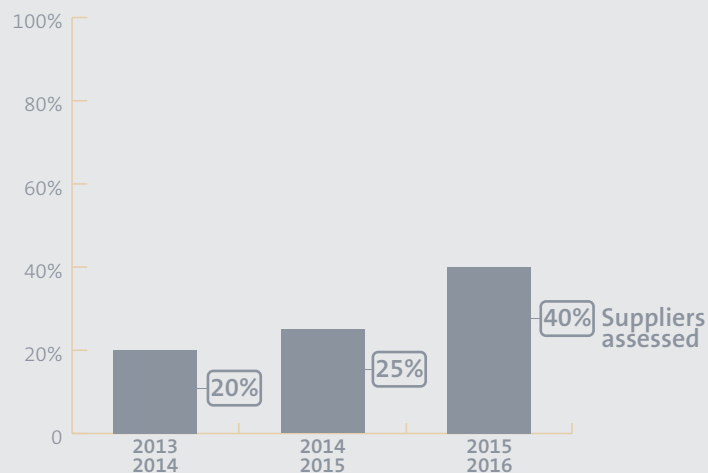
With the conclusion of the three-year cycle agreed for the English course, in September 2015 a new project supported by PAMP and devised in conjunction with the school's leaders began. The project is a workplace education project involving small groups of pupils, which aims to introduce them to a working environment accompanied and supported by an educator, to encourage success and learning in terms of cognitive and relationship skills and practical and professional skills alike.

More specifically, in addition to workshops on recycled paper, laundry and cooking, the pupils have tried their hand at **making fresh pasta**, following all the phases of the process. They also had the opportunity to visit a pasta factory and a mill located nearby, and could therefore observe professional production up close for themselves.

The positive fresh pasta workshop experience was also celebrated with a lunch attended by Giovanni Calabria (Internal Processes and Quality Manager) and Daniela Weithaler (Sales Manager) representing PAMP, Monsignor Pier Giacomo Grampa, Egidio Centonze (Chair of the Sant'Angelo di Loverciano Foundation) and the school's head teacher Piercarla Reposo (see photo).

1.3. Production Chain

Figure 8 Active suppliers assessed based on the SA8000 procedure



After obtaining the important SA8000 certification (which covers corporate social responsibility with a focus on the production chain) in May 2014, we began intensive inspections of our active suppliers. This year, we achieved 40% of suppliers assessed (which is covering more than 90% of our purchases). This means that they have completed a questionnaire and received inspection visits as necessary (Figure 8).

In one case, we sent a specialist company to carry out an initial inspection of an Asian supplier identified as “high risk”. The audit found major deficiencies in terms of safety at work and the quality of the working environment, so we asked for these issues to be resolved as an essential condition for the continuation of our working relationship. A second audit confirmed the corrective measures taken and documented them by means of photos and a detailed report; these measures signified a tangible improvement in the working environment (particularly in terms of safety) for the over 30 employees.

Our objective in the coming months is to update the supplier qualification questionnaire to make it more in-depth and targeted

in order to verify all the aspects (ethical, environmental and concerning occupational safety) that are fundamental for us.

The entire MKS PAMP GROUP works intensively to supervise the production chain, with the aims of combating human rights abuses on every front, completely avoiding the funding of conflict and/or terrorism, and meeting the highest standards in relation to money-laundering. We implement the **Responsible Precious Metals Group Policy** through a comprehensive management system that involves due diligence based on risk analysis before beginning any commercial relationship, together with ongoing proactive monitoring of transactions.

« Since 2011, we have followed the Responsible Jewellery Council's Code of Practice, while in 2015 we obtained Chain-of-Custody certification from the same body. CoC-certified metal comes from a fully traceable production chain that complies with the RJC's requirements. »

Our active role on the international stage

We participate in various round tables and work with numerous organisations and associations to define guidelines and regulations, as well as implementing initiatives to improve the sustainability of the precious metals chain. In more detail, we work closely with:

- **RJC, Responsible Jewellery Council:** a non-profit organisation that defines standards and certifications specific to the jewellery sector; it has over 850 members working in the sector, from mining to the sale of the finished products;
- **OECD, Organisation for Economic Co-Operation and Development:** the organisation has 35 member countries around the globe, and works to promote policies to improve the economic and social wellbeing of people all over the world; we are an active member of the Multi Stakeholder Steering Group working on the implementation of the OECD Due Diligence Guidance;
- **WGC, World Gold Council:** the industry organisation for development of the gold market, whose members work to ensure that gold mining is carried out responsibly;
- **LBMA, London Bullion Market Association:** the competent authority for the world gold market. We worked with the LBMA on the drafting of its Responsible Gold Guidance and contribute to the implementation of the Guidance on an ongoing basis;
- **SBGA, Swiss Better Gold Association:** since its foundation in 2013 – in which we played an active part – the association has facilitated the improvement of working conditions and greater environmental protection at small and medium-scale non-industrial mining cooperatives;
- **PPA, Public-Private Alliance for Responsible Mineral Trade:** this initiative brings together various sectors and stakeholders to promote the sustainability of the trade in minerals from the Democratic Republic of the Congo and the African Great Lakes Region.

