

better.



## Overview of the activities of the Messer Group

Messer Group GmbH (“the Company”), an industrial gases manufacturer, has its registered office in Sulzbach/Taunus near Frankfurt am Main and its postal address in Bad Soden am Taunus. It acts as management holding company and, together with its subsidiaries and affiliated companies, forms the Messer Group (“the Group”)<sup>1</sup>.

From acetylene to xenon, the Messer Group offers a product portfolio that must surely count as one of the most diverse in the market – the Company produces industrial gases such as oxygen, nitrogen, argon, carbon dioxide, hydrogen, helium, shielding gases for welding, specialty gases, medical gases and a wide variety of gas mixtures.

In state-of-the-art competence centers, the Messer Group develops application technologies for the use of gases in almost all branches of industry, in foodstuffs technology, medicine and research and science.

The Group has its own operating facilities in 30 countries. Messer is therefore represented in each of the main European markets (with the exception of the United Kingdom and Scandinavia) as well as in Turkey, China, Vietnam, New Zealand, Algeria and Peru.

In Germany, the Messer Group employs teams of experts that specialize in gas technologies, gas production and distribution. One highly specialized technical center handles applications in areas such as cold grinding, recycling and cryogenics and another is responsible for developments in the area of welding and cutting. The Group’s Technical Center for application processes used in the manufacturing, metallurgy, heat treatment and burner engineering sectors is located in Austria. The Technical Center in France specializes in the development of processes used in the food-processing, pharmaceutical and biotechnology sectors.

<sup>1</sup>A full list of the subsidiaries included in the group reporting entity is provided in the list of shareholdings of the Notes to the Consolidated Financial Statements.

# better.

"If you don't constantly improve, you will fall behind" – the validity of this insight is almost timeless. At Messer, the goal of constantly improving our performance is an integral part of the brand: it features in our mission statement, is a key criterion in personnel development and is inherent to our innovative application technologies.

We are driven by the desire to improve. It impels us to test solutions which basically work well already. It makes us curious about things that often go unnoticed. It is a statement of the fact that satisfaction may be gained precisely from not being content with what you have achieved.

On the one hand, we use this energy to give our company lasting independence and success. We employ it in order to create advantages for our customers with regard to economy, efficiency, quality and the preservation of resources.

On the other hand, our aim is to integrate issues such as sustainability and responsibility into everyday processes to an even greater extent. An example of this is the energy consumption of our air separation units: in just five years, we have been able to reduce the energy factor, which expresses electricity consumption in relation to gas yield, by 16 per cent for the ASUs in Europe.

But we also want to keep on getting better in areas that have no direct influence on the success of our company. Messer is committed to a large number of social projects – some directly and some through the personal involvement of our staff.

In 2013, we continued to improve in many respects. We are proud of this success, which is due mainly to our committed team. At the same time we know that this only represents a few further steps along the way to getting better and better.

## Our values

24



## Personnel development

32



## Business activities

38



## Safety

42



## Environmental and climate protection

46



## Technical innovations

56



## Turning good into better

62



## Social commitment

66

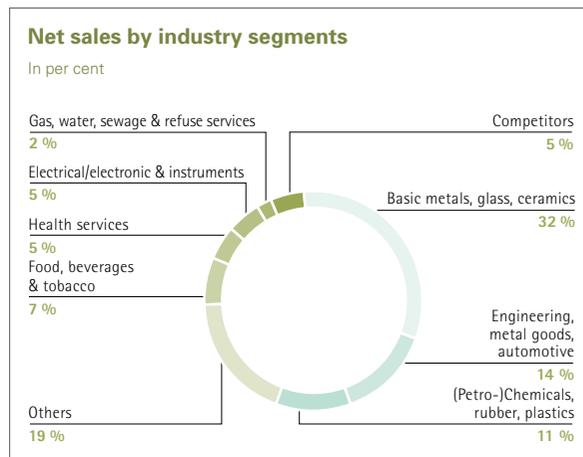
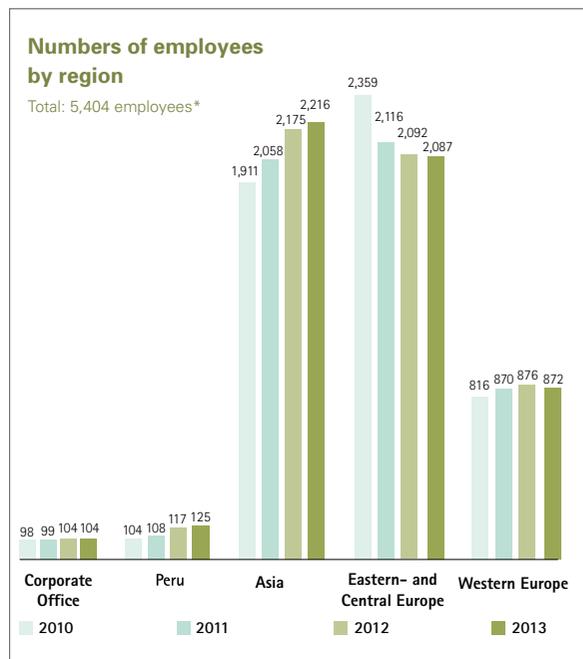
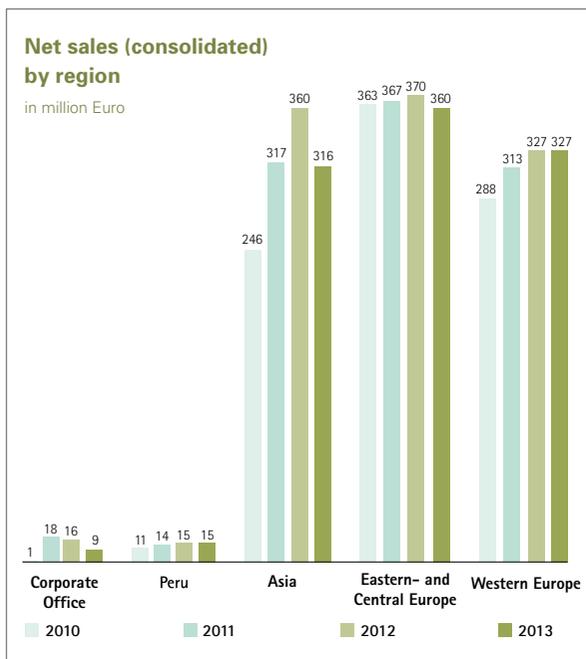


# Key figures of the Messer Group at a glance

As of 31.12.2013

		2010	2011	2012	2013
Net sales	in million Euro	909	1,029	1,088	1,027
EBITDA	in million Euro	207	241	237	231
EBITDA margin	in per cent	23	23	22	23
Investments	in million Euro**	168	191	184	197
Employees*		5,288	5,251	5,364	5,404

\* contractual employments \*\* incl. IFRIC4



# Contents

Overview of the activities of the Messer Group	3
<b>better</b>	<b>4</b>
Key figures of the Messer Group at a glance	6
We make gases out of air	8
Foreword by Stefan Messer	10
Management Board and Supervisory Board of the Messer Group	14
Supervisory Board Report	15
<b>Corporate Responsibility Report of the Messer Group GmbH</b>	<b>17</b>
Commitment to sustainability	19
Our values	24
Personnel development	32
Business Activities	38
Safety	42
Environmental and climate protection	46
Technical innovations in our core sectors	56
Turning good into better	62
Social commitment	66
<b>Group Management Report of the Messer Group GmbH</b>	<b>71</b>
General Information on the Group	72
Report on economic position	81
Events after the end of the reporting period	90
Outlook	91
Report on opportunities	94
Risk report	96
Risk management	100
Consolidated Balance Sheet	102
Consolidated Income Statement	103
Consolidated Cash Flow Statement	104
Messer World	106
The Messer Group worldwide	114
Imprint	115

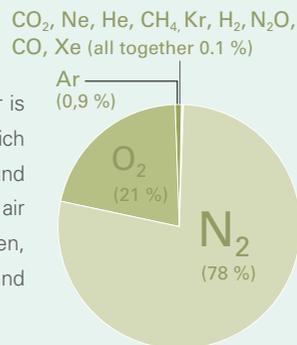
## We make gases out of air

### What are industrial gases?

Industrial operations require oxygen, nitrogen, argon, xenon, neon and krypton, along with carbon dioxide, acetylene, hydrogen and helium, and a wide variety of gas mixtures. At Messer we call these gases **Gases for Life**. They are produced in large-scale industrial plants and are just as important as water and electric power for many manufacturing processes which make everyday products.

### What is air?

What we generally refer to as air is a mixture of different gases which make up the atmosphere around our planet. For the most part, air consists of nitrogen and oxygen, plus a small quantity of argon and traces of other gases.

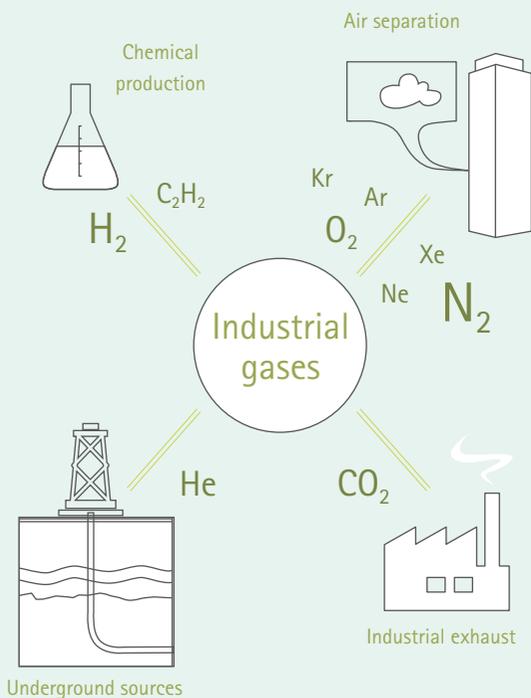


### Where do they come from?

Oxygen, nitrogen, argon, xenon, neon and krypton are produced from the air. Carbon dioxide is primarily collected from the exhaust of industrial operations and cleaned. In some cases it is also produced from natural underground sources. Hydrogen and acetylene are produced chemically. Helium is produced from underground sources.

### How are gases produced from air?

In order to produce these gases, we use air separation units which can reach 60 metres high or more. Inside them, a physical process takes place which separates the air into its components. That process, which is also known as low-temperature rectification, basically works like this:



Air is

- filtered (dust is removed) and compressed to about 6 bars
- pre-chilled with cooling water
- dried and stripped all of CO<sub>2</sub> in a molecular sieve
- cooled below -175 °C and liquefied in the main heat exchanger
- separated into liquid or gaseous oxygen and nitrogen in a separation column
- also separated into liquid argon

The gases are stored in tanks in liquid form.



## How do Gases for Life reach the customer?

In smaller quantities, gases are stored in gas cylinders. When industrial gases are needed in large quantities, we install tanks at our customer's plant. Those tanks are used to store gases such as oxygen, nitrogen, argon or CO<sub>2</sub> in liquid form. Road or rail tankers are used to transport the gas from the production plants to the customer.

Major industrial concerns such as steel works or chemical companies need so much gas that they often have an air separation unit operating on their grounds. Sometimes pipelines also supply gases to one or more major facilities, such as in industrial parks.

The greater the quantity of gases which a consumer needs, the shorter the distance should be between the customer's site and the location where the gases are being produced. Generally speaking, gases are produced where they are needed: close to densely developed industrial areas.

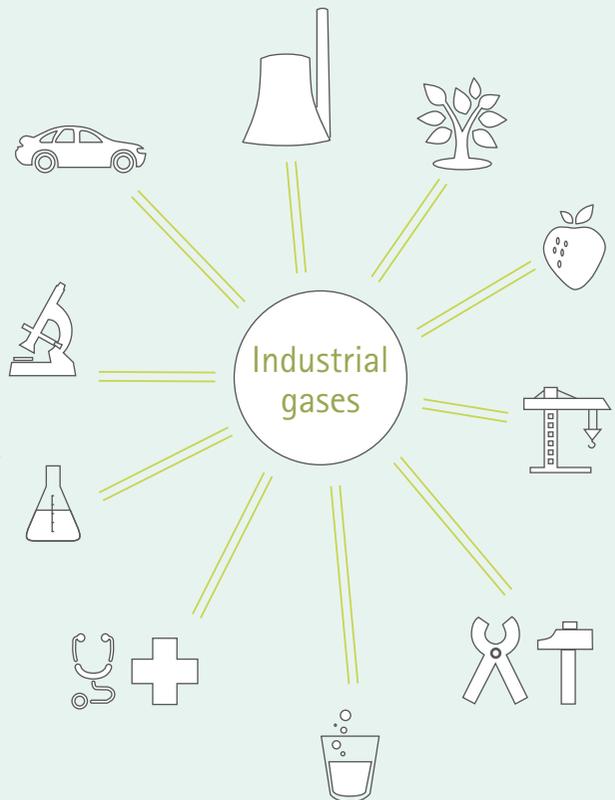


## Who needs Gases for Life?

Industrial gases are used in a variety of purity grades and for a wide range of purposes. Including as food gases and medical gases.

Industrial gases can make production processes safer and more cost-effective and improve product quality. They often contribute to environmental protection. Some processes and applications would even be inconceivable without the chemical processes of gases.

Typical user sectors include the automotive industry, the steel industry, environmental engineering, food and beverages, construction, metallurgy, glass and ceramics, medicine and pharmaceuticals, the chemical industry, and research and development.



## Foreword

### Dear Readers,

This Annual Report for 2013 is special for the Messer Group as its publication comes exactly ten years after our independent group of companies was formed. We have integrated a Corporate Responsibility Report for the first time this year, which sets out our values, our strategy and our priorities for sustainable and socially responsible entrepreneurship.

Dynamic, socially responsible entrepreneurship has been the guiding principle for our responsible conduct since Messer was founded in 1898. Today, integrating a company into the society is not necessarily a more extensive exercise than it was a hundred years ago, but specific aspects of responsibility now need to be given full consideration: for the good of mankind, it is necessary to counteract the damage done to our environment by industrialization and globalization and to develop technologies which minimize the negative impact on the environment or even benefit it. This includes efforts to slow down or even stop climate change. Safe handling of our products as well as healthy workplaces for our employees also remain as important as ever for Messer. Our Corporate Responsibility Report looks in greater detail at all aspects of sustainability that are important to us and our stakeholders.

We can look back on a very successful past: between 2004 and 2013 we managed to double our volume of business, and consolidate and expand our regional and product-specific market positions. This required considerable financial resources, the bulk of which was drawn from our generated cash flow. We are continuing to focus on growth and diversification in Asia, and on improving our efficiency in Europe. To this end we have made considerable investments in expanding our production and distribution infrastructure in the last few years. We now want to use our strengths as a family business and intensify our good contacts with the European SME sector.

As a family business we are not subject to daily monitoring by the capital market and are therefore able to make longer-term plans and arrangements. We do not have to pay out annual dividends either, instead being able to use our profits to develop our company in a focused and determined way. We have many good ideas and a competent and committed team which translates our visions into long-term business in an unbureaucratic and highly effective way. We have thus once again been able to implement a large number of projects and initiate new ones in the year under review.

Having received all the necessary approvals, we can now supply medical gases to hospitals and home-based patients in France.

In Germany, we will expand our gas filling and distribution plant in Siegen by adding the filling of specialty gases to the portfolio. To this end we have reacquired the site – along with the relevant buildings – on which we used to have operations in the past. We have also successfully supported the construction of a new underground tunnel in the middle of our capital Berlin by freezing the ground with liquid nitrogen in order to stabilize it during the works.

Our business in Spain is stable in spite of the country's deep recession, and we are delighted that a new liquefaction plant for air gases has gone into operation at El Morell, with a daily output of 450 tonnes.

Our Swiss affiliate ASCO has sold its first two HTC-CO<sub>2</sub> units. This new technology involves the use of an energy-efficient absorption process for recovering CO<sub>2</sub> from waste gases with a low CO<sub>2</sub> concentration.

Our subsidiary in Austria has been technologically updated with numerous individual measures. The modernization and standardization of the filling facility for specialty and industrial gases as well as the start-up of a new filling plant in Tyrol were the highlights of this extensive overhaul and expansion. A new air separation unit has also gone into operation at the headquarters in Gumpoldskirchen. The gases produced there will in future also be used to supply neighbouring countries with liquid gases. The recommissioning of our residual gas disposal facility, the only one of its kind in Europe, is at the preparatory stage.