In addition, through the **Know Your Customer** procedure, we verify in advance with all current and potential customers:

- The origin of the raw materials delivered to us for processing;
- The legality of financial resources;
- Respect for human rights and compliance with the standards on working conditions;
- Protection of the environment in the context of mining and production operations.

Environmental Responsibility

We hold ISO 14001 certification, which evidences the fact that we implement an environmental management system subject to constant development and improvement. At PAMP, we manage our environmental responsibility with the utmost commitment, setting tangible objectives, applying stricter internal rules and procedures than legally required, and finding solutions and tools to reduce our environmental impact. We rationalise and monitor the use of resources while carefully managing water discharges and atmospheric emissions, in part by working closely with the appropriate bodies such as the Water Treatment Consortium for Chiasso and Surrounding Areas and the Water, Air and Soil Protection Section of the Department of the Environment.

I have provided support to PAMP for several years in analysing consumption and trends on the energy market, and it was immediately clear to me that the company had a deep-rooted awareness of environmental issues. Even in the current climate, which is leading many companies to focus heavily on maximising profit, PAMP has maintained its commitment, choosing to abandon conventional electricity supplied from unidentifiable sources (e.g. coal-fired power stations, nuclear power, gas), and instead to get its electricity entirely from Swiss hydroelectric power. Moreover, the company is constantly on the lookout for innovative solutions that protect the environment in a tangible way through optimising consumption and reducing emissions.

Antonio Bader,
Managing Partner,
Powergia GmbH tbd



RESOURCES

28.4 kWh

The amount of energy consumed per hour of work is 28.4 kilowatt-hours.

73%

Electricity, generated from renewable sources, covers 73% of our total energy needs. Liquid and gaseous fuels respectively account for 10% and 17% of our energy needs.

5000 m³

We discharged approximately 5,000 metres cubed of water back into the Raggio stream, i.e. 30% of all the water discharged externally.

47%

47% of the water used was drawn, in accordance with the restrictions imposed by the abstraction authorisation, from our private well, specially built so as not to place an undue burden on the consortium aqueduct.

ENVIRONMENTAL IMPACT

23.3 µg/m³

The average annual quantity of nitrogen oxides (NO_x) recorded by the detectors in the built-up area of Castel San Pietro is 23.3 micrograms/m³. The Order Against Atmospheric Pollution (OIAt) sets an average annual quantity limit for nitrogen oxides (NO_x) of 30 µg/m³.

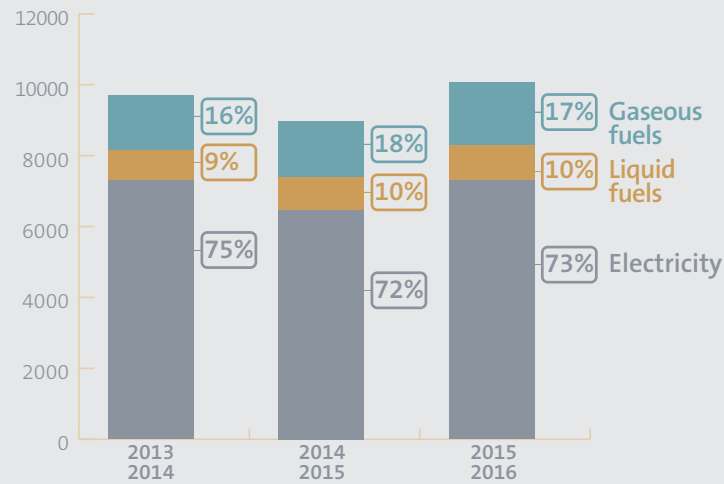
96%

We rigorously separate the waste we produce. Once again this year, we have been able to recycle the overwhelming majority of it: 96%.

2.1. Resources

2.1.1. Energy

Figure 9 Energy Supply (MWh/anno)



During 2015-2016, energy consumption grew by approximately 12%, from 9,890 MWh to 10,060 MWh. This increase is notably linked to an uptick in foundry department operations after a period of slowdown last year, as this department requires considerable energy.

As Figure 9 shows, electricity accounts for 73% of the energy mix, with 10% provided by liquid fuels (fuel oil which we essentially use to heat working areas), and 17% from gaseous fuels (methane and propane). These levels are all but unchanged compared to the previous financial year, and the positive ele-

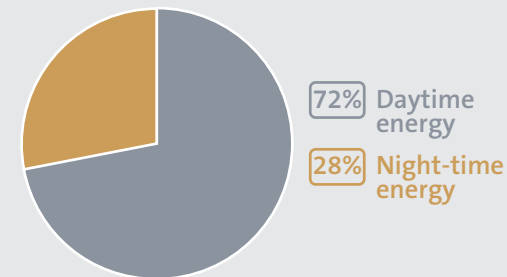
« As of this year, our electricity supply has been provided from Swiss renewable energy, meaning hydroelectric power produced in Switzerland. This decision is part of a broader strategy of increasing energy efficiency and reducing environmental impact. »

ment lies in the fact that the **great majority of our energy needs are covered by clean energy** from renewable sources, which also produces less carbon dioxide (CO₂). Our medium-term objective is to reduce and ultimately eliminate the use of liquid fuels (see Objective: reduce carbon dioxide emissions box).

Energy consumption per hour worked has increased slightly compared to last year, from 25.5 kWh to 28.4 kWh. This increase can also be attributed to the types of production activity carried out this year, which required more energy.

As Figure 10 shows, the energy consumption breakdown has altered slightly, from 70% to 72% for daytime hours (from 06:00 to 22:00, a total of 16 hours) and from 30% to 28% for night-time hours (from 22:00 to 06:00, a total of 8 hours). The variation leaves the distribu-

Figure 10 Day-to-day distribution of electricity consumption



	2013-2014	2014-2015	2015-2016
Daytime energy (16 hours)	70%	70%	72%
Night-time energy (8 hours)	30%	30%	28%

tion of energy use between day and night largely unchanged, however; the hourly percentage of daytime consumption is 4.5%, while night-time consumption stands at 3.5%. This confirms that by standardising input current, we can now avoid peaks in demand during the day when energy requirements are generally greater and exploit night-time surpluses that would otherwise be wasted.

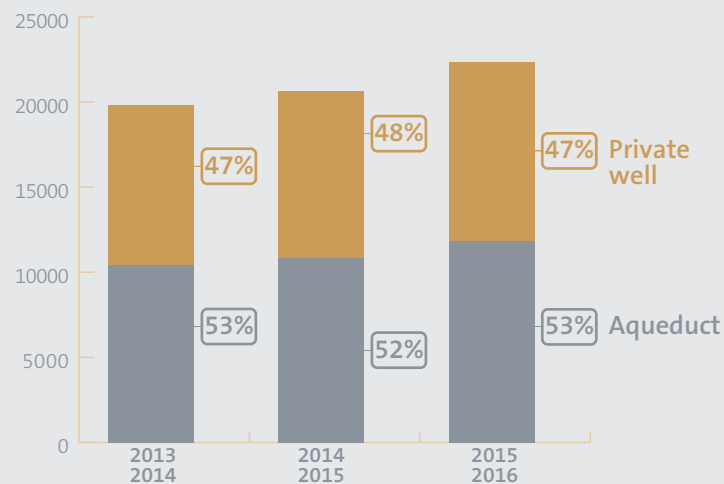
Objective: reduce carbon dioxide emissions

We have focused our research for several years on solutions to improve our energy efficiency in order to make our operations more and more sustainable, including in relation to the consumption of resources. We constantly monitor power flows, analyse energy performance and increase the awareness of our personnel in terms of prudent energy management in production processes.

In addition, with the aim of reducing carbon dioxide (CO₂) emissions, in early 2016 we commissioned a consultant recognised by the Swiss government to carry out an energy analysis, which resulted in the definition of objectives for the next five years, together with suggested measures to take to reach them. In addition to reducing carbon dioxide emissions, the measures identified – which include the installation of a **heat recovery system** – will make it possible to attain other major benefits: termination of the use of diesel, an overall reduction in energy consumption, a move towards obtaining energy from cleaner sources (gas and predominantly electricity) and a reduction and ultimately the elimination of stocks of fuels and the transportation required to move them.

2.1.2. Water

Figure 11 Water supply (metres cubed)

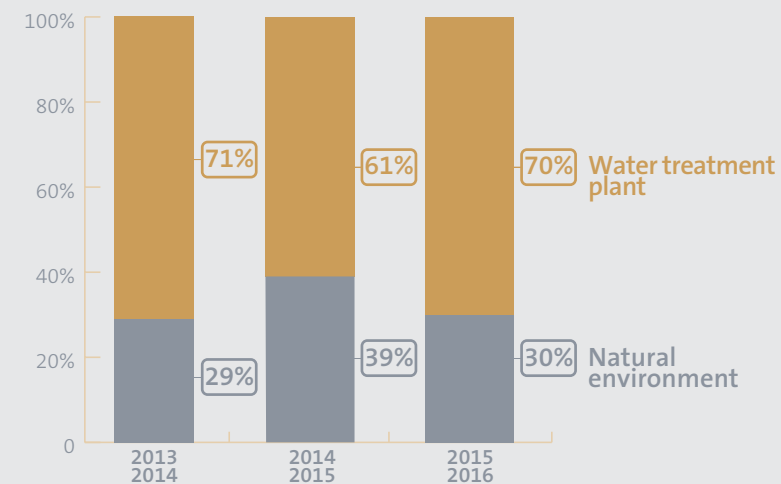


Water consumption maintained a growth trend this year, from a total of 20,645 metres cubed to 22,340 metres cubed (an increase of 8%). The breakdown of water drawn from the consortium aqueduct and the private well remained in line with the previous financial year, with 53% of water used coming from the aqueduct and 47% drawn from the private underground well (in accordance with the restrictions imposed by the abstraction authorisation) (Figure 11). The variations are linked to production processes, in particular the uptick in foundry operations after a period of interruption, as these processes require a considerable amount of water.