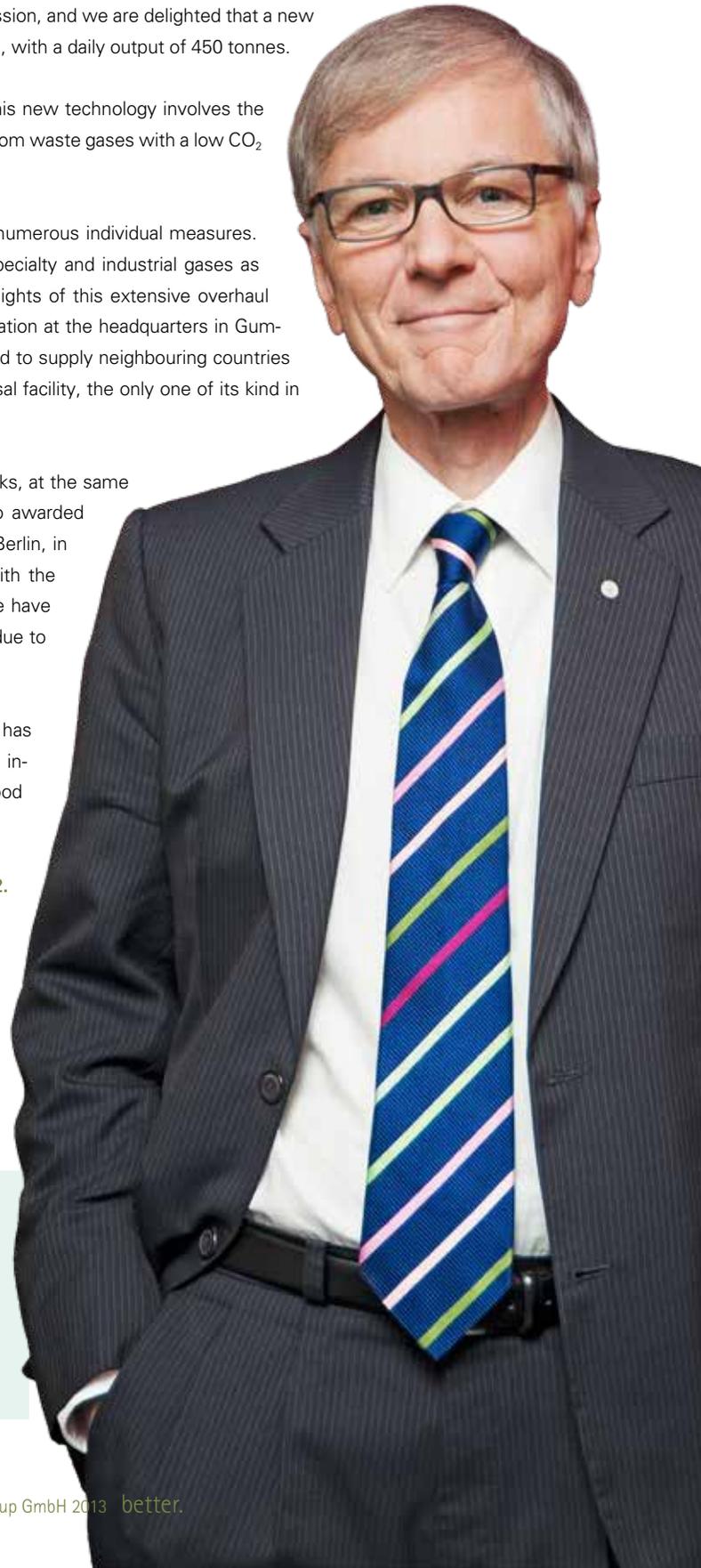
In Poland, we have sold an oxygen generator to the Tur glassworks, at the same time securing a long-term management contract. We were also awarded a contract for a major soil freezing project, similar to the one in Berlin, in connection with the construction of a metro line in Warsaw. With the capacities of our air separation unit in Rybnik fully maximized, we have decided to build a second, almost identical, facility in Turek. It is due to go into operation in the first quarter of 2015.

Our largest nitrous oxide plant at Ostrava in the Czech Republic has been given a comprehensive overhaul and has had its capacity increased to 1,200 tonnes a year. We supply our customers in the food and health sectors in Central Europe and Germany from here.

Read more on page 12.

### Stefan Messer

As owner and CEO of the largest owner-managed industrial gases company, Stefan Messer is the driving force behind the strategies for the future.



Together with our partners in the Baltic States and Ukraine, we have begun to export liquefied air gases to the St. Petersburg area from our new plant in Estonia. We have expanded our business in Lithuania through the acquisition of a local gas distributor. At our Kharkiv site in Eastern Ukraine, we have comprehensively modernized our gas filling plant and shut down the old gas production facilities.

Following the integration of a gas filling plant in Tirana, Albania, which we acquired from a competitor, we have been able to upgrade and expand it to include the filling of specialty and medical gases.

In the Southeast Europe Region, we have successfully completed many projects which further strengthen our independence, such as the construction of new filling plants in Bulgaria and Romania, the commissioning of nitrogen generators and membrane units in Serbia and Hungary as well as the modernization of our plants in Croatia and Slovenia.

We have successfully continued our expansion and diversification strategy in China. New air separation and liquefaction plants have gone into operation in Hunan, Jiangsu, Sichuan, Chongqing and Yunnan provinces. To expand our specialty gases business, we have set up Suzhou Messer, which is now building a new plant in Jiangsu province. We are also going to enter the CO<sub>2</sub> business and are currently pursuing projects in several provinces.

In Vietnam, too, we have further expanded our business activities, commissioning our second air separation unit on schedule for our customer Hoa Phat in the north of the country. Together with the German-Vietnamese Chamber of Commerce, the German Society for International Cooperation (GIZ), the German and Vietnamese Governments and family enterprise B. Braun Melsungen, we have started providing dual training based on the German model at our plants in Vietnam. We want to use this to train young people for technical trades in particular, such as mechatronics technicians, providing them with qualifications and long-term prospects in our company.

In Peru, we now have Good Manufacturing Practice (GMP) certification, which is indispensable for the expansion of our medical gases business.

The economic environment, which is particularly weak in Europe, has had an impact on the business development of the MEC Group. Thus, unfortunately, the sales figures are below our expectations. Only since September has there been a slight market recovery. We have used the time to develop new technologies, further streamline our organization and optimize business processes. Among other things, we have thus transferred production of Castolin products such as our wear plates from Germany to our plants in Poland and Austria, consolidated and upgraded our CastoLab centres worldwide and introduced a new high-performance coating technology with a laser welding process.

With the acquisition of British company Monitor Coatings, Castolin Eutectic has expanded its technical and international offering in the area of coatings for customers in the oil, gas, steel, energy and aviation industries.

Messer Cutting Systems has successfully commissioned its new plant in India. Messer Cutting Systems now has five production facilities for cutting systems in the USA, Brazil, Germany, India and China. This year's "Schweissen und Schneiden" trade fair in Essen provided fresh impetus and we hope that the relatively good order situation that currently exists in the USA and China will now spread to Europe as well.

With the acquisition of the remaining shares held by local partners in the USA, the BIT Analytical Instruments Group has successfully completed the consolidation of its three American companies, Source Scientific in Irvine, BIT MedTec in San Diego and BIT Inc in Boston. Several new development and manufacturing contracts for technologically sophisticated diagnostic equipment, such as for Beckman Coulter and Rohm, ensure a secure future for BIT.

The course our group of companies has followed so far is paying off. After the listed industrial gases and welding firms, Messer is the industry's largest family company. Our long-term goal is to maintain this position and continue to build on our local and product-specific strengths.

With the launch of our Junior Circles as part of the new Messer Academy in both groups of companies, we are supporting the managers of tomorrow and creating a communication platform for sharing knowledge and experience. The aim is to build up a resource of some 200 young managers in a targeted way through training and information seminars.

In September 2013, we held a worldwide "Safety Day". An unannounced practice alarm was set off simultaneously at every Messer Group location, following which safety instruction meetings were called at each location. We want to use our "This was not planned" campaign to further raise our employees' safety awareness and improve our accident statistics with the aim of "zero accidents".

Our new "Gases for Life" slogan is intended to make our invisible products tangible for everyone. Industrial gases are used everywhere in our lives. For example, they help to make manufacturing processes safe, to freeze, chill, package and transport food, make beverages sparkle, purify wastewater, measure emissions, recycle substances and produce steel, glass and ceramics in a more environmentally friendly way.

Thank you for your support, loyalty and trust.

We ask that you remain true and well-disposed towards us and that you join us in discovering the fascinating world of gases, which improve our lives.

Kind regards



Stefan Messer

## Management Board and Supervisory Board of the Messer Group

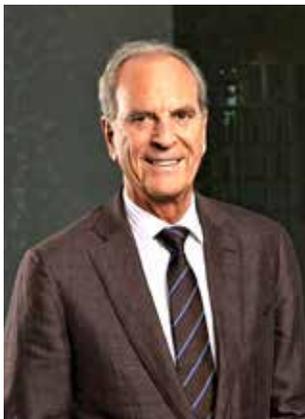
Our aspiration to become better and better is both demanded and supported by the Management Board and the Supervisory Board. The Supervisory Board has continued to fully support the necessary measures in the past financial year, thus making a crucial contribution to the positive development of the Messer Group.

### Supervisory Board of the Messer Group:

Dr. Jürgen Heraeus, Chairman  
Dr. Werner Breuers  
Dr. Bodo Lüttge  
Dr. Karl-Gerhard Seifert  
Dr. Nathalie von Siemens  
Peter Wilhelm Storm van's Gravesande

### Management Board of the Messer Group:

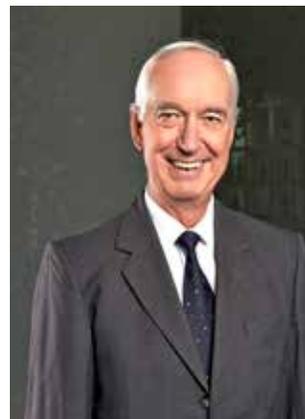
Stefan Messer, Chief Executive Officer  
Dr. Hans-Gerd Wienands, Chief Financial Officer  
Dr. Uwe Bechtolf, Strategy, Executive Vice President  
Accounting & Controlling  
Johann Ringhofer, Executive Vice President  
Engineering & Production  
Adolf Walth, Executive Vice President  
Sales & Marketing



Dr. Jürgen Heraeus



Dr. Werner Breuers



Dr. Bodo Lüttge



Dr. Karl-Gerhard Seifert

## Supervisory Board Report

During the reporting period, the Supervisory Board has performed the tasks incumbent upon it in accordance with the statutory provisions and the articles of association by providing support and advice to the Management. The Management has reported to the Supervisory Board, both verbally and in writing, concerning the performance and situation of the company within the framework of regular meetings on April 16, 2013 and November 13, 2013. Furthermore, the Supervisory Board was informed about important business transactions and decisions. Legal transactions requiring the Board's approval were submitted to the Board for its decision. The Supervisory Board has satisfied itself in the plenum that the bookkeeping, the annual financial statement of Messer Group GmbH and the Group accounts for the year ending December 31, 2013, as well as the management report from Messer Group GmbH and the Messer Group, have been audited and certified by the auditing company KPMG AG Wirtschaftsprüfungsgesellschaft, Essen. The audit reports were discussed at the Supervisory Board meeting on April 10, 2014 with the assistance of the auditors. The Supervisory Board had no objections and expressed its agreement with the auditor's results.

The Supervisory Board would like to thank the Management as well as all employees of the Messer Group for their efforts and successful work in the 2013 financial year.

Bad Soden, April 10, 2014  
Supervisory Board

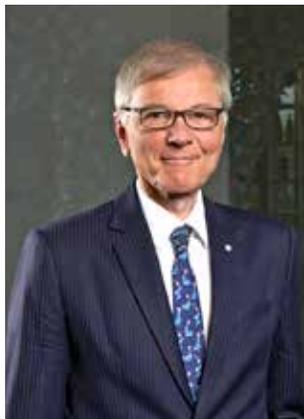
Dr. Jürgen Heraeus, Chairman



Dr. Nathalie von Siemens



Peter Wilhelm Storm van's Gravesande



Stefan Messer



Dr. Hans-Gerd Wienands



# Corporate Responsibility Report

of the Messer Group GmbH 2013

This Corporate Responsibility Report is structured in accordance with the requirements of GRI 3.1. It provides information about the sustainable and responsible business activities of Messer Group GmbH and the consolidated subsidiaries in which Messer Group is a majority shareholder, as well as the joint ventures in which Messer Group has a management role.



GRI hereby confirms that the annual report of Messer Group satisfies Application Level B in accordance with the G3.1 Guidelines. The detailed GRI Content Index, which shows the location of the disclosures required by GRI, can be downloaded from the following website: <http://annualreport.messergroup.com/nachhaltigkeitsbericht/gri/index.html>

## Commitment to sustainability

The Management of Messer Group GmbH is committed to acting in a responsible and sustainable manner as part of its economic and social integration into society.

### **Stefan Messer, owner and Chief Executive Officer:**

“We recognize and accept our social responsibility towards our employees and society in different areas: the safety of our employees, customers and partners when using our products is our number one priority. We are also committed to protecting our environment and climate by constantly improving our processes and focusing our development on technologies that make our customers’ production processes more efficient and resource-friendly. Messer has a presence in thirty countries. We respect the cultural differences as well as rights in the regions in which we operate. We contribute to community life and education in these regions through the provision of wide-ranging support.”

### **Dr. Hans-Gerd Wienands, Chief Financial Officer:**

“We conduct our business on a sustainable basis and guarantee our autonomy and independence through forward-looking investments. This enhances our customers’ and financial partners’ confidence in us and gives our employees long-term security. We operate with maximum transparency vis-à-vis our stakeholders. Responsible behaviour is an important factor when choosing a business partner. We take this into account by viewing corporate responsibility as a strategic matter and integrating it into our processes.”



Stefan Messer

Dr. Hans-Gerd Wienands

## Strategic integration of corporate responsibility

A process for managing social and environment-related issues was drafted in a Messer Group GmbH management meeting on 20 February 2014. This process is based on a materiality analysis which depicts the importance of core issues in the areas of environmental and climate protection, safety, business activities, personnel development, values and society. The core issues were assessed both by the management and staff of the Messer Group and by its stakeholders.

On the basis of this analysis, our focus in this publication is on the highly relevant issues and spheres of business responsibility and of presenting our objectives and measures as well as the successes already achieved. Responsible behaviour has been an integral part of our mission statement since the formation of Messer Group GmbH and has always been put into practice when dealing with employees, business partners and our social and societal sphere as well as in relation to the environment. We set ourselves relevant goals and measure our performance in attaining them. We report on our progress every year. We endeavour to do better all the time, not just in our activities related to sustainability and responsibility, but also in terms of our corporate responsibility reporting.

We support our customers' aim of ensuring the sustainability of their own activities and supply chains. We therefore also report to contracted third parties, e.g. EcoVadis or the 'Carbon Disclosure Project', at our customers' request.

# Materiality matrix



- ▲ Values
- Business/company
- ✿ Environmental and climate protection
- \* Safety
- ◆ Employees
- Society

## Our stakeholders

The Messer Group promotes and takes advantage of regular contact and exchange with its stakeholders. The main ones are the employees, customers, industrial firms and scientific organizations, the media, our neighbours, the broad public and the Internet community. We have occasional contact with non-profit organizations as well as governmental and non-governmental organizations.

The assessment of our core corporate responsibility issues reflects the management of the Messer Group with its employees, information from customer surveys and media response analyses.

As an owner-managed company, our cooperation is based on trust, honesty, transparency and open communication. We are committed to these values so that our customers, business partners and the public rightly perceive our company as a reliable and trustworthy organization.

### Communication with our stakeholders

Communicating with the stakeholders is a task which is incumbent upon all employees of the Messer Group and will enable them to carry out their activities and responsibilities in the area of management.

The job of the Corporate Communications department is to define and implement a general internal and external communications concept within the Messer Group. It also includes all activities in the area of corporate communications and corporate branding as well as communication by Messer Group GmbH. The Corporate Communications department develops a uniform understanding of the Messer Group, our identity and origin, our products and processes as well as our future and strategy – both for internal and public use. To this end, this corporate department supports the management as well as the sales and marketing departments of the local Messer organizations in their efforts to achieve the business objectives through suitable means of information and communication.

### Opportunities for dialogue through surveys

We regularly analyze customer satisfaction, the Messer brand's reputation scores and the media response. Some 1,000 customers who took part in customer surveys in Europe in the last two years consider the quality of the gases, the quality of the logistics services, safety concerns and cost-effectiveness to be important. Messer's performance on these points is measured, both internally using suitable KPIs and externally on the basis of satisfaction surveys. On average, customer satisfaction is high; the majority of customers are loyal to the company and some 80 per cent are prepared to recommend Messer to others. In line with procedures set out in ISO 9001, action plans aimed at improving weaknesses identified locally are developed, implemented and communicated to the customers.