« Our laboratory carefully analyses the properties and temperature of the water discharged back into the Raggio stream to ensure that it is fit for release into the natural environment. »

In terms of water discharges, we recorded a reduction in the percentage of water discharged into the natural environment. As Figure 12 shows, the percentage of water destined for the consortium water treatment plant was 70% (compared to 61% last year), while the amount discharged directly into the Raggio stream was 30% (compared to 39% last year). Our PLC (Programmable Logic Controller) system processed and dispatched approximately 12,000 metres cubed of water to the Water Treatment Consortium for Chiasso and Surrounding Areas in accordance with predetermined criteria and rules. In spite of the increase, the system and our close cooperation with the Consortium ensured that the water was managed based on the **parameters planned in agreement with the Consortium**, and consequently did not impose a significant burden on the consortium treatment plant. Meanwhile, after thorough checks by our laboratory, a little over 5,000 metres cubed of water were discharged into the stream. The variations are, as previously, attributable to differing uses of water connected to production processes.

Figure 12 Destination of water discharges



Analysis and monitoring to ensure the safety of the water released

In addition to the usual laboratory analyses that we carry out on water leaving the company, we have recently introduced a detailed **monitoring system** for both intake and output water. In relation to intake water, we monitor how it is used, overseeing its consumption for various processes and consumption per hour worked. This is the starting point for optimising the use of this important resource. Secondly, we constantly track the water discharged to both the consortium treatment plant and the natural environment, with the aim of promptly recognising any anomalies and acting to take the necessary corrective steps.

We also have an **automatic sampler** for output water which allows the Canton Authority, more specifically the Water, Air and Soil Protection Section (SPAAS) of the Department of the Environment, to carry out cross-checks. These periodic tests will further validate the analyses we carry out internally, making dual comparison possible.

2.2. Environmental Impact

2.2.1. Waste

Figure 13 Composition of ordinary waste

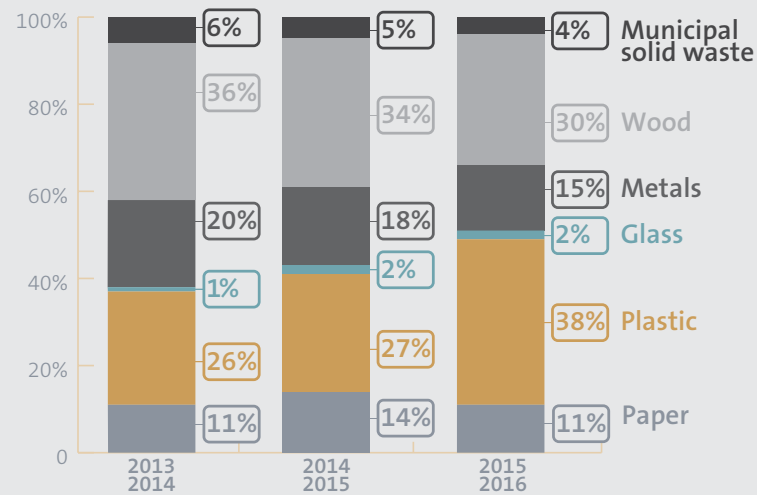


Figure 14 Recycling of ordinary waste

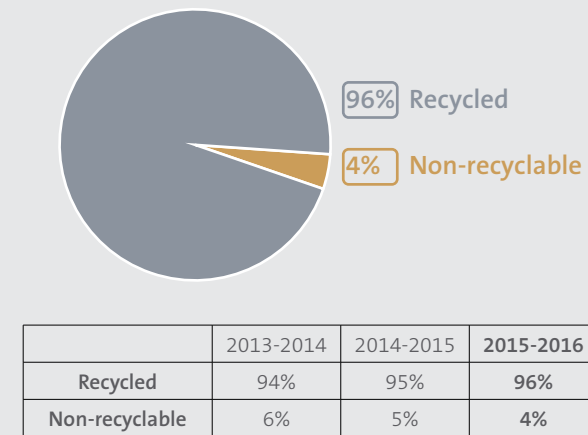
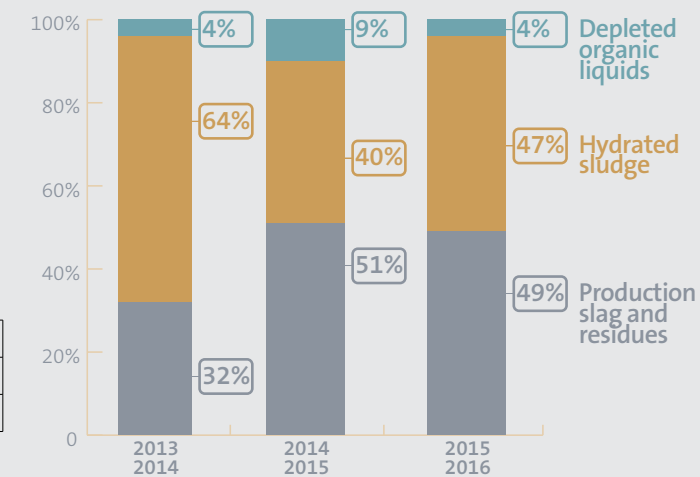


Figure 15 Composition of special waste



During the financial year under consideration, we saw an increase in the total ordinary waste produced, particularly plastic. This is primarily due to various modernisation efforts carried out within the facility. In terms of the percentage distribution of various types of waste, as Figure 13 shows, the waste type that experienced the largest change was plastic, moving from 27% to 38% due to waste materials from the modernisation works, such as various kinds of packaging. The percentages of other materials such as paper, cardboard, glass, metal and wood fell. The percentage of municipal solid waste – i.e. non-recyclable waste – was 4%, also a fall compared to 2014-2015. As Figure 14 illustrates,

« We have a system for storing liquids and chemicals which ensures protection of the soil through the use of tanks and containers created ad hoc. We can also immediately identify any losses and therefore contain possible damage. »

tes, this means that **we recycled 96% of the waste produced**. This is an important sign of the care we take with waste management.

In terms of special waste (waste with particular chemical and physical properties linked to the presence of non-precious metals in it), we also take the greatest care. With the support of authorised waste disposal providers, **this waste can be converted, recycled, recovered or disposed of with complete respect for the environment**. As Figure 15 shows, the percentage of production slag and residues (such as dust and resins from various production processes) moved from 51% to 49%, a fall of 2%, the percentage of hydrated sludge (copper sludge from the refinement process) moved from 40% to 47%, an increase of 7%, and finally the percentage of depleted organic liquids (primarily from the running of the systems) moved from 9% to 4%, a fall of 5%. The change in percentages is linked to logistics: these materials are stored and dispatched to the companies responsible for processing them with varying regularity. Consequently, the timescales under which the shipments are made determine the quantities of the waste which are recorded as outgoing.

Waste sorting is our watchword

In order to recycle as much waste as possible, we **constantly work to raise our employees' awareness** through the use of newsletters and by providing them with the conditions to dispose of waste responsibly and easily. We have a variety of containers for sorted waste collection spread throughout the various areas in the facility, in the offices, the production spaces and the break rooms alike.

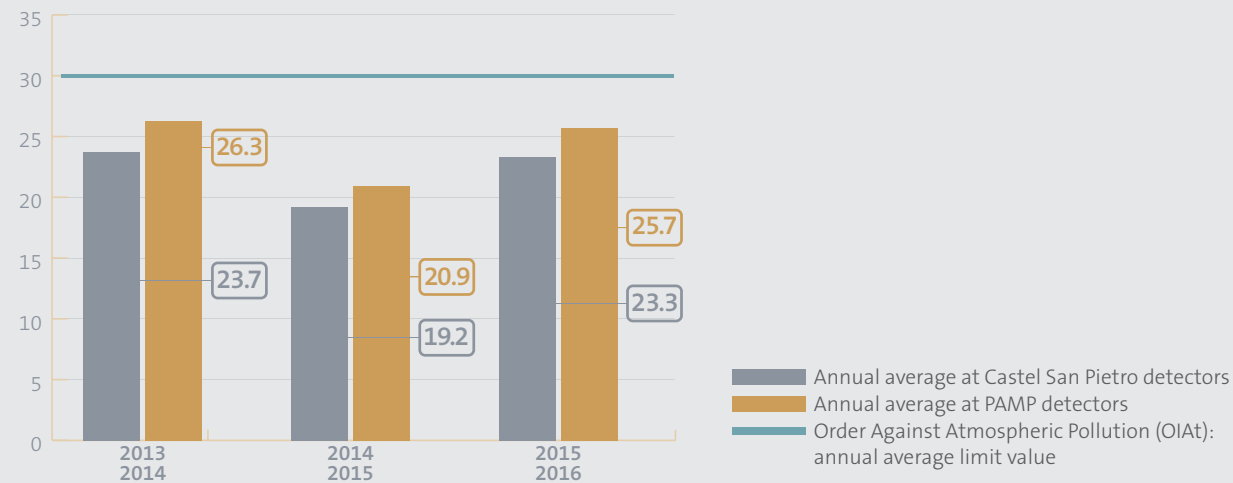
This awareness-raising has had excellent results, as shown by the very high percentage of waste recycled. However, we want to maintain constant improvement so we are leaving nothing to chance, and continue to monitor the situation so that our waste management is as sustainable as possible for both the community and the environment.