The latest reputation survey of approximately 1,000 people in Germany, which was carried out by an independent institute, showed that 13 per cent of those surveyed by telephone said they liked Messer, while zero per cent did not. The media analysis yielded 5,831 publications in online and printed media, all of which were positive and provided an accurate picture of our business activities.

### **Dialogue via the Internet**

The Messer Group uses various channels on the Internet to provide stakeholders with the targeted information and contact details they expect. Messer uses the corporate and country websites to provide information on products and applications and the companies, as well as relevant news for the press and public. Messer has also been publishing a microsite every year since 2008, which features information on the annual accounts. Furthermore, Messer has launched "Gasesforlife.de", a rich source of information on industrial gases and their use. "E-Technology" websites offer users access to detailed process information as well as direct contact with our experts. Messer also offers information to the broad public through social networks, where anyone can contact the company.

# Acting on the basis of clear, corporate values is more than a philosophy for us – it makes us strong.

Customer and employee orientation, responsible behaviour, corporate responsibility as well as trust and respect are firmly embedded in the Messer Group's mission statement.



We focus on integrity, loyalty and open communication in order to motivate our employees to think in an entrepreneurial way.

The condensed mission statement reads:

Messer is an independent and owner-managed family company producing industrial gases with a focus on Europe and China.

We act sustainably to meet the needs of our customers in accordance with our collective responsibility for people, progress and the environment.

Read more about this starting on page **26**.

**Owner and CEO Stefan Messer's personal involvement in many bodies connected to our industry promotes integrated action by companies.**

Our employees worldwide are also actively involved in industry associations and organizations, as well as supporting research projects and maintaining contact with industry specialists.

Read more about this starting on page **27**.



In 2013, many companies in the Messer Group received awards in the areas of safety, environmental protection, transparency and business success.

Messer received the awards in Europe and China.

Read more about this starting on page **28**.

**Sandrine Gueguen**, joined Messer in 2002. Sales Assistant Sales Department IDF & Normandy, Messer France, France.



**Cynthia Lochmann**, joined Messer in 2000. Sales Assistant Sales Department IDF & Normandy, Messer France, France.

# Our values

## Specific strengths

Messer sees its strength in being the largest owner-managed industrial gases supplier in the world. Messer is seventh in the world rankings. The market leaders are all listed companies. Messer's primary objective is to increase profits in a sustainable way rather than maximizing profit in the short term. Like its competitors, Messer cannot expand its product portfolio, which ranges from acetylene to xenon. Messer therefore constantly endeavours to optimize its product range with services and high-quality technical equipment in what is a fiercely competitive market. Messer focuses on the individual requirements of its customers and helps them strengthen their competitiveness and efficiency. At the same time, we focus on technologies that protect our environment and climate.

## The company's mission statement

The principles enshrined in the Messer Group's mission statement include customer and employee orientation, responsible behaviour, corporate responsibility as well as trust and respect. Values such as integrity, loyalty and open communication provide a solid foundation in relation to the motivation and commitment of our employees.

### **Genesis of mission statement**

Ever since Adolf Messer founded the company in 1898 in Frankfurt/Main, long-term independence, excellence in products, research and development, entrepreneurial flair in our staff and social responsibility for people and the environment have been important pillars of the company's success.

When he founded the new Messer Group GmbH in 2004, Stefan Messer stimulated a discussion of values within the company. This led to a company mission statement a year later, which was signed by all the executives in the Dubrovnik Agreement. Messer's strategy is based on the company mission statement, consisting of a vision, a mission and company values. Each Messer Group subsidiary has implemented the vision, mission, values and strategic guidelines in its business and taken its own measures aimed at satisfying the guidelines at various levels and ensuring business success.

## Our brand: "Messer – Gases for Life"

In contrast to many other companies and our competitors, the Messer company name is not a made-up name. It is the Messer family name, which gives the company and its products a special identity and importance as a family company. The "Gases for Life" company slogan was introduced in 2011 and has been an integral part of the Messer brand ever since. "Gases for Life" is intended to demonstrate the diversity of the products and the responsible behaviour of Messer as a family company. Through an international advertising campaign, we want to show and explain to customers and the general public where gases are hiding as invisible helpers. The campaign, which also includes a website and the "Gases for Life" customer magazine, is aimed at achieving long-term competitive advantages through emotional branding.

## The owner's personal involvement

Stefan Messer has wide-ranging commitments to every aspect of the industrial application of gases and to general economic issues, including:

- Chairman of the external trade committee of the Frankfurt/Main chamber of commerce (IHK)
- Member of the general assembly of the Industry group at IHK Frankfurt/Main
- Vice president of the EIGA (European Industrial Gases Association)
- Member of the board of IOMA (International Oxygen Manufacturers Association)
- Member of the European Road Safety Charter action group
- Member of the board of the German Welding Society (DVS)
- Honorary consul of the Republic of Slovenia for the consular district of Hesse, Rhineland-Palatinate and Saarland

## The company's involvement

Messer Group is a member of the European Industrial Gases Association (EIGA). The association, which is based in Brussels, represents almost all European companies which produce and sell industrial, medical and food gases. The association members work together to achieve the highest possible safety and environmental standards in the production, transport and use of gases. At the beginning of each working meeting organized by the EIGA, compliance with the "EIGA anti-trust meeting rules" is stressed.

Messer Group is a member of the German Welding Society (DVS-Verband e.V.). DVS is a non-profit-making, technical-scientific association based in Düsseldorf. The organization's aim is to promote welding and allied processes among and beyond its members. Messer employees are involved in expert committees, support research projects and establish and maintain contact with other highly qualified industry professionals.

Our subsidiaries are involved in various industrial associations at a local level.

## Awards and commendations

Messer received awards from various organizations in 2013:

Messer Slovenija d.o.o. received the Excellent Small & Medium Enterprise award from the Slovenian Chamber of Commerce in cooperation with the renowned COFACE Slovenia Credit Rating Agency.

At the klima:aktiv symposium on 25.11.2013, Messer Austria GmbH was awarded the klima:aktiv certificate by the Austrian environment ministry for its exemplary commitment to energy efficiency.

Messer Ibérica de Gases S.A. received the Premium SEGURIDAD FEIQUE award from FEIQUE (Spain's chemical industry association).

This award is given to chemical companies with more than 50 employees and a year of accident-free working.

Elme Messer Gaas A.S received the Best Wholesaler 2013 award from Äripäev business magazine at the annual trade conference on 09.10.2013.

Messer Polska Sp. z.o.o. received a safety award for an accident-free year from the Polish Foundation for Technical Gases on 19 September 2013.

In June 2013, Messer Hungarogáz Kft was given an award by the European Industrial Gases Association (EIGA) as the company with the lowest loss of working hours due to accidents in 2012 in "EIGA Category 3".

In June 2013, Messer France S.A.S. received the EIGA Safety Award for five years of accident-free working at its Folschviller site.

Messer Mostar Plin d.o.o. (Bosnia-Herzegovina) received the gold "EIGA Safety Award" for 15 years of accident-free operation in June 2013.

In September 2013, Sichuan Pangang Messer Gas Products Co., Ltd (China) was awarded 23rd place out of the Top 50 privately run companies in Panzhihua.

In November 2013, the company received the Panzhihua City Advanced Unit Award for open, transparent and democratic management.

In October 2013, Wujiang Messer Industrial Gas Co., Ltd (China) was awarded a commendation as a progressive company in the area of transporting hazardous substances and goods by road.

In 2013, Chengdu Chenggang Messer Gas Products Co., Ltd (China) was awarded a commendation as a progressive company in the area of safety management in Qingbai Jiang.

Valentin Ilievski, Managing Director of Messer Tehnoplina/Messer BH Gas in Bosnia-Herzegovina, received the Najmenadžer 2013 award (Best Manager of the Year 2013) from EVROPSKO UDRUŽENJE MENADŽERA „BH MENADŽER“ Zenica on 14.12.2013.

# Mission Statement

## Our vision

Messer is an important industrial gases group in its core markets of Europe and China. Messer is and will remain an independent family-run business. We think and act decisively for a long term and measure ourselves by our sustained success. Together with our partners and associated companies in the field of wear, fusion, and cutting technologies as well as precision instrumentation we develop synergies and meet our customers' needs expertly, reliably and with a flair for innovation. This is what makes us the first choice for our customers and employees.

## Our mission

As an owner-managed family business with a rich tradition we are focused on the future whilst taking into account the different conditions in our existing markets. We also use our experience and expertise to building up our position in new markets. Ranging from acetylene to xenon we offer our customers a wide range of technical and medical gases and food and specialty gases. Our product range is completed by our excellent services and state-of-the-art technical plants and equipment. In our highly modern technology centers we work together with our customers to develop application technologies for the use of gases in almost every industry, in food technology, medicine, science and research. Our efficient and dedicated employees, our flexibility and the closeness we feel to our customers in local markets makes us their preferred partner. Through entrepreneurial flair, farsighted thinking and the continuous improvement of our processes, we create added value for our customers and so secure our mutual success in the long term. Solid finances and fair profits guarantee our independence and support sustainable growth.

# Our values

## Customer orientation

We are focused on the individual requirements of our customers and help them to improve their competitiveness and their performance.

## Employee orientation

We train, develop and promote motivated and efficient employees with integrity. We expect our employees to be resourceful and responsible team players.

## Responsible behavior

We take our social responsibilities towards our employees and to society very seriously:

- **Safety:** we are committed to the safety of our staff and the safe production, handling and use of our products.
- **Health:** we set working standards that ensure sound health and well-being for every individual.
- **Environment:** as a member of the wider society, we are committed to protecting the environment.

## Corporate responsibility

By responsibly managing our resources and applying the talents of our employees we are increasing the worth of our company in the long term.

## Excellence

Our actions are based on technical expertise, innovation, flexibility and the ability to make quick decisions.

## Mutual trust and respect

We believe that cooperation is based on trust, sincerity, transparency and frank communication. We respect and abide by the culture and social customs of the countries in which we work.

The aim of our personnel development is to offer optimal conditions for motivated and skilled working.



2013 saw the launch of the Academy Messer Group. This supplements our systematic personnel development with a variety of training opportunities and expert talks.

The concept of the Academy's "Junior Circle" consists of five modules with different emphases as well as intercultural training for budding executives. Central to this is the practice-oriented and comprehensive presentation of products, technical solutions, structures and specific internal themes by our own experts. Another priority is to foster close networking between the participants.

Each "Junior Circle" is designed to run for two years, with the candidates being chosen directly by the Management Board after completion of the application process.



Read more about this starting on page **35**.



**Dr. Walter Bachleitner,**  
joined Messer in 2008.  
Technology Manager Chemistry,  
Messer Group, Germany.

International network meetings are encouraged in order to optimize know-how transfer within the special fields.

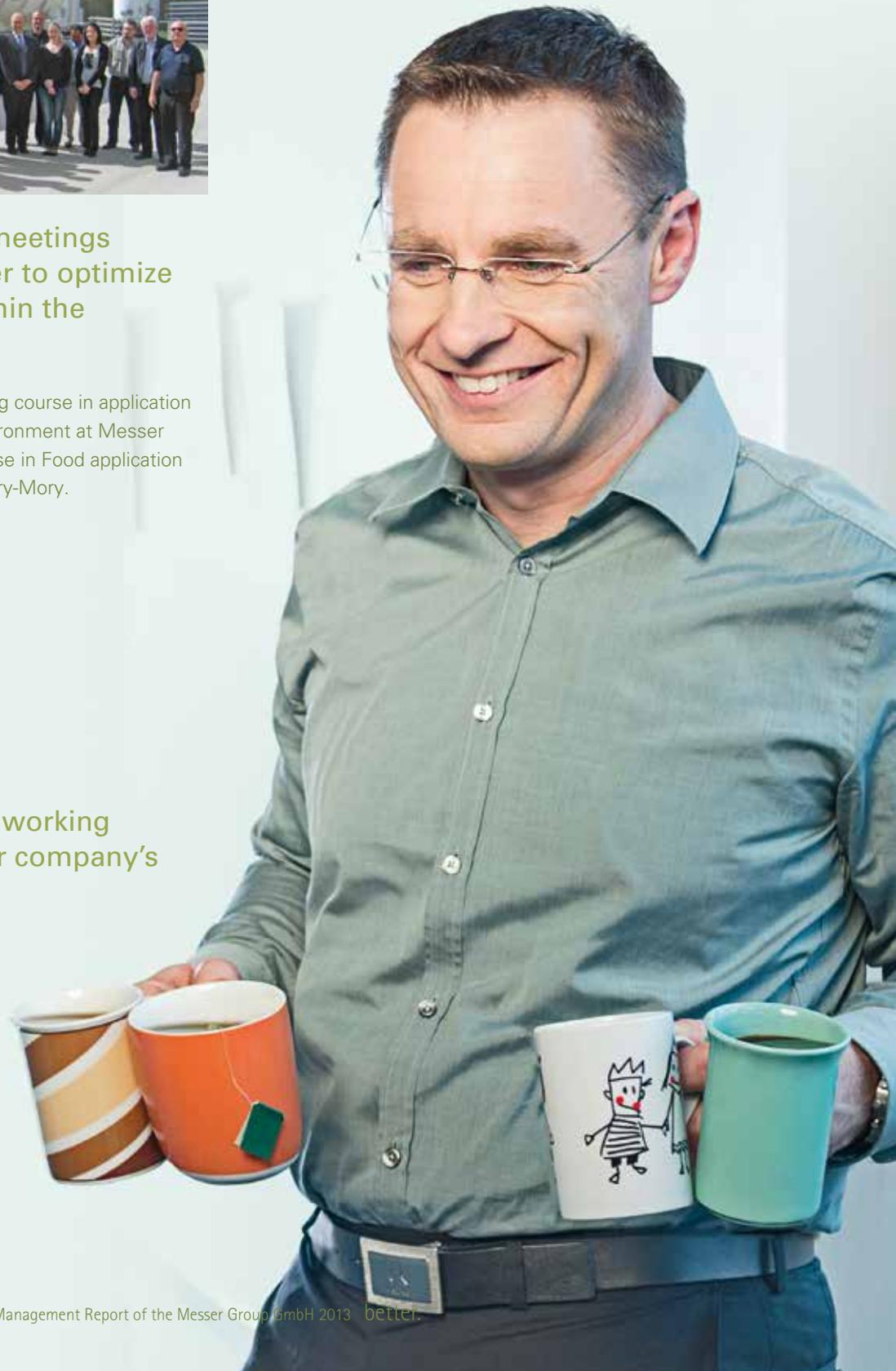
In 2013, this included a basic training course in application technology in Chemistry/Paper/Environment at Messer Group in Krefeld and a training course in Food application technology at Messer France in Mity-Mory.

Read more about this on page **37**.

The diversity of people working for Messer is one of our company's strengths.

It is the diversity in terms of our employees' background, culture, language and way of thinking that helps produce new ideas and innovations.

Read more about this on page **34**.



# Personnel development

We are convinced that people are only able to perform at their best if they are suitably motivated and qualified. Messer is therefore committed to targeted training and professional development as well as a transparent management style and comprehensive health management.

## Behaviour towards other employees

We regard the diversity of people working for Messer as one of our company's strengths. The differences in terms of our employees' background, culture, language and way of thinking give us a competitive advantage by virtue of the fact that they contribute to ideas and innovations through their openness and willingness to embrace change. Each employee needs to be aware of the fact that their behaviour is always associated with the company, and that the latter's external and internal reputation therefore depends on the behaviour of the individual. The company therefore expects each employee to treat colleagues or third parties in a respectful, fair, friendly and professional way. Discrimination, particularly on the basis of gender, race, skin colour, age, religion, background or physical appearance will not be tolerated at Messer. Resolute action will be taken against any form of discrimination, preferential treatment, harassment or exclusion. Messer does not tolerate psychological and physical harassment nor any other attacks which violate employees' dignity and respect in their place of work. We respect and value the cultural differences and the various practices and customs of the people we meet.

## Equal treatment and anti-discrimination

Once a year, as part of the annual meeting of the Messer Group's human resources managers, information and training is provided on equal treatment and anti-discrimination policy. If employees feel discriminated against or not treated equally, they can, at any time, turn to their local human resources manager or the Group Compliance Manager, who are obliged to clear up the matter and ensure that equality is maintained. Such incidents must be included in the annual Compliance Report. The employee may also choose to put it on record during the annual appraisal.