Sorted waste collection containers

2.2.2. Atmospheric Emissions

Figure 16 Average NO_x/m³ emission values



During the financial year under consideration, emissions figures, as shown in Figure 16, increased slightly compared to the previous year, to levels similar to those of 2014-2015 – although remaining well below the permitted threshold. The Order Against Atmospheric Pollution (OIAt) sets an average annual limit for nitrogen oxides (NO_x) of 30 µg/m³. The detectors installed in central Castel San Pietro recorded an average annual value of 23.3 µg/m³ (+4.1 µg/m³), while those near PAMP recorded a value of 25.7 µg/m³ (+4.8 µg/m³).

Taking into consideration the measurements taken in the municipality of Balerna, where PAMP does not have any effect, we can see that the average figure there is in fact higher than both the figure detected in the built-up area of Castel San Pietro and the figure detected near our facility. Moreover, a detailed analysis of the data recorded over the year reveals a clear trend: during the summer months, the concentration of NO_x/m³ is much

« The NO_x values recorded in recent years are well below the threshold set by the Order Against Atmospheric Pollution. Among other things, the detected levels show that the proportion of these substances originating from our activities is minimal. »

lower than in the winter months in all three areas considered. Bearing in mind the fact that summer climate conditions favour the dispersion of pollutants whereas in winter it is more likely for nitrogen oxides to stagnate on the ground (with a resulting increase in values detected), it is apparent that the main factors determining the presence of these substances in the air are traffic and the use of fossil fuels for heating.

Our commitment to air quality

We have undertaken various initiatives to monitor and improve the quality of the air we emit into the atmosphere:

- We have installed **vapour washing and extraction systems**;
- We have fitted **probes on the two towers** from which air is emitted. These probes constantly monitor the nitrogen oxide values in the towers, immediately reporting any anomalous concentrations. This proactive monitoring means that we can manage emissions at all times;
- We work closely with the **Water, Air and Soil Protection Section (SPAAS)** of the Department of the Environment;
- We have actively promoted **car pooling** for several years now, providing our employees with practical tools (such as mapping of places where personnel live and a mathematical model to calculate the economic benefits generated by car pooling), and offering incentives to encourage car pooling. The results are very encouraging and there is good potential for further improvement.

In addition, the CO₂ reduction project we referred to in section 2.1.1 Energy includes the installation of an energy recovery system. This will make it possible to heat our facility with electricity and make less use of fossil fuels.

Economic Responsibility

Being economically responsible means managing the company in a way that ensures its stability and generates value for the economic fabric. Particularly in difficult market contexts like today's, this can mean making strategic choices that may affect investments or sponsorships, for example. These measures are often intended to ensure the robustness of the company, preserving jobs, commercial relationships and support for bodies that rely on the company for their existence.

Corporate Social Responsibility (CSR) is a corporate management philosophy that is increasingly taking root internationally. At the Canton of Ticino Chamber of Commerce, we place considerable emphasis on this subject and we are delighted to see more and more local companies getting to grips with this new paradigm and making significant efforts with outstanding results. One of the first to come to prominence in this area was PAMP, a Ticino-based company with a long history, whose business activities undoubtedly have a positive effect on the canton's economy.

Glauco Martinetti,
Chair of the Canton of Ticino
Chamber of Commerce

RESULTS

+10%

Turnover was up 10% compared to 2014-2015.

-6%

Capitalisation fell 6% compared to 2014-2015.

INDIRECT ECONOMIC IMPACT

514

Active suppliers that have issued at least one invoice within the year.

60%

60% of our suppliers (of consumables, machinery or services) are Swiss. Over half of these are based in Ticino.

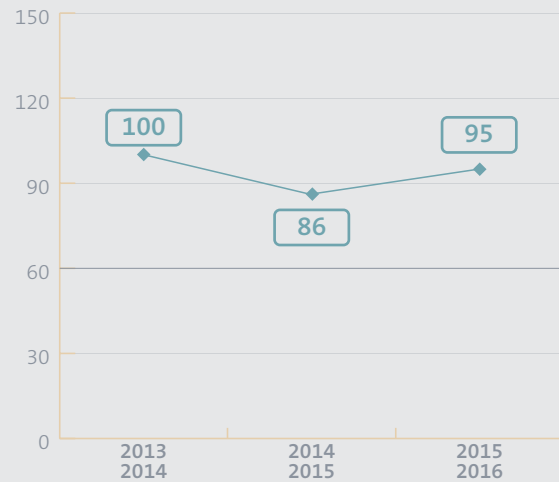
-13%

Sponsorships fell 13% compared to 2014-2015.