Every executive has a duty to organize their area of responsibility in such a way that any violation of the law can be reported at any time. Misconduct must be actively communicated. All employees are called upon to report any violation to their superior.

Whenever a new company is formed or there is a majority acquisition of a company, we ensure that these codes of conduct are communicated and implemented immediately.

To date, no violations against human rights or equal treatment have been reported. If such a case arose, provided it is a minor infringement, there would be a discussion, in consultation with the parties involved, as to whether the problem could be resolved through mediation or equivalent coaching. A serious violation could, however, result in termination of employment for the employee who committed the offence.

## Length of employment and staff structure

The average length of employment for our staff is 14 to 16 years. Even in China, we benefit from a high level of loyalty and an average length of employment of four years.

Only 0.5 per cent of our staff are part-time.

The Messer Group presently employs an average of 5,346 people worldwide. Of these, 72.7 per cent are male and 27.3 per cent female. The proportion of our employees with severe disabilities is 0.8 per cent.

## Internal social partnerships

Messer is generally supportive of the formation of employee organizations such as works councils. About 57 per cent of our employees are represented by works councils. Nevertheless, we are proud when our employees see no need for such an organization, as is the case in Germany. At most of our Eastern European national subsidiaries, the local management negotiates joint pay agreements with trade unions. The relationship between our workforce and the management is characterized by trust, so there has never been a strike or anything similar within the Messer Group up to and including 2013.

## Training and Academy Messer Group

We support our employees through regular training and professional development opportunities. In terms of recruiting young people, we try to attract new, well-qualified recruits at an early stage: in Germany we offer ambitious school-leavers interesting careers with extensive training opportunities.

We have set up the Academy Messer Group for our systematic personnel development programme. The Academy's focus is on imparting knowledge through our own experts from different areas of the company, supplemented by external speakers. In spring 2013, the "Junior Circle", with 18 participants from various national subsidiaries and departments, was launched as part of the Academy Messer Group. Here, too, the focus is on providing a practice-oriented and comprehensive overview of our products, technical solutions, structures and specific internal issues. Another main objective of the "Junior Circle" is good networking among the participants.

Messer Group also has concrete training plans for some 380 employees, with the remaining employees looked after locally. Fifteen to 20 per cent of them are females.

Individual promotion to the management of Messer Group GmbH is carried out on the basis of individual ability and the requirements at the time.

## Professional development

Once a year, each employee undergoes safety training tailored to their particular area of work.

On average, eight to ten per cent of technical staff are given individual training relating to changes and improvements in their area of work every year. This may include driving licences for fork-lift trucks, SAP postings for gas filling volumes or training in the transportation and use of hazardous substances.

Of our administrative staff, about 15 per cent take part in special training programmes every year. In 2013, the figures were 18 (13 males, five females) in the Academy Messer Group Junior Circle and 20 (19 males, one female) in general management training.

347 employees (307 males, 40 females) are listed in the Messer Group successor database and have been given special professional development recommendations and a personal training plan.

In addition, we came to a decision in 2013 to run a campaign aimed at improving executives' knowledge of English, and this was started at the beginning of 2014. We plan to have approximately 40 per cent of our administrative staff attend English courses, at levels that depend on existing language knowledge.

## Health management expanded

The health and wellbeing of the individual are core values for Messer. In many of Messer's national subsidiaries, measures aimed at preventing ill health are therefore being implemented. At Messer, these include:

- Monitoring workplace ergonomics
- Courses aimed at raising staff awareness of stress and burn-out
- Talks on cancer and preventive measures as well as on cardiovascular diseases
- Annual health check
- Agreements with fitness and wellness centres in the area
- In some cases, free admission to fitness and wellness centres for employees and their families

## Uniform employer brand

The introduction of an employer brand that reflects our corporate culture and is uniform across countries has almost been completed. It is intended to strengthen the bond that employees have with the company and at the same time attract potential job applicants to Messer. As part of a wider campaign – which includes company presentation films and posters, an enhanced Internet presence and a redesigned career website – we present ourselves as an international, diverse and attractive employer.

## Know-how transfer through internal networks

Knowledge transfer within the departments of Messer is aimed at both new entrants and experienced staff who want to improve their skills and know-how. To this end, annual network meetings are held where all the experts get together, e.g. from application technology, production, communications, human resources, IT, safety and environmental protection, etc.

In April 2013, basic training in the Chemistry/Paper/Environment (CPE) field of application technology took place at Messer Group in Krefeld, Germany. Eleven experts from Europe and Vietnam were given an overview of all the relevant CPE applications.

In the same month, 14 expert staff from twelve Messer companies in Europe and Vietnam took place in application technology training in the area of Food. The training was organized by Messer France in Mitry-Mory. Besides market-specific and legal aspects, the training also covered applications of food gases for chilling, freezing and packaging. The practical part involved running through the entire course of a customer relationship – from initial contact and calculations through to tests in the technical centre and the design of a system.

## Commitment to vocational training

Together with pharmaceutical company B. Braun Melsungen and the university in Hung Yen, Vietnam, Messer has signed a memorandum on commitment to vocational training. The aim is to jointly set up a mechatronics training programme. This will involve trainees getting practical experience in companies from the second year of their training. After successful completion of their training, they may be offered employment by the company.

Messer supported a youth employment project in Bosnia-Herzegovina, where the low employment levels for young people are a major issue – as in many other European countries. This gave new entrants to the labour market the opportunity to complete a year of practical training specifically tailored to their educational background.

Our business activities are characterized by clear principles for cooperation allied to sustainable investments.



Many investments in 2013 were again aimed at securing the independence of our product supply and generating profitable growth.

Since the founding of Messer Group in 2004, we have invested 1,661 million euros worldwide in the expansion of our production capacities and in means of distribution.

Among other things, a new air separation unit for oxygen, nitrogen and argon production was put into operation in Gumpoldskirchen, Austria.

Four new air separation units were built in Asia.

Read more about this on page 40.



The principles for cooperation play a key role at Messer. The Group-wide guidelines reflect the company's values and business principles.

The guidelines on safety, health, environmental protection and quality are particularly important for our cooperation with customers and suppliers.

Read more about this starting on page 40.

**Frédéric Sinamale,**  
joined Messer in 2002.  
Head of Filling and Maintenance,  
Messer France, France.

**Anne-Sophie Gérôme,**  
joined Messer in 1994.  
Responsible for SAP Reporting  
Industrial Gases Production,  
Messer France, France.



# Business activities

## Investment and financial strategy

Our goal is to guarantee our long-term independence and sustainable growth on the basis of solid finances and fair profits. We use the profits we make for new investments in local markets. These investments are based on commercial principles and are primarily targeted at projects which ensure a secure product supply and/or offer prospects for profitable growth.

In Europe, our focus since 2007 has been on the development and expansion of our production facilities with the aim of, among other things, reducing product supply shortages and the associated additional purchases. In China, Messer is seeking to act as a partner supporting the expansion plans of our on-site customers. Details of our investments in 2013 can be found in our Group Management Report 2013.

Moreover, we make use of the advances in financial policy: we always endeavour to optimize our operating free cash flow and re-use it in a profitable way. This repeatedly involves the use of creative ways of protecting financial resources, developing financing alternatives or optimizing taxes. In the area of financial communication, Messer sets unusually high standards, for example when producing and distributing treasury or management reports.

## Code of Conduct and Group Guidelines

### Principles of cooperation

Messer is committed to cooperation with preferred suppliers and other business partners, including contractors who act in accordance with our guidelines on safety, health, environmental protection and quality. Messer complies with internationally recognized human rights and general ethical principles rejecting child and forced labour. All Messer companies, their employees, executives and managing directors are therefore bound by our Code of Conduct.

The Code of Conduct and the Group Guidelines play an important role for Messer. All first- and second-level managers are therefore required to confirm that they are familiar with the contents of these documents and undertake to comply with them. Our employees have also been informed about the contents relevant to them and have also undertaken to comply with them.

### Anti-corruption

In relation to corruption, § 1.6 of the Code of Conduct deals with the relationship with third parties as well as anti-corruption measures. It states that suppliers should only be chosen on the basis of objective criteria. Messer undertakes only to compete on the basis of the high quality and the price of its innovative products. Officials at home and abroad must be offered or given no unlawful benefit whatsoever.

§ 1.7 of the Code of Conduct stipulates that all employees must avoid conflicts between the interests of the company and private interests.

§ 1.7.1 External Employment / Secondary Employment of the Code of Conduct stipulates that any employee who intends to conclude an additional contract of employment with another employer must inform their local personnel department. The personnel department must first give approval for the intended employment.

§ 1.7.2 Shares in Competitors, Customers and Suppliers states that significant shares held in competitors, customers and suppliers amounting to more than 5 per cent of the share capital require the approval of the Management Board. It is necessary to make sure that the person in question is not involved in any decision regarding the award of a contract, either directly or indirectly. The Group Legal Department will supply checklists to check the necessary criteria when working with representatives or external advisers.

### **Behaviour in relation to competition law**

Anti-competitive practice is dealt with in the Code of Conduct under § 1.2.1. Monopolies and Competition Law: Messer is committed to strict compliance with the various domestic and foreign monopolies and competition laws. It follows that any commitments or actions that could lead to a restriction of trade or competition are prohibited. All employees must avoid any actions that might appear to constitute such conspiracy.

From time to time, the Group Legal Department of Messer Group publishes instructions on avoiding anti-competitive behaviour. § 8.8 Questions of Competition and Monopolies Law in the Group Guidelines stipulates that all Messer Group companies must strictly comply with these instructions.

Non-compliance with the Code of Conduct may result in a caution, claims for damages or termination of the contract of employment. An annual report regarding compliance activities is submitted to the Supervisory Board of Messer Group by the Corporate Compliance Officer.

All employees can report violations of the Compliance Code to the Compliance Organization. Their identity will be treated confidentially if expressly requested. Communication is possible directly with the Corporate Compliance Officer ("whistleblowing") via a dedicated hotline or e-mail, or with the Supervisory Board via the local management.

# Safety at work means avoiding all work-related illness, injuries and accidents.



In 2013, Messer launched a new campaign aimed at avoiding industrial accidents. Its aim is to improve safety at work and raise awareness of a safe working environment.

A particular area of focus is the avoidance of industrial accidents caused by violations of safety guidelines, negligence and carelessness.

The campaign's motto, "This was not planned", is designed to highlight that accidents not only cause operational downtimes and thwart business plans. They can also have an adverse impact on, and even destroy, the plans that families make for their lives.

Alongside individual measures such as safety inspections, training programmes, risk analyses and reciprocal safety audits, there is also a poster campaign in over 30 languages for all 120 Messer Group locations.

Read more about this starting on page **44**.

## In the past financial year, Messer once again won awards for exemplary safety at work.

The subsidiary in Bosnia-Herzegovina received the gold award from the European Industrial Gases Association (EIGA) for 15 years of accident-free working. Further awards went to Messer subsidiaries in France and Hungary.

Read more about this on page **45**.



**Gábor Kovács,**  
joined Messer in 2007.  
Plant Manager On-Site Plants  
Hydrogen, Messer Hungarogáz,  
Hungary.

## Messer uses a global management system in order to identify and manage operational risks.

The principles of this system have been carefully documented and cover all the relevant safety areas. Numerous SHEQ audits have been carried out in recent years in order to ensure compliance with these guidelines.

Read more about this on page **44**.



# Safety

Safety at work is a matter of great importance to us. Our position is: „All work-related illness, injuries and accidents are avoidable.“ To meet this high standard, Messer uses a range of measures aimed at ensuring and improving safety at work in the company.

The Messer Group employs 40 staff with responsibility for safety, health, environment and quality (SHEQ), who participate in the work of health and safety committees. Our international SHEQ committee has eight members and is responsible for communicating and implementing the Messer Group's safety policy in our subsidiaries.

In our Group Management Report 2013, we report in detail about our activities in the area of safety.

## Global management system

In order to identify and manage possible operational risks, Messer has implemented a global management system that covers all the relevant safety areas: risk management, safety training, safety tests, personal protective equipment, communications security, accident investigations, etcetera.

Compliance with these standards is checked by means of SHEQ audits, of which there were no fewer than eight in the past financial year. There were also 93 other internal and external audits. In order to ensure that the safety guidelines can be measured and assessed, performance indicators were generated, such as industrial accidents with lost days, accident frequency and accident severity rate.

A total of 38 industrial accidents with lost days were reported in 2013. This means that the frequency of accidents has risen again. The accident severity rate dropped to 61.3 absent days per one million hours worked. Sadly there were two tragic deaths, one caused by an explosion in an acetylene plant, the other following a road accident.

Further information will be published in our management report.

## Safety campaign and year of safety at work

A new safety campaign and an international year of safety at work were launched at all locations in 2013 with the aim of avoiding accidents even more effectively in future. The goal is to raise employees' awareness of a safe work environment. This is particularly relevant to industrial accidents caused by infringements of safety guidelines or by negligence and carelessness.

The campaign with the motto "This was not planned" makes it clear that accidents not only thwart business plans but can also have serious personal consequences. The international year of safety was launched by setting off a practice alarm at all 120 Messer locations in Europe, Asia and Peru without prior notification. At 11 o'clock local time, over 5,000 em-

ployees had their work interrupted and were given their annual safety training. The sudden interruption of the day's routine illustrated how accidents not only have the potential to disrupt operational processes but can also have an adverse impact on, and even destroy, the plans that people make for their lives.

All the evacuations went smoothly. Alongside individual measures such as safety inspections, tailor-made training programmes, risk analyses and reciprocal safety audits carried out by the different locations, there is also a poster campaign in over 30 languages. The poster images were photographed in various areas of operation in our company such as gas filling plants, cylinder storage locations or offices. Our "Messer – Gases for Life" brand also deliberately features in the poster images, making it clear that this is not about image but about a sense of responsibility that is subject to continuous improvements.

A safety newsletter and three detailed descriptions of incidents or near misses were also distributed in 2013 for the purposes of prevention.

## Activity in associations

Messer is an active member of the European Industrial Gases Association (EIGA). The active exchange of experiences and knowledge that this facilitates helps us to learn from incidents.

As has been the case in recent years, we once again won various awards for exemplary safety at work in 2013: our subsidiary in Bosnia-Herzegovina received an award for 15 years of accident-free working; Messer in France was given an award for five years of accident-free working; our subsidiary in Hungary received an award for the lowest frequency of accidents in its category.

# Environmental and climate protection is a central task for Messer, which we are implementing across many areas.



To conserve resources, our energy management is an ongoing process aimed at a continuous improvement in energy efficiency.

Thanks to a broad range of projects to improve energy efficiency and due to the commitment shown by Messer's application engineers it has been possible, in just five years, to reduce the energy factor, which expresses electricity consumption in relation to gas yield, by 16 per cent for our air separation units in Europe.

For the production of carbon dioxide from industrial waste gas, Messer has secured the long-term rights of use for an optimized carbon dioxide separation process. It allows energy consumption to be reduced by around 30 per cent compared with conventional systems.

Read more about this starting on page **48**.

Pure oxygen ensures optimized combustion processes which are more intensive and therefore more energy-efficient as well as cleaner.

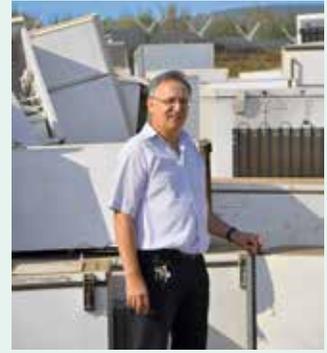
Oxyfuel burners, in which fuel and oxygen enter the combustion chamber together, are particularly advantageous (oxyfuel process): with the same burner output, the volume of waste gas is reduced by 70 to 80 per cent, and the fuel requirement by up to 60 per cent.

Read more about this on page **51**.



The DuoCondex process ensures that ecologically harmful CFCs, which are released when breaking up refrigerators, do not get into the atmosphere.

Europe's most modern refrigerator recycling centre in the Hungarian town of Karcag as well as other recycling companies in Serbia and Poland have also been profiting from this technology since 2013.



Read more about this on page 54.

**Dénes András Paszera,**  
joined Messer in 2004.  
Application Engineer  
Environmental Technology,  
Messer Hungarogáz,  
Hungary.



# Environmental and climate protection

## Environmental guidelines of the Messer Group

Messer adheres to environmental guidelines which were developed by the company as the basis of its business activity:

The Messer Group will

- determine the material impact of its business activity on the environment and set itself targets for the continual improvement of its environmental compatibility
- reduce the environmental impact of its products and services
- endeavour to prevent pollution of the environment
- reduce waste generation and support programmes aimed at the prevention of pollution
- provide operational principles, processes, procedures and resources for the implementation of its environmental guidelines taking into consideration the best available technology
- encourage staff to act in an environmentally friendly way, both at work and at home
- encourage continuous improvement in waste minimization
- comply with existing environmental legislation or exceed its requirements
- carry out environmental impact assessments before building new or modifying existing facilities
- strive for open and honest communication with all stakeholders and neighbours
- minimize energy consumption and, wherever possible, reuse materials in an economically viable way.

## Energy management

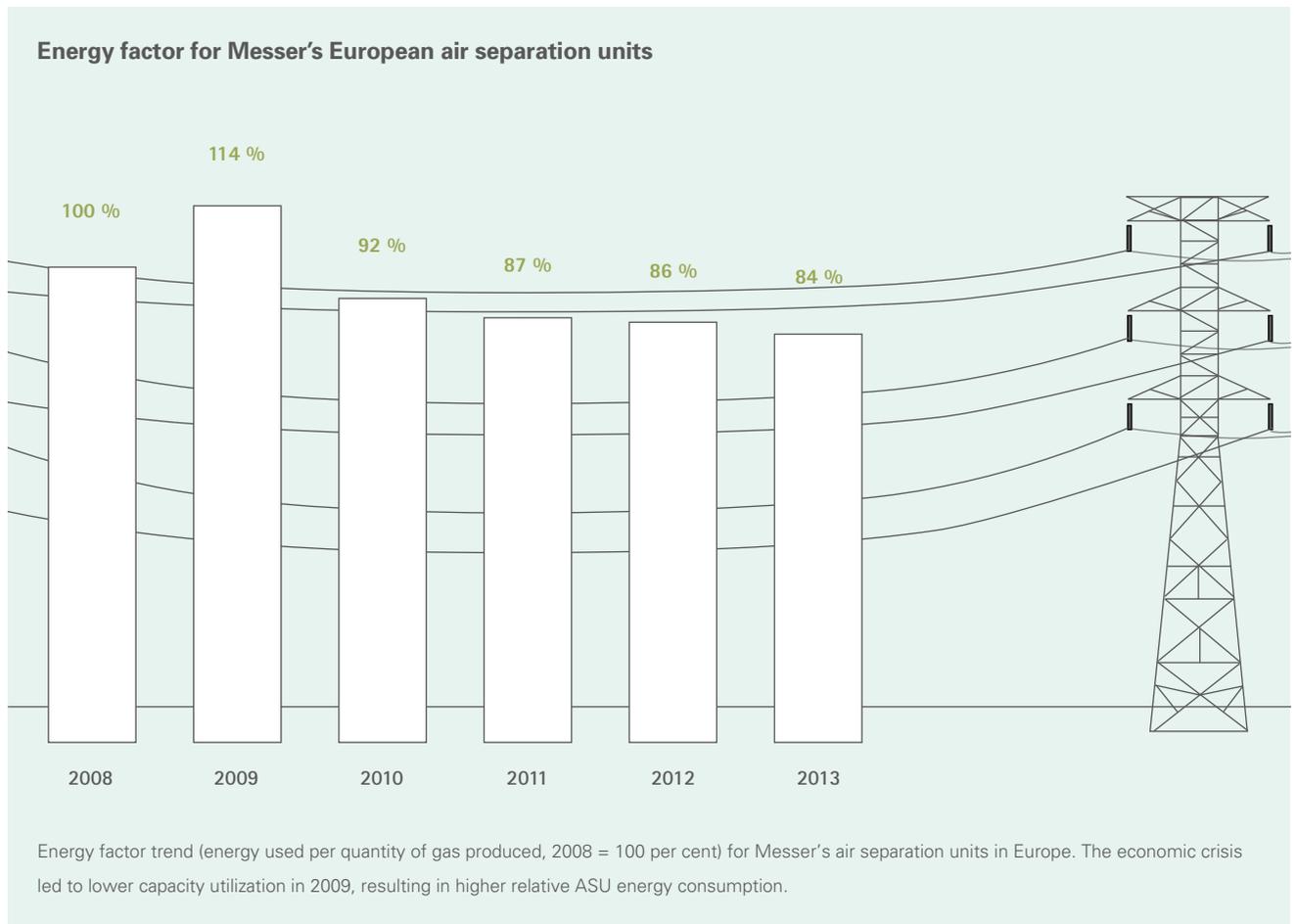
Environmental protection and the efficient use of energy are core objectives for Messer. In order to conserve resources and reduce costs, energy management is an ongoing process, with our main focus on a continuous improvement in energy efficiency.

In addition to optimizations within the company, we also seek to enable our customers to operate in an environmentally friendly, sustainable and cost-effective way.

### **Energy efficiency improvement in the production of air gases**

Messer has tasked a global energy manager to increase the energy efficiency of its air separation units. In cooperation with the local managers, a wide range of projects aimed at improving energy efficiency has already been initiated. An initial success was achieved in 2013: energy efficiency, measured on the basis of energy consumption per cubic metre of gas sold, was improved by four per cent.

Approximately 600 kilowatt hours of energy is needed to produce a tonne of liquid nitrogen or oxygen. An average air separation unit (ASU) consumes as much energy as all the households in a town with 40,000 inhabitants. These figures clearly show how important an ASU's efficiency is in terms of its carbon footprint – its impact on the climate. In the space of just five years, it has been possible to reduce the energy factor which expresses electricity consumption in relation to gas yield by 16 per cent for our ASUs in Europe.



### Energy efficiency improvement in the production of carbon dioxide

Carbon dioxide (CO<sub>2</sub>) is part of Messer's product range. Carbon dioxide is used in many of our customers' processes to make them more environmentally friendly and efficient. It is also used for carbonation in the beverage industry. For Messer, therefore, carbon dioxide is not just a greenhouse gas, but one which is produced, processed and supplied to customers under the most environmentally friendly conditions possible. Carbon dioxide is not produced by means of air separation. Instead, possible methods include recovery from industrial waste gas. In vertical absorbers, the waste gas is passed through a counterflow of amine-containing solvent, which combines with the CO<sub>2</sub>. The carbon dioxide is subsequently separated from the solution by heating. Again, energy efficiency plays an important role in this process.

The Canadian company HTC has managed to drastically reduce energy consumption during heating with improved solvents and an optimized process. Messer subsidiary ASCO Carbon Dioxide has obtained a sole licence from HTC for the use of this CO<sub>2</sub> separation process outside North America for 21 years. This means that we will reduce energy consumption by up to 80 per cent compared with CO<sub>2</sub> combustion facilities and by approximately 30 per cent compared with conventional CO<sub>2</sub> waste gas recovery plants.

### **Energy efficiency in the transportation of gases**

Messer is working hard to reduce the distances travelled in connection with the supply of gases in order to cut transport-related emissions. Transport routes are being optimized with a software-based solution which calculates the shortest route for delivering the gases to the customers. This covers cylinder and bulk transport.

Investments in new air separation units and cylinder filling plants are being made at selected locations that are close to potential markets, thereby reducing the distances travelled. SWAP agreements are being concluded with business partners and cross-border customer deliveries are being agreed between Messer subsidiaries in order to reduce the distance to customers.

Transportation units and customer tanks are being optimized. The conversion of the fleet of trucks from EURO 4 to EURO 6 will reduce particle emissions by 50 per cent and NO<sub>x</sub> emissions by 90 per cent. While this can only slightly reduce diesel consumption and CO<sub>2</sub> emissions, it is nevertheless a major step in reducing the environmental impact from transportation. In addition, Messer uses weight- and product-optimized transportation units (tankers/containers and cylinders/bundles) to reduce diesel consumption as well as the number of trips that are required to deliver the products. Telemetry systems and the optimal selection of customer tank sizes also help reduce the number of delivery journeys.

In order to also improve energy efficiency for the transportation of small quantities of gases, Messer is actively promoting the filling of cylinders with a pressure of 300 bar instead of the usual 200 bar. This means that they contain some 50 per cent more gas, bringing down transport costs significantly. Improved steel quality makes the higher pressure possible with an only slightly increased cylinder weight. Messer has been a pioneer in this area for about ten years. The company has been able to take a further step with the new MegaPack cylinder bundle: it is lighter, holds more gas and also offers advantages in terms of handling and safety.

Special certifications awarded to several Messer companies in Western Europe, for instance according to the ISO 50001 standard, are a further example of the improvement in energy performance at Messer. The standard describes the requirements that the company has to meet in terms of introducing, implementing, maintaining and improving an energy management system. This system refers to technical aspects such as continuous energy data acquisition, screening analyses, evaluation of operational energy use and the potential for savings.

## Energy saving for customers

Together with our customers, we are working to develop environmentally friendly and energy-saving processes that offer significant environmental benefits. A few examples:

Messer offers a process for reducing nitrogen oxides during the production of nitric acid (HNO<sub>3</sub>). The targeted use of oxygen drastically reduces the emission of nitrogen oxides, which otherwise would have to be rendered harmless through the use of large quantities of ammonia and natural gas. Worldwide, a total of some 55 million tonnes a year is produced as a basic material for inorganic chemistry and for fertilizers.

Thanks to the oxygen depolarized cathode developed by chemical group Bayer, the electricity used in the production of chlorine is reduced by 30 per cent. Messer offers an oxygen supply optimally adapted for this process. The oxygen-rich waste gas is reused. In Germany, a one-per-cent reduction in total electricity needs could be achieved if this technology were used extensively. Chlorine is required for around two thirds of all chemical products.

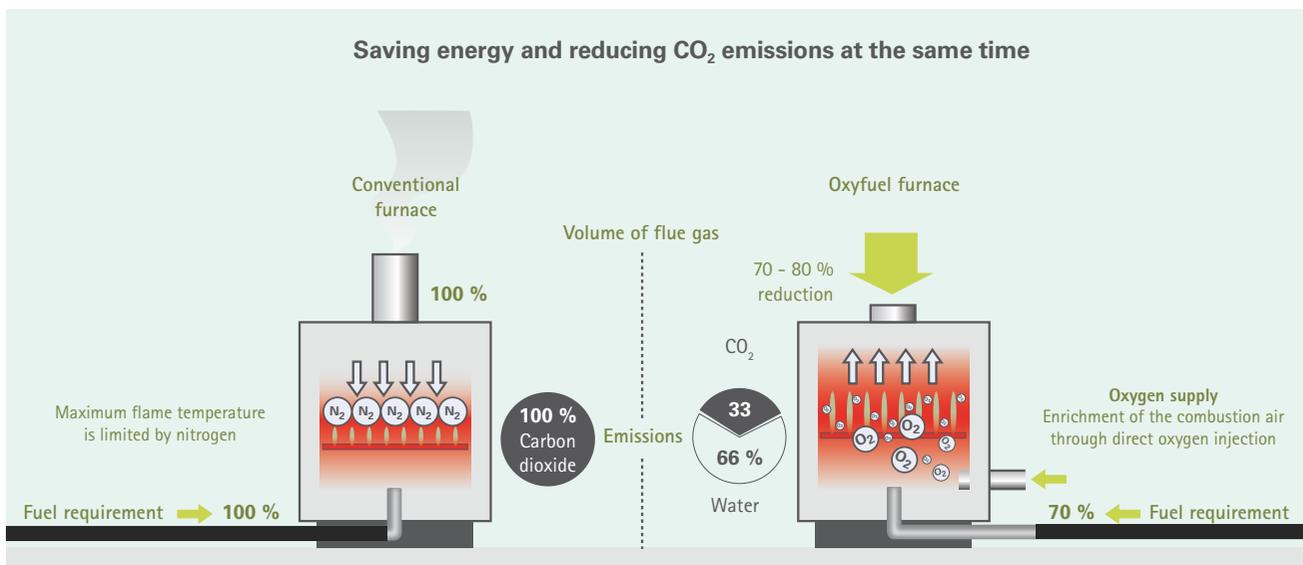
Leading chemical companies are currently researching the possibility of chemically integrating carbon dioxide into polyether polyols. The polyether polycarbonate polyols (PPP) produced in this way not only lead to a saving in terms of raw materials, but also mean that significant quantities of the greenhouse gas CO<sub>2</sub> are absorbed in the end product. As an expert in CO<sub>2</sub> applications, Messer cooperates closely with the manufacturers. Polyether polyols are intermediates used in the production of polyurethanes (PUR), which are required for paints, coatings, foam and insulating materials, synthetic leather and textiles, etcetera.

The intensity of combustion processes is enhanced by adding pure oxygen – this means that they use less energy and that emissions of carbon dioxide and nitrogen oxides are also significantly reduced. We have customers worldwide who take advantage of this economic and, at the same time, environmentally friendly effect. Two Chinese users in the ceramics industry and the copper industry have also been using our burner technology since August and October 2013 respectively.

The Turkish market leader in the production of aluminium from scrap and other recycled materials has been able to reduce the energy consumption of one of its furnaces by 50 per cent thanks to the new oxyfuel combustion system. A further system was installed by Messer in February 2013, with the installation of a third one being planned. The largest producer of primary aluminium in Central and Eastern Europe has also been using the same technology since April 2013.

Oxyfuel burners, in which fuel and oxygen enter the combustion chamber together, are particularly advantageous (oxyfuel process): with the same burner output, the volume of waste gas is reduced by 70 to 80 per cent, and the fuel requirement by up to 60 per cent. The waste gas in an oxyfuel furnace consists exclusively of water and carbon dioxide, while CO<sub>2</sub> emissions are significantly lower than with conventional air firing. Even taking the carbon footprint for the supply of the oxygen into consideration, 30 per cent less carbon dioxide is emitted when melting glass for example (1,500 degrees Celsius).

Efficient heat insulation of residential buildings actively protects the climate while at the same time saving energy and reducing costs. Pure oxygen can be used to produce mineral insulating materials as efficiently as possible. It optimizes the combustion process needed for production, getting more heat out of less fuel. This also reduces carbon dioxide emissions for the same product quantity. The amount of primary energy used is offset in just a few months by the material's insulating effect in buildings.



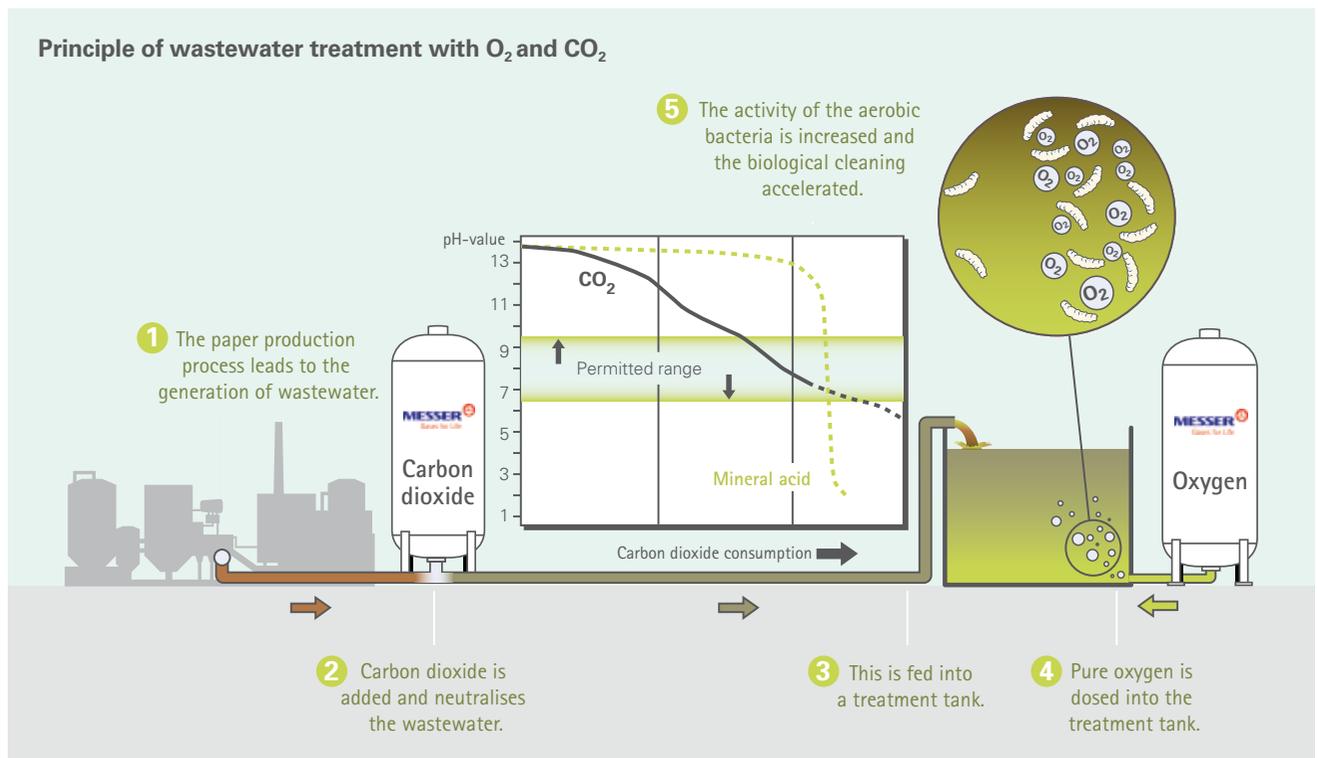
## Ecological alternatives for our customers

We are constantly working on developing technologies that are used to improve processes in our customers' industries. Messer focuses its efforts in this regard on processes and technical improvements that will have a positive impact on the environment and climate as well as the consumption of resources.