3.1. Results

Figure 17 Trends in turnover
(base 100: 2013-2014)

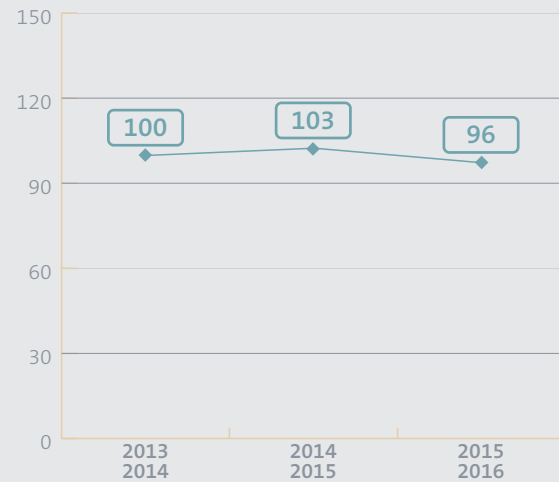


During the 2015-2016 financial year, turnover increased by 10% compared to the previous year (Figure 17). In spite of the widespread market difficulties, we saw an increase in demand for minted products, which led to this increase in turnover.

After several years of constant, significant growth, this year capitalisation fell by 6% compared to 2014-2015 (Figure 18). Where the growth recorded between 2013-2014 and 2014-2015 was due to allocation to reserves of part of the profit earned, the distribution of the 2015 dividend and a reduction in the net result (balance sheet loss) explain the fall referred to above. The financial robustness of the company remains, in any case, assured.

« In a changing market like today's, we are convinced that only prudent management with an eye to the long term can ensure stability for the company and employees, alongside sustainable results. »

Figure 18 Trends in capitalisation
(base 100: 2013-2014)

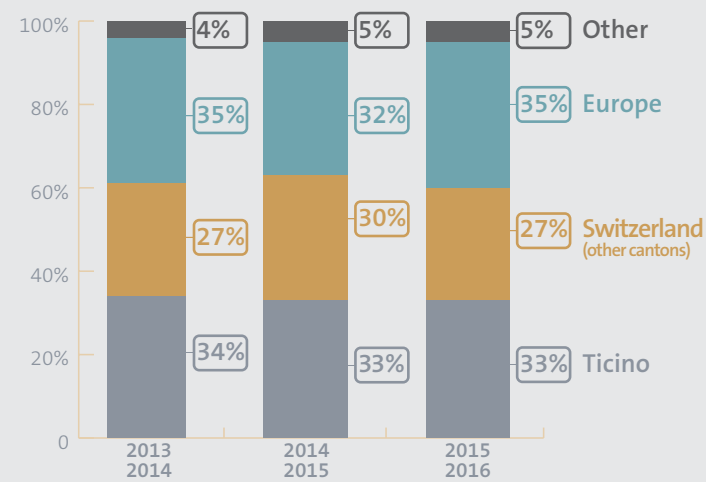


PAMP investment products

3.2. Indirect Economic Impact

3.2.1. Suppliers

Figure 19 Origin of suppliers by geographical area



When we talk about 'suppliers', we mean companies from which we obtain consumables and machinery, as well as partners that provide services (since we receive the metal to be worked directly from our customers). Some minor changes in our suppliers' geographical distribution have occurred, as Figure 19 shows, with the percentage of Swiss suppliers from outside Ticino falling from 30% to 27%, with a corresponding increase in European suppliers (from 32% to 35%). **The percentage of Ticino-based suppliers remained unchanged at 33%.**

The variations noted above are not due to replacements of our active suppliers (i.e. suppliers that have issued at least one invoice within the year), but rather a reduction in their number from a total of 605 to 514. The reduction is due to some of our projects reaching completion and the rationalisation of our supplier numbers.

« 170 Ticino-based firms supplied us with products or services in 2015-2016. We opt for local suppliers whenever possible to generate value in the economic fabric of our local area. »

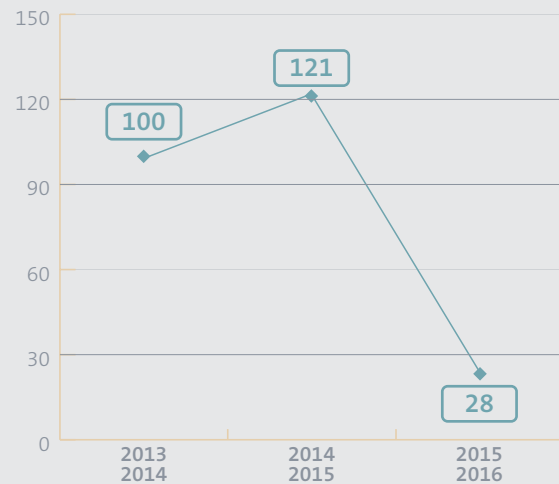
Tangible value for the local economy

An analysis of the location of our suppliers in terms of expenditure yields data similar to those shown in Figure 19 (Origin of suppliers by geographical area). **The percentage of expenditure incurred in Ticino was 36% of the total.** The main items that contributed to the result include purchases of: utilities such as energy, gas and others; materials and services connected to construction work, such as hardware and electrical equipment, and building work; specialist workmanship linked to ironworking and wall-plastering; systems and technology for production and safety; and services linked to staff training. For the remaining 64% expenditure, 31% remained in Switzerland (excluding Ticino), 25% was accounted for by neighbouring Italy, and the remaining 8% was divided equally between the rest of Europe and the rest of the world.