More than 22 million tonnes of paper, card and cardboard were produced in Germany in 2012. Gases and sophisticated technologies can be used to significantly reduce the consumption of energy and resources as well as the emission of harmful substances in this industry. Messer has worked long and hard on sustainable paper production, and this has led to the concept of the "Green Paper Mill". Elements of this sustainability concept are being used in practice by a number of our customers.

Carbon dioxide can be used in place of ecologically harmful and expensive mineral acids to neutralize the alkali wastewater that is produced during paper production. Dissolved in water, the carbon dioxide is turned into carbonic acid. In biological wastewater treatment, pure oxygen, rather than ordinary air, is introduced into the wastewater treatment facility's activated sludge basin, which significantly accelerates the biological degradation processes in the compact facility. Such a facility has been in operation at a Czech paper mill since January 2013.

In Spain, Messer is involved in a European Union funded project to develop environmentally friendly and cost-effective technologies for the paper industry. The aim of the project is to develop a closed-loop water circulation system to reduce consumption of fresh water and energy as well as the use of toxic chemicals. Another aspect of the project involves working on a process that facilitates completely chlorine-free bleaching of the raw fibres and could therefore significantly increase the proportion of recycled fibres in paper production. Industrial scale tests have been running since autumn 2012. The project phase is due to be completed by mid-2014.

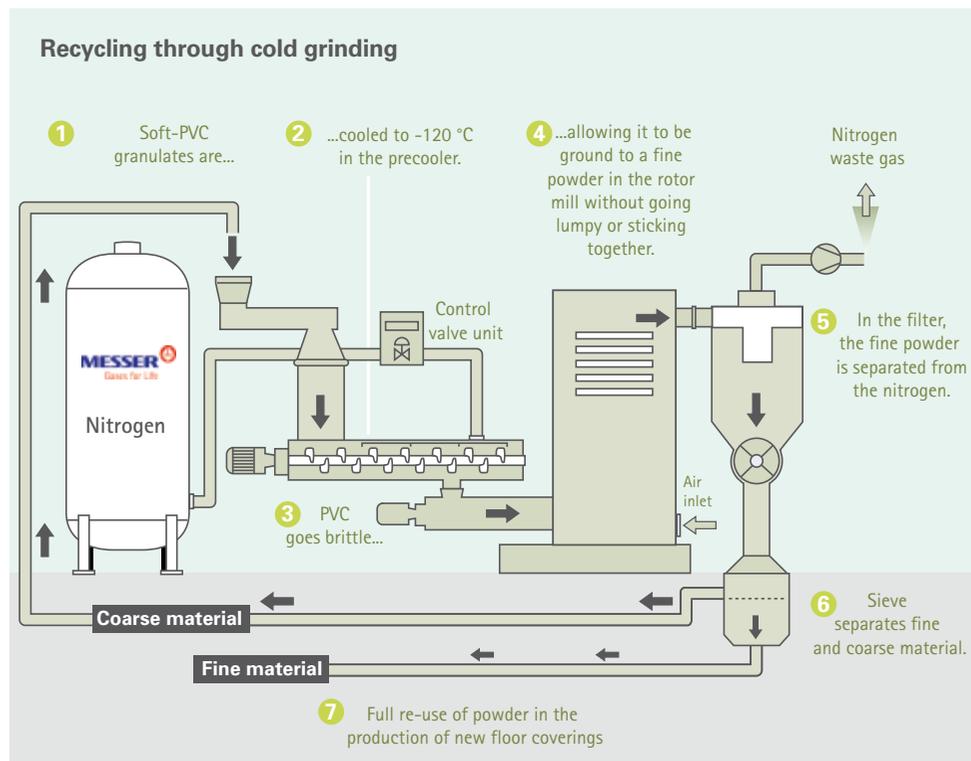


Many thermal baths use diluted sulphuric acid to reduce the pH value of their water. A Messer customer in Slovenia is taking a more environmentally friendly route: instead of sulphuric acid, it uses CO<sub>2</sub> in its pools, which has led to excellent results both ecologically and economically.

In waste recycling and the treatment of heavily contaminated wastewater, the use of CO<sub>2</sub> is an environmentally friendly and cost-effective alternative. This has also been the experience of one of our Hungarian customers, who previously neutralized alkaline wastewater with sulphuric acid. Using CO<sub>2</sub> also prevents wastewater acidification, which frequently occurs when using sulphuric acid.

During modernization of a wastewater treatment plant in Hungary, the existing facility had to be kept in operation. However, this meant that all the wastewater from a town with 30,000 inhabitants had to be treated with just four oxidation basins instead of eight. By adding pure oxygen, Messer increased the content of dissolved oxygen needed for nitrification in the four

activated sludge basins, which meant that the aerobic biological processes resulted in effective treatment of the wastewater during the conversion phase.



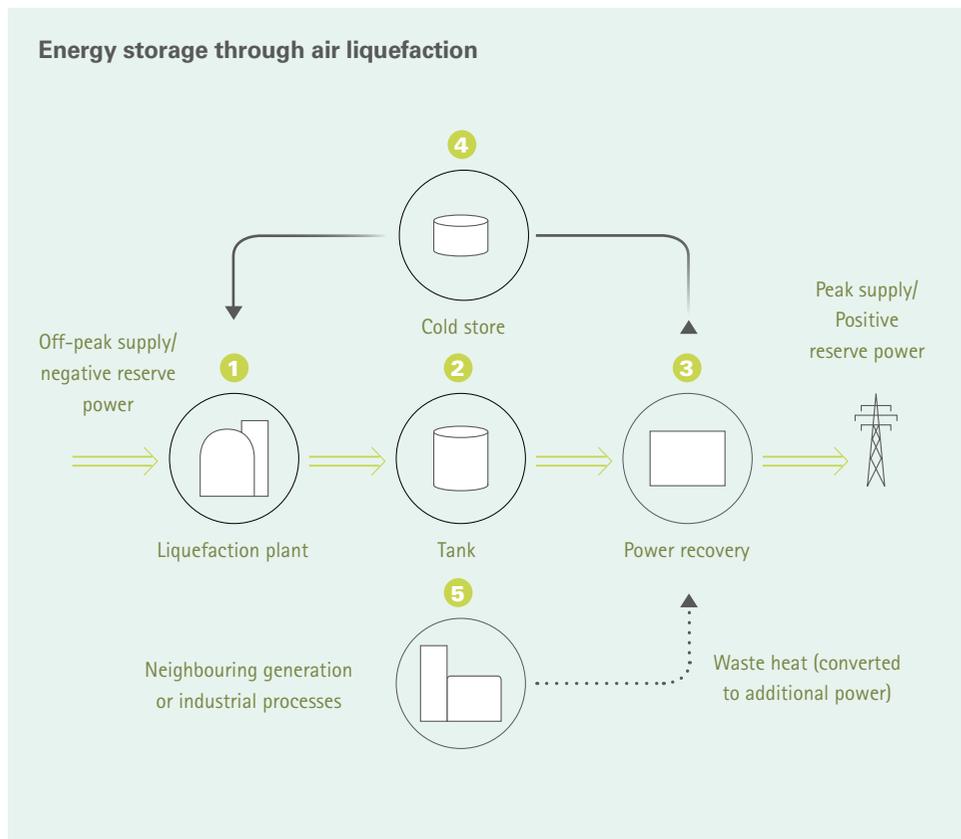
The Hungarian town of Karcag is home to Europe's most modern refrigerator recycling centre. The project, which is funded by the EU and the Hungarian government, uses the DuoCondex technology developed by Messer. It ensures that ecologically harmful CFC, which is released when breaking up refrigerators, does not get into the atmosphere. Messer supplies liquid nitrogen to cool the facility for this process. After it has been recovered, this nitrogen is used in gaseous form to inert the crushers. Since 2013, the DuoCondex process has also been used by a Serbian and a Polish recycling company.

Polyvinyl chloride (PVC), a material used for pipes, cables, window frames or floor coverings, is difficult to dispose of. For one customer in Hungary, the solution is cold grinding. Following a two-year test phase, a recycling facility was commissioned in 2013, which will initially recycle 1,000 tonnes of the plastic per annum. In this process, the coarsely crushed plastic residues (granulates) are cooled to minus 120 degrees Celsius using liquid nitrogen. At these low temperatures, the PVC becomes brittle and can be ground to a fine powder without sticking together or going lumpy. The PVC powder produced in this way is fully re-used in the production of new floor coverings.

## Alternative energy storage

LAES stands for Liquid Air Energy Storage. This system has the potential to provide energy to the grid operator at any time, as needed, and to avoid supply shortages. This is particularly important where green electricity is generated from wind and solar power.

To support this technology as an expert in cryogenic technologies, Messer has agreed a strategic partnership with British company Highview Power Storage. The potential for developing appropriate systems for integration into industrial gases facilities is being examined.



# Technical innovations by Messer have a clear objective: to give our customers a competitive edge.



Our new MegaPack cylinder bundle sets standards in the packaging of industrial gases with regard to safety, handling and economic efficiency. In 2013, it won the prestigious red dot award.

While the standards regarding the quality of industrial gases have continuously risen in the last 40 years, their “packaging” remained virtually unchanged. The new MegaPack from Messer brings cylinder bundles right up to date.

For example, MegaPack features effective impact protection of all gas-carrying components as well as the new tamper-proof seal. The centrally located, easily accessible operating panel makes for improved ergonomics, as does the clearly visible level indicator. Filling at 300 bar facilitates greater operational continuity.

For its successful detail solutions, MegaPack received an “honourable mention” at the red dot award for product design.

## The EcoLIN filling station allows refrigerated vehicles to have their mobile tanks filled up quickly, safely and accurately.

Messer officially unveiled the fully developed filling station in February 2013. When filling up the cryogenic cooling system with liquid nitrogen, the entire operation is monitored and logged.

Read more about this on page **58**.





Messer is involved in the development of superconducting power supply cables, which are cooled with liquid nitrogen.

The longest superconducting cable in the world is being laid by the energy company RWE for the "AmpaCity" project. In cooperation with a partner, Messer has developed a system which cools the cables to  $-206^{\circ}\text{C}$  with cryogenic liquefied nitrogen.

Read more about this on page 60.

**Vũ Xuân Điện** and **Bùi Văn Xuân**, joined Messer in 2010. Operator Production and Head of Safety, Health, Environment and Quality, Messer Hai Phong, Hai Duong Branch, Vietnam



# Technical innovations in our core sectors

Change is essential for improvement. We are therefore always looking for new ways to give our customers an edge in every aspect of the supply and application of our gases. Our range of applications span a wide spectrum: gases are used in most industries, in research and science as well as medicine and pharmaceuticals. Some of our technologies are used across different sectors. But we also try to open up completely new market segments for our customers with new developments. In 2013, we were able to develop, present or successfully implement several at the same time.

## EcoLIN filling station

Vehicle refrigeration with cryogenic coolants is a well-known and tried and tested alternative to conventional cooling systems. As a result of increasing environmental requirements regarding noise emissions and CO<sub>2</sub> emissions, cryogenic systems are now becoming particularly interesting for refrigerated logistics companies.

Messer has developed a nitrogen-operated cooling system for food transport vehicles in collaboration with French vehicle outfitter Frappa. Messer's contribution to this technology is a filling station and the supply of liquid nitrogen.

The EcoLIN filling station facilitates automated and safe filling of the liquid nitrogen tank installed on the vehicle.

## CO<sub>2</sub> cyclone snow horn

Numerous industrial cooling processes use CO<sub>2</sub> snow, which is produced by expanding liquid CO<sub>2</sub> using what is called a snow horn. The gaseous CO<sub>2</sub> (flash gas) that is released in this process has to be discharged and can severely disrupt the process through pressure build-up and flow turbulences.

Messer has developed a cyclone snow horn for such processes, where the flash gas is separated and discharged immediately after exiting the expansion nozzle. This ensures that turbulences and an unintentional pressure build-up are prevented; the cooling process can be better controlled and is made more efficient.

## Shielding gas flow made visible

For welding processes under a shielding gas, it is very important to use the appropriate shielding gas atmosphere. However, naturally, the correct shielding gas atmosphere cannot be observed or adjusted directly.

In order to optimize welding processes and be able to resolve any process defects, a

simulation programme was developed in cooperation with Technical University Dresden, which allows shielding gas flows to be visualized during welding. The variable selection of flow volume and torch distance allow customer-specific conditions to be depicted. The simulation programme is used for training and targeted customer consultations.

## Use of oxygen in copper anode furnaces

The growing demand for copper worldwide – copper is mainly used today in electronics – means that processing secondary copper is becoming increasingly important, particularly in China. At the same time, the refineries required for this must meet much stricter energy and environmental standards. Messer has therefore adapted its Oxipyr F and Oxipyr Flex burners for the melting process in copper anode furnaces. In addition, a special movement device has been developed and installed for the burners which allows them to be removed quickly from the furnace chamber between the heating phases. This serves to protect the burners during the redox phases of the refining process and significantly increases their service life. Due to the high process temperature, oxyfuel technology facilitates considerable primary energy savings (up to 35 per cent), a drastic reduction in the volume of waste gas and a marked reduction in CO<sub>2</sub> emissions.

## Use of oxygen in reheating furnaces

As part of a pilot project, two forging furnaces were converted to oxyfuel technology. The aim was to achieve a primary energy saving (natural gas) of up to 40 per cent with the same level of production.

To this end, two fully automatic burner systems with flameless burners were developed and implemented in the forging furnaces.

The conversion to oxygen operation resulted in an energy saving of 35 per cent on one furnace and 45 per cent on the other, with an evenly heated product. In addition, the removal of the preheating units has allowed a sharp reduction in the down times of the systems.

## Optimization of ladle heaters with oxygen

European steelworks are required to cut costs and emissions. One solution that can be implemented quickly is to convert air-firing systems for ladle preheating to oxyfuel technology. We have therefore developed modified burner systems for the vertical ladle heaters. The temperatures in the entire ladle were homogenized for a Czech steel company by optimizing the pulses of media at the burner. This led to a natural gas saving of over 60 per cent for the heating process.

The movement trench heater (Fahrgrabenfeuer) and the normal vertical ladle heater were converted to oxyfuel technology for a German customer. This made it possible to reduce the number of ladles in circulation because the availability of the ladle heater was increased as a result of shorter heating times. At the same time, an energy saving of 10 per cent was achieved, and the pressure on the flue gas system was reduced during “drying”.

## Use of oxygen in clinker production

In the cement industry, attempts are being made to increase the use of alternative fuels at the main burner of the rotary kiln and at the calciner for energy saving and carbon footprint reasons. This requires the use of oxyfuel technology.

A special burner system has been developed for this, with which liquid waste products are atomized directly with oxygen and added to the combustion process. For an Austrian company, this technology has led to very clear energy cost savings as well as a reduction in CO<sub>2</sub> emissions.

A Slovakian customer wanted to increase the percentage of solid alternative fuels to 100 per cent. The targeted addition of oxygen has facilitated improved efficiency as well as cost savings.

## Cooling system for superconducting energy supply cables

High-temperature superconductors (HTSC), which lose their electrical resistance when cooled to a temperature close to the boiling point of liquid nitrogen (minus 196 °C), are used for the almost loss-free transmission of electrical energy in high-performance power cables.

For the purposes of cooling such superconducting cables, we teamed up with partners to develop a system which uses cryogenic liquefied nitrogen as a coolant and can produce cooling temperatures as low as minus 206 °C, 10 °C colder than the boiling point of liquid nitrogen.

The first system of this type was delivered in 2013 for the "AmpaCity" project run by RWE Deutschland AG. As part of a practical test, RWE is operating what is currently the world's longest superconducting cable here for inner-city power transmission. Following a successful test run, a large number of follow-up projects is expected.

## Drilling with liquid nitrogen – anchor drilling in the construction industry

In the building and construction industry, drilling heads with flushed hollow shafts are used as a drilling system for anchor drilling work. However, in the case of adverse groundwater conditions, the boreholes are frequently not stable enough for the proper installation of ground anchors or other installations.

Messer has significantly improved this process: during drilling, the area around the drilling head is frozen with liquid nitrogen introduced through the hollow shaft, stabilizing the borehole and reliably preventing the penetration of groundwater. The drilling system can then be removed and anchors, supports, freezing lances installed or the hole filled in.

## Zinc diecast deburring with nitrogen

Zinc diecast deburring hitherto required extensive and cost-intensive reworking. Now it is possible to remove the burrs with the aid of cryogenic nitrogen and a blast medium.

A deburring machine has been developed for this application in cooperation with Olpe-based German partner Mewo. At temperatures between minus 60°C and minus 100°C, the burrs go brittle and can be easily removed with an appropriate blast medium. Material analyses show that cooling the treated parts has no negative influence on their product quality.

The range of applications for this deburring technology stretches from toy cars to razors, to electronic and automotive components.

## Environmentally friendly paper production

Since 2011, Messer and its partners have been working on a European Union funded project aimed at reducing water consumption in paper production and at producing absolutely chlorine-free paper. Messer is examining the use of industrial gases for recycling the process water.

In the year under review, the work focused on examining sludge dewatering through CO<sub>2</sub>. By lowering the pH value with CO<sub>2</sub>, it was possible to achieve a marked improvement in sludge dewatering. This leads to smaller volumes of waste sludge and a better calorific value.

# We are increasing the value of our company in a targeted way through **continuous improvement** of internal processes and a host of measures.

In the past financial year, we were able to launch or successfully complete various projects geared to securing the long-term and profitable growth of Messer.

One example of this is C7 (“See Seven”). This name refers to seven core projects in areas such as business processes, international personnel development, knowledge management and transfer, technology development and selected growth markets. The progress being made with the measures, which are being implemented across Europe, was discussed by all the executives at the Management Conference 2013 in Essen, Germany.



The increased use of our word and figurative mark “Messer – Gases for Life” has allowed us to measurably raise the profile of our brand.

Among the general public, awareness of Messer increased by 43.8 per cent nationwide in 2013. In the Ruhr area, the figure was as high as 110 per cent, thanks to the high-profile Christo exhibition in the historic Gasometer in Oberhausen.

Read more about this on page **65**.

**Christian Stankowic**, joined Messer in 2008. IT Administrator and IHK Instructor, Messer Information Services, Germany.

Customer satisfaction is measured on a regular basis at Messer. Technologies that make our customers more successful in their sector are a key instrument of long-term customer retention.

The customer can then measure Messer's performance by the economic and resource-conserving advantages that they have gained through the use of gases.

Read more about this on page **64**.



# Turning good into better

It is part of the way Messer sees itself to regularly question internal processes as well as the image we present to the outside world. This constructive way of dealing with the company's image is expressed in various measures and campaigns which were carried out in 2013. These include our risk management, customer satisfaction analysis, strengthening awareness of our brand and optimizing processes for sustainable growth.

## Risk management

Preventing the occurrence of risks – that is the task and aim of our Corporate Governance in accordance with the precautionary principle. Our risk management allows us to identify problems in good time and deal with them in a targeted way. This is done through training, for example, which shows the right way to behave in order to prevent an occurrence of risk. The binding Compliance Guidelines of Messer Group – including the Code of Conduct and the Group Guidelines in particular – are not just something the staff have internalized; they also put these rules into practice at all times.

The Compliance department works closely with Safety, Health, Environmental & Quality (SHEQ), Medical, IT, Audit, Legal and Insurance. Internal audits are used to check whether the Compliance Guidelines, in particular the Group Guidelines, are being implemented. Compliance violations are followed up and punished, but they are also used in order to try and prevent a similar future violation through establishing new measures.

## Customer satisfaction

Most companies in the Messer Group are ISO 9001 certified. This standard stipulates regular customer satisfaction analyses, among other things. Several Messer Group companies have been conducting these analyses online since 2011.

A characteristic feature of the gases business is that the products, such as oxygen, nitrogen and argon, as well as their mixtures, are commodities and therefore comparable and interchangeable as far as all industrial gases manufacturers are concerned. Rather, it is the services offered by the individual suppliers that provide the main source of differentiation. Industrial gases, specialty gases or food gases are generally used when, for example, a customer has no environmentally friendly or cost-effective alternatives for an optimization of procedures and processes. In the food industry, for example, foodstuffs are only frozen with nitrogen if the cryogenic process offers greater advantages, such as a quicker freezing result, than is the case with mechanical freezing. Messer therefore strives to improve customer applications continuously through the use of gases, with the ultimate aim of securing long-term partnerships with its customers. The customer can then measure Messer's performance by the economic and resource-conserving advantages that they have gained through the use of gases rather than just on the basis of the price of the gas.

The sales division at Messer is geared to the needs of its customers. While smaller customers are looked after via local sales partners and supported with the aid of electronic tools,

more intensive partnerships with medium-sized customers are developed by the local sales department and supported personally. International customers that have complex needs and requirements across several countries, as well as an international approach when it comes to buying and/or production technology, are looked after centrally by an internationally active Key Account Management Team, in order to fully exploit the business development potential. To manage its customer processes, Messer uses a customer relationship management tool throughout Europe, which is linked centrally to the ERP software operated by Messer in Europe.

The successful online survey tool for customer surveys is currently undergoing further development.

## Brand awareness

Our “Gases for Life” campaign, which has been running since 2012, stresses that gases such as oxygen, nitrogen, helium, xenon or carbon dioxide play an important role not only in industry, but in everyday life as well. This widening of the brand message into the public sphere helped increase awareness of Messer in Germany by 43.8 per cent in 2013.

In 2014, our “Gases for Life” communication is being further strengthened with application examples from day-to-day life and accompanied, for example, by popular scientific articles in the social media. A new concept for targeted city marketing is currently being developed.

## Process optimization

In the past financial year, we were able to launch and/or successfully complete various projects geared to securing the long-term and profitable growth of the Messer Group. One example of this is C7 (“See Seven”). The name refers to seven core projects in areas such as business processes, international personnel development, knowledge management and transfer, technology development, profitable growth in Europe and business development in selected growth markets.

One of the aims of C7 is to reduce our European debt in the medium term and increase our EBITDA across Europe by 2015. With this goal in mind, various working groups are developing measures aimed at boosting sales, improving processes and cutting costs.

One of these measures is further development of IT applications and systems for the sales departments. They are intended to provide effective support for quoting/tendering and price management. In e-Invoicing and e-Purchasing, there is also great potential for improvement in terms of document flow and archiving.

# Messer is actively committed to educational projects and social initiatives.



Messer is committed to exciting ways of imparting knowledge to children and young people in order to foster enthusiasm for the diversity of industrial gases.

In 2013, experts from Messer Haiphong carried out exciting experiments with industrial gases at several Vietnamese schools. Schoolchildren from Hanoi and Hai Duong were able to witness at first hand how an egg is “fried” with nitrogen, how a frozen banana is used to drive a rubber nail into a plank of wood and how liquid nitrogen puts out a candle.

Read more about this starting on page **68**.

## Messer sponsored a holiday for Slovenian schoolchildren on Croatia’s Adriatic coast.

This initiative by Messer Slovenija underlined the company’s particularly family-friendly staff policy, which has already been recognized with the “Family Friendly Enterprise” certificate.

Read more about this starting on page **69**.



Messer once again sponsored the hydrogen scooter race in Paris, in which handicapped athletes also took part.

The race is held as part of the 'Hello Hydrogen' event and the winning team once again broke the world record from the previous year.

Read more about this starting on page 69.



In Bosnia-Herzegovina, Messer and the Red Cross supported Zenica schoolchildren with learning tools.

Among other things, Messer paid for the relief supplies to be transported from Germany to Bosnia-Herzegovina.

Read more about this starting on page 69.

**Vũ Văn Tuấn** and **Vi Minh Quyết**, joined Messer in 2010. Gas filling operative, **Lê Phạm Lưu** and **Phùng Cao Trí**, joined Messer in 2013. Delivery driver, Messer Vietnam. Messer Vung Tau Branch, Vietnam.



# Social commitment

Many Messer companies are involved in social and environmental projects. This involvement ranges from donations of money or goods to social institutions, schools and hospitals, to participation in days of action through to the sponsoring of projects. The type of involvement depends on the cause or on the needs of the country in question.

## Commitment to education

Messer has supported the Faculty of Mechanical Design at the University of Belgrade with donations, scholarships and sponsoring activities for years. In 2013, on the initiative of Messer, a new department for welding and welded structures was set up at the faculty. Significant elements of the equipment were supplied by Messer, in addition to which the students can use the CastoLab laboratory for their work. Representatives of the company also take part in the teaching programme by giving talks and presentations. Once a year, second-year students have the opportunity to spend time at Messer's Serbian subsidiary. Messer Tehnogas has been awarded a plaque of honour in recognition of its contribution to the faculty.

Elme Messer Gaas has been cooperating with the "Wonders" knowledge centre in Riga for some time. The initiative, which is directed at children, young people and adults who are eager to learn, teaches science in an exciting and appealing way. Employees of Elme Messer Gaas present a gases show there at weekends, giving visitors an insight into the world of gases free of charge.

Experts from Messer Haiphong visited several schools in Vietnam to demonstrate the effects of industrial gases using practical examples. They showed schoolchildren from Hanoi and Hai Duong how to "fry" an egg with nitrogen, how to hammer a rubber nail into a plank of wood with a frozen banana and how to put out a candle with liquid nitrogen. All the experiments, which took place in June and August 2013, generated great enthusiasm among the schoolchildren and teachers.

In March 2013, budding engineers from Polytech Nantes presented their latest development: the "Cityjoule", a city car powered by a hydrogen fuel cell. As on many previous occasions, Messer France also supported this innovative project. In May 2013, "Cityjoule" took part in the Shell Ecomarathon Europe competition in Rotterdam and won in the "Urban Concept" category.

Miroslav Rasic and Chi Thanh Nghe from the Frankfurt am Main University of Applied Sciences were awarded in 2013 the Hans Messer Prize 2012 by the Frankfurt am Main Chamber of Commerce. Miroslav Rasic received the top grade of 1.0 for his final-year thesis on "Innovation protection and management in service companies". Chi Thanh Nghe's bachelor thesis was also awarded the top grade. He had developed a microprocessor-based

measuring instrument with relevant software for process integration. The Hans Messer Prize has been awarded since 1987.

In September 2013, the Goethe University in Frankfurt am Main awarded the title of Honorary Senator to Stefan Messer as the representative of the Board of Trustees of the Adolf Messer Foundation, a foundation set up by the Messer family. On behalf of the foundation, Stefan Messer has for many years supported outstanding research in the natural sciences and medicine at the Goethe University.

## Social commitment

Messer Slovenija has a particularly family-friendly staff policy, which has been recognized with the award of the "Family Friendly Enterprise" certificate. In 2013, Messer Slovenija commissioned a youth organization to run a holiday camp for school-age children of employees as well as of non-employees. Messer sponsored the holiday for the children of its staff. Thus, in August 2013, 14 children experienced a fun-packed week of action in Poreč on Croatia's Adriatic coast.

Messer sponsored the hydrogen scooter race at the 'Hello Hydrogen' event in 2013. Handicapped athletes also took part in the race, which was held in Paris. The previous year's world record was broken again: the winning team managed to travel 545 kilometres on just 18 litres of hydrogen.

In March 2013, our Vietnamese colleagues took part in "Earth Hour", a global environmental initiative, by planting numerous trees at the company site in Binh Duong. The aim of the event, which was brought into being in 2007 in Sydney, Australia, is to raise people's environmental awareness.

In 2013, Messer in Spain carried out the solidarity initiative "The Solidarity Kings". As part of this Christmas initiative, the staff donated toys, which were then distributed to children's homes and charitable organizations in cooperation with "Jove Cambre de Tarragona" (an organization of young entrepreneurs). Thanks to this commitment, the Three Kings, who traditionally bring the Christmas presents in Spain, were also able to give presents to children from less well-off families.

Messer has donated and installed a medical oxygen supply system for the first Hungarian hospice for terminally ill children in Pécs. Inhalation of the oxygen aids the children's treatment. The institution, called "Dóri Ház", is run by the Szemem Fénye ('Apple of my eye') foundation and also receives financial support from Messer in Hungary.

School satchels, school material, smart boards, two notebooks and other learning tools were included in a donation to the Red Cross in Zenica. Messer paid for transportation of the relief supplies from Germany to Bosnia-Herzegovina, where they were distributed to schoolchildren from Zenica. The Sarajevo-based relief organization Smjesko – "Smile" in English – was also involved in the initiative.

Messer in France has run an information campaign to raise staff awareness of disability. This included an internal survey on the awareness of disability within the company as well as various initiatives aimed at strengthening the campaign: in Nantes, Messer employees took part in a relay race with mentally handicapped people. In Bordeaux, the Messer team organized a balloon initiative, thus contributing to the fight against cystic fibrosis, a hereditary disease of the respiratory tracts and the digestive tract. For the annual "Téléthon", a nationwide fundraiser to support research into hereditary diseases, Messer donated helium for balloons in 2013, the sale of which benefited this good cause.

# Group Management Report

of the Messer Group GmbH 2013

## General Information on the Group

### Changes in the financial year 2013

The group reporting entity changed as follows during the year under report:

#### First-time consolidations

The following entities were founded and commenced operations in 2013:

- Messer Gas Products (Nanjing) Co. Ltd., China,
- Messer Griesheim (Kunming) Gas Products Co. Ltd., China,
- Fujian Quanhui Messer Gas Products Co., Ltd., China,
- Messer Specialty Gases (Suzhou) Co. Ltd. China, and
- Sichuan Meifeng Messer Gas Products Co. Ltd., China, which – due to lack of control (Messer Group holds 50 % of the shares) – is accounted for in the consolidated financial statements as an investment using the equity method.

#### Successive purchases of shares

During the financial year 2013, Messer Group GmbH increased its shareholding in Messer Polska Sp. z o.o., Poland, from 99.91 % to 99.97 %. The difference amount arising on consolidation was not material.

Messer Group GmbH holds 75 % of the shares of Messer MOL Gáz Kft., Hungary. On December 19, 2013 Messer Hungarogáz Kft., Hungary, acquired the remaining 25 % of the shares, as a result of which the Messer Group's shareholding increased from 75 % to 100 %. A credit difference of K€ 462 arose on the consolidation of these additional shares and was transferred (without income statement impact) to group reserves.

#### Deconsolidations

Messer Hellas S.A., Greece, was deconsolidated with effect from June 30, 2013. Messer Group GmbH holds 100 % of the shares of Messer Hellas S.A., which sold its entire business to Air Liquide Hellas S.A. in a contract dated July 7, 2007 („APA“) as part of an asset deal. Under the terms of the APA, Messer Group GmbH guaranteed to Air Liquide Hellas S.A. that it would provide finance to ensure that Messer Hellas S.A. would remain in business for five years and would be kept solvent.

Since the expiry of this contract term on July 9, 2012, the business of Messer Hellas S.A. has been dormant. The entity's only activities at that time consisted of meeting the contract terms of the APA which were still in force and bringing or defending a number of lawsuits. For this reason, two employees were appointed and an external law firm was briefed.

After July 9, 2012, the Messer Group decided, with effect from September 1, 2012, not to make any further funds available to finance the protracted litigation. Messer Hellas S.A. thereupon became insolvent and insolvency proceedings were opened in 2013. Control of Messer Hellas S.A. was therefore handed over by Messer Group GmbH to an external insolvency administrator and it was deconsolidated with effect from June 30, 2013.

As of June 30, 2013, Messer Hellas S.A. had negative equity of K€ 7,714, which corresponded to payables to Messer Finance S.A. amounting to K€ 5,444 and payables to third parties (including provisions allocated for this purpose) amounting to K€ 2,270. Due to the insolvency proceedings opened and the transfer to the insolvency administrator, Messer Group GmbH is no longer required to assume liability for this K€ 2,270 of debt. From a consolidation point of view, this resulted in a deconsolidation gain, which was recognized in other operating income at June 30, 2013.

## Other

In March 2013 Messer Bleona L.L.C., Kosovo, changed its name to Messer GTM L.L.C.

## Financial performance indicators

For control purposes, the Messer Group mainly uses parameters based on operating performance indicators derived from the income statement (sales, EBITDA) and from capital expenditure, net debt and ROCE indicators. Further explanations and the make-up of the indicators are provided in the sections on earnings performance and financial position.