When we choose our suppliers, **we consider geographical proximity a plus**, and if the bid meets our often very specific needs, we favour local businesses. This allows us to support our local economy while at the same time protecting the environment by limiting transport requirements. We also endeavour to build long-term partnerships with our suppliers from which both parties can derive major benefits in terms of synergy and efficiency.

3.2.2. Tax, Investments and Sponsorships

Figure 20 Trends in tax
(base 100: 2013-2014)



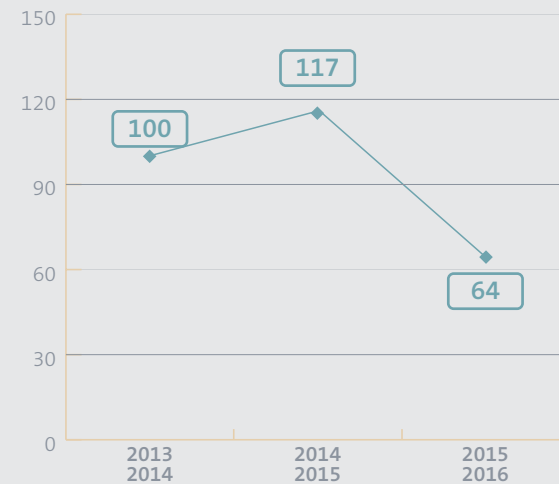
The level of tax that we pay each year essentially depends on the net result recorded during the year and on the company's capital. In 2015-2016, our net result fell due to increased costs, primarily linked to implementation of the ERP (Enterprise Resource Planning) system. As a result of the balance sheet loss recorded, only canton taxes were paid. We therefore saw a 76% reduction in tax compared to 2014-2015 (Figure 20).

Investments in tangible company assets (such as machinery, structural improvements, etc.) fell by 45% compared to the previous

« This year, we limited our investments in tangible company assets, but investments in process improvements required the input of a large number of working hours for implementation. »

financial year (2014-2015; Figure 21). The fall should be interpreted primarily in the context of cost reduction intended to maintain economic sustainability and guarantee the company's stability. Secondly, it must be borne in mind that from June 2015, costs linked to implementation of the ERP system were accounted for, having been amortised as investments in the previous financial year.

Figure 21 Trends in investments
(base 100: 2013-2014)

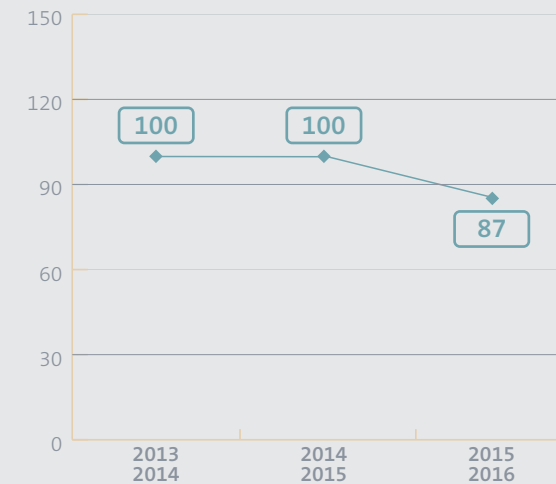


Investment in processes: advantages on multiple fronts

In 2015-2016, we introduced several innovations into our processes. For example, we have restructured so that some activities can be carried out internally, such as taking photographs of our products and manufacturing packaging for some items. This allows us to provide customers with a service of even higher quality. We acquired latest-generation machinery, freeing up our employees from repetitive tasks so that their professional skills can be put to use in activities with greater added value.

We also undertook **further analyses of the water** that we discharge externally, with special recovery and filtration processes for harmful elements that may be present in the product received by us for proces-

Figure 22 Trends in sponsorships
(base 100: 2013-2014)



ing. Although there are no directives on this point in Switzerland to date, we want to make a real commitment to environmental protection through strict controls that go above and beyond current regulatory requirements.

The total value of sponsorships, meanwhile, fell by 13% (Figure 22). Sponsorships of and donations to our longstanding partners (such as Istituto Sant'Angelo di Loverciano school and Associazione Sportiva Castello local football team) were confirmed, however, and remained stable, based on a foundation of continuity and collaboration.



PAMP SA

6874 Castel San Pietro | Switzerland

T +41 91 695 04 50 | F +41 91 695 04 51
info@pamp.com | www.pamp.com



An MKS PAMP GROUP Company