## Non-financial performance indicators

Safety, environmental protection and quality („SHEQ“) have been firmly embedded in Messer’s guiding principles since its foundation in 1898 and continue to have the utmost priority in the operations of the family-owned company. Messer is aware that well-organized safety and quality guidelines form the basis for dealing safely with operational risks and improving operational performance. For this reason, the health and safety of our workforce and the protection of the environment are firmly embedded in the Group’s total quality management systems, as reflected in various Messer Group Standards. 76% of our production facilities and filling plants in Europe have already been awarded ISO 9001 certification.

To take account of the growing importance of ensuring a healthy environment, social justice and effective business management, the Messer Group has embarked on the introduction of a system of Corporate Responsibility Management (“CRM”). CRM follows a long-term approach and will contribute to the sustainable development of Messer. To this end, the Messer Group has also enhanced its SHEQ performance indicator system.

During the past financial year, 602 SHEQ-related inspections and checks were carried out throughout the Messer Group (of which 513 in Europe), resulting in more than 4,000 different improvement measures.

In addition, 367 ideas and suggestions for improvements were submitted by our staff members throughout the Messer Group (of which 156 in Europe). The suggestion rate within the Messer Group therefore stood at 0.07 ideas per employee.

## Occupational safety

Occupational safety is of the utmost importance for all Messer companies. The Messer safety guidelines clearly reflect our position: "All industrial illnesses, injuries and accidents are avoidable".

Messer uses its global management system to identify and control potential operational risks. The principles of this system are carefully documented in a SHE manual and cover all safety-relevant areas: risk management, safety training, safety inspections, personal protective equipment, communication safety, accident investigations, etc. In recent years, a large number of SHEQ audits have been carried out to ensure compliance with these guidelines.

During the financial year 2013, eight safety audits were conducted in six countries, as well as 93 other internal and external audits to ensure compliance with the SHEQ standards in all of the Messer Group's operations. The success of the safety guidelines is assessed by means of annual performance indicators: working accidents causing lost days and accident frequency (number of working accidents causing lost days per million hours worked) and accident severity (days lost per million hours worked).

In 2013, 38 working accidents causing lost days were reported. Accident frequency has therefore risen again. Additional efforts are therefore needed to raise safety levels. The good news is that the level of accident severity, at 61.3 days lost per million hours worked, has fallen.

	2007	2008	2009	2010	2011	2012	2013
Working accidents causing lost days	17	16	17	29	12	23	38
Accident frequency	2.1	1.9	1.9	2.9	1.2	2.2	3.6
Accident severity	64.8	61.8	60.6	47.5	44.5	74.4	61.3

Unfortunately, two fatal accidents also occurred during 2013: One employee lost his life in a tragic explosion in an acetylene plant and another employee died in a road accident.

Although the general trend is at a low level, the Messer Group's accident statistics fail to match up to the average for the European technical gases industry. For this reason, the management decided in 2013 to conduct a new safety campaign to avoid working accidents at all sites. The aim of this campaign is to improve occupational safety and to raise employee awareness of a safe working environment, especially at production sites. The focus is placed in particular on the prevention of working accidents which are attributable to a breach of safety guidelines or negligence and carelessness. Ultimately, all occupational illnesses, injuries and accidents are avoidable.

To open the campaign, on September 13, 2013, Messer launched an International Year of Safety at Work. "This was not planned" is the motto of the campaign, which aims first and foremost to improve safety by raising awareness of hazardous situations in the workplace and when travelling to and from work. The aim is to ensure early recognition of critical situations that can lead to accidents. The title of the campaign "This was not planned" is to draw attention to the fact that accidents do not only have a negative impact on business plans. The International Year of Safety was rung in quite literally by setting

off a practice alarm without notifying staff. At 11 o'clock local time, all 120 Messer locations in Europe, Asia and Peru were evacuated. Over 5,000 employees had their work interrupted unexpectedly and were given their annual safety instructions. With this spontaneous interruption, it was demonstrated at the outset that accidents not only result in operational downtimes, but can also have an adverse impact on, and even destroy, the plans that families make for their lives. All evacuations went smoothly.

Alongside individual measures, such as safety inspections, tailor-made training programs and risk analyses, as well as safety audits carried out at various locations, there was also a poster campaign in over 30 languages. The poster images, which were photographed in our own areas of operation, such as gas filling plants, cylinder storage locations or offices, depict accident situations that are intended to encourage identification on the part of the viewer: an activated safety shower, a safety helmet knocked to the ground or a damaged gas tanker. Messer is not afraid to display its "Messer – Gases for Life" brand on the poster images. The posters make it clear that it is not about image, but about people's sense of responsibility, which is a dynamic process that is subject to continuous improvement. Workers' own health and that of their colleagues serves as an incentive in this regard – it is one of the most precious assets and is irreplaceable.

Messer is an active member of the European Industrial Gases Association (EIGA) and our experts actively exchange experience, knowledge and what they have learnt from incidents with the EIGA. Messer was presented, as in previous years, with various safety awards for exemplary work safety in 2013. For example, its subsidiary in Bosnia-Herzegovina won a Gold Safety Award in recognition of 15 years of accident-free operations. A bronze award was received by the Messer subsidiary in France for five years of accident-free operations and our company in Hungary was commended for the lowest accident frequency in the past twelve months within EIGA category 3.

The dissemination of safety information is a matter of particular concern to us. In the past financial year, a safety newsletter and three detailed descriptions of incidents or near-accidents were distributed.

### Transport safety

Since most of the products sold by the Messer Group are transported by road, increasing safety awareness and achieving a greater understanding of risks are objectives which can be considered just as important as improving safety measures.

The transportation of gases, equipment on the road and customer deliveries are activities which involve the most risks in the gases industry. For this reason, the Messer Group places particular emphasis on transport safety. In addition to the laws and regulations on operating a vehicle fleet (minimum standard), the Messer Group has found that it has proved invaluable to follow a transport safety plan of its own.

A large proportion of the drivers working for Messer are outsourced to transport firms, with which the prime responsibility for training drivers according to the ADR rests. Messer has also drawn up its own modular driver training package, which is used to train all drivers. So far, some 75% (1,186) of the drivers have participated in this standardized training scheme. The main themes covered by the training are:

- Laws and regulations (ADR and national provisions)
- Defensive, economical driving
- Technical aspects (hazards arising from product, vehicle and tank technology, vehicle checks, safety technology)
- Accident avoidance
- What to do in the case of an accident

In addition, all drivers receive a driver manual specific to their work (bulk, cylinders or service vehicles). This ensures that the driver has immediate access to all important information relating to his activity.

With the main aim of monitoring progress, Messer has introduced its own system of statistics to measure road accidents. According to these statistics, the number of avoidable road accidents has fallen from 23 accidents in 2012 to 19 accidents in 2013.

Furthermore, Messer specialists are actively involved in improving transport safety in all relevant bodies of the EIGA and to a large extent too in the national associations.

Through ongoing integration of the new findings and experiences in training and the driver manual, the Messer Group is also making its contribution to a steady reduction in the number of transport incidents.

## Employees and corporate culture

### Worldwide workforce

The Messer Group had an average worldwide workforce in 2013 of 5,400 employees, each contributing to the success of the business with his or her extensive knowledge, ideas, know-how, motivation, attitude to work, active commitment and in many cases longstanding experience. In the previous year, the Group had an average worldwide workforce of 5,339 employees. The slight increase in 2013 was due in particular to the growth market China, where new jobs continue to be created.

The average number of employees per region was as follows:

	Jan. 1 - Dec. 31. 2013	Jan. 1 - Dec. 31. 2012
Western Europe	985	983
Central Europe	730	739
South-Eastern Europe	1,368	1,370
China, Vietnam and Peru	2,317	2,247
<b>Total numbers of employees</b>	<b>5,400</b>	<b>5,339</b>

As at December 31, 2013 approximately 91 % of our employees were working in non-German-speaking countries.

### Compensation

Personnel expense in the year under report amounted to K€ 170,363 (2012: K€ 165,483). Variable remuneration components are designed to encourage employees to focus on the Group's strategic objectives. To this end, a uniform bonus system has been introduced for managers and white-collar workers. This enables staff to earn up to four additional gross monthly salaries if they meet general targets (70%) and personal targets (30%) depending on the hierarchical level. Parallel bonus systems are also in place for blue-collar workers.

### Training and the Academy Messer Group

The expertise and experience of our workforce of well-motivated and well-qualified employees provides the foundation for the Messer Group's success. They are constantly being required to rise to the practical challenge of highly demanding tasks and projects, at which stage they can also draw on the knowledge gained through regular attendance at internal and external training courses, specifically designed to meet their needs. This combined approach gives them the wherewithal to master the vast array of constantly changing work requirements, while at the same time enhancing the professional manner with which they go about their work. A transparent leadership style, based on an „open door“ principle, allows for open communication and represents a core element of our management culture.

We endeavor to make school pupils and students aware of the potential of the fascinating world of gases, also with an eye to winning well-trained staff in the future. It is considered to be a crucial aspect of business to develop employee skills from an early stage. The Messer Group is committed to providing educational and vocational training opportunities to young people, based on the tenet that investment in the next generation is essential for the future competitiveness and underlying strength of our business. In Germany we offer vocational training to ambitious school and college leavers in the

areas of industrial business studies, mechatronics, IT data processing and IT support. Training takes place at various sites, in some cases supplemented by several weeks spent at international locations.

The Academy Messer Group was established to expand the range of systematic development programs available to employees. The Academy Messer Group offers various training courses and lectures, including the annual autumn lectures for our managers and junior executives. Spring 2013 saw the launch of the Junior Circle with 18 participants from various national companies and specialist areas. The focus will be on the dissemination of knowledge by our own experts from various functions within the organization. Aspiring managers will attend five one-week modules covering various fields of focus, including inter-cultural training. The principal objective of the Messer Academy will be to provide an insight into our products, technical solutions, structures and specific internal issues based on a comprehensive and practice-oriented approach. Effective networking of the participants is also a primary concern. Training in the Junior Circle is organized over a two-year period, with candidates being selected and invited directly by the management under an internal application procedure. Furthermore, work is in progress in cooperation with the technical departments on modular training courses for our experts with a view to the forthcoming annual meetings.

The Messer Group has drawn up specific training plans for some 380 employees, while the local HR departments are in charge of the others. The need for training is in any case one of the topics raised during the annual employee performance reviews.

An “English offensive” has been launched worldwide to increase knowledge of English in the Group. In each company, employees, split into three groups, have the opportunity to improve their language skills.

Each year, the succession planning for managers and technical specialists is updated. Here too, the need for training is determined. Alongside the horizontal succession planning within each company, vertical cross-company succession planning will also be carried out next year for the various specialist areas.

### Uniform employer branding

The Messer Group’s Employer Branding project is an international program aimed at depicting a corporate culture that is easy to recognize and understand. It is also seen as a way of tying in new and current employees more closely to the business as well as a means of getting potential employees to be enthusiastic about us, our products and our solutions. The job ads to recruit new employees have already been adapted groupwide, achieving the anticipated result of receiving fewer, but more qualified applicants. Image promotion films and posters have been completed and work is in progress on the Group’s website, including an attractive reorganization of our career page, and on optimizing our intranet site. In this way, by spring 2014 at the latest, the Messer Group, will be able to showcase itself as an international, versatile, attractive employer using a uniform employer branding approach.

### Environmental management

The environment must be protected at all times and in all places. As a company, Messer takes this obligation very seriously and employs its global management system to further the protection of the environment. Internal environmental protection guidelines are documented in the Messer Group’s SHEQ manual. These and the environmental management systems in place at all the subsidiaries follow international standard ISO 14001 and recommendations of the European Industrial Gases Asso-

ciation EIGA (for example, IGA IGC Doc. 107 — Guidelines on Environmental Management Systems). 33% of Messer Group subsidiaries have already obtained external certification of their environmental management systems (with a rising trend).

Efficient use of energy goes without saying at Messer and is clearly in the Group's own interests. With the main aims of cost-cutting and economic use of resources, energy management is an ongoing process which also makes a contribution to reducing our CO<sub>2</sub> emissions. Our energy management system has been certified in accordance with ISO 50001 at all Messer production facilities in Germany and Spain.

Messer uses atmospheric air and electrical power at its production sites as the main raw materials to produce the air gases nitrogen, oxygen and argon. Production by means of air separation plants accounts for over 75 % of total energy consumption. Particular emphasis is therefore placed on the ongoing improvement of energy efficiency. Accordingly, Messer has assigned the specific task to a global energy manager to increase the energy efficiency of the Group's air separation plants.

Continuous monitoring of plant efficiency brings to light any energy variations and enables potential for improvement to be identified. Working together with local managers, a wide range of projects have already been launched to improve energy efficiency.

The key environmental data of Messer's production activities during the past year are as follows:

The volumes of gases produced rose by 6 % compared to the previous year, as a result of which the electricity consumption of the Group's air separation plants also rose. Energy consumption per cubic meter of gas produced (energy efficiency measurement indicator) was reduced by 4 %.

### Health management

Messer is aware of its social responsibility and its impact on employees, as employees play a decisive role in all work processes. Messer therefore aims to ensure the health and well-being of the individual through its working standards. This was clearly demonstrated by a health campaign organized by the Messer Group. Ideas for improvement measures and practices are regularly examined and shared by staff at in-house conferences. For instance, Messer introduced various health programs, such as free access to fitness and wellness centers for employees and their families. Measures of this kind are designed to promote a healthy lifestyle among employees. The subsidiary in Slovenia was even awarded the "Family-friendly company" certificate for this.

Furthermore, a comprehensive training program for handling gas cylinders was initiated, with a view not only to reducing accidents associated with this, but also to improving the prevention of industrial diseases such as muscular-skeletal disorders.

During the swine fever epidemic (N1H1), Messer, as part of its crisis management, developed a worldwide plan with the objective of protecting employees' health in the event of a pandemic.

Messer also decided to analyze for the first time the total lost days caused by illness. The average number of days lost through illness per employee came to seven in 2013, which is 90 % up on the previous year (3.7).

## Customer satisfaction

Most of the Messer Group companies are certificated in accordance with ISO 9001. This standard lays down the requirements for the Group's quality management system, which include regular customer satisfaction surveys. Our customers are aware that where gases are concerned there is far more at stake than merely the price of the products. The logistics, the quality of the gases and the technical equipment, as well as the safety standards are considered to be particularly important.

Since the beginning of 2011, several Messer Group companies conduct customer satisfaction surveys using an online tool. More than a thousand customers from Germany, Austria, Italy, Hungary, Spain, the Czech Republic and Bulgaria have already taken part in them. The high response rate shows that our customers appreciate this opportunity to provide feedback.

## Report on economic position

### General and sector-specific environment

The industrial gases business is not concentrated on a single sector. The various products, services and technologies are used in almost all branches of industry, in foodstuffs technology, medicine and research and science. As a cross-sector indicator, gross domestic product (GDP) is therefore relevant to measure the economic development of the Messer Group.

The rate of growth of the global economy continued to slow down in 2013. According to data published by the International Monetary Fund (IMF)<sup>1</sup> and the World Bank<sup>2</sup>, the global economy weakened very slightly once again compared to the previous year. The IMF figures indicate that global GNP grew in real terms by 3.0 % in 2013, with developed industrial countries (+ 1.3 %) and emerging and developing markets (4.7 %) again faring very differently. The overall rate of growth was therefore down by 0.1 percentage points on a year-on-year comparison. Emerging and developing markets also felt the effects of a weaker economy and the growth rate in these regions was 0.2 percentage points down on the previous year.

European economies continued to be negatively impacted by the euro debt crisis, which had started in autumn 2011 and has flared up since from time to time. The austerity measures implemented in a number of the region's countries in an attempt to consolidate public sector budgets pushed the euro area back into recession in 2012 (IMF: real GDP of negative 0.6 %). This economically testing time continued in 2013 and, according to the IMF figures, the euro area continued to contract with a further fall in real GDP of 0.4 %. According to the Organization for Economic Cooperation and Development ("OECD")<sup>3</sup>, this applied once again in particular to the southern European countries most affected by the sovereign debt crisis e.g. Italy, Slovenia and Spain, but also to countries such as the Czech Republic and the Netherlands.

In China, the real GDP growth rate has not recovered since the sharp fall in 2012 and, according to the World Bank, remained at 7.7 % in 2013, although in global terms it is still at a high level. The announcement of the change of leadership in the ruling party and the new Five-Year-Plan did not generate any perceptible impetus for growth in investments in 2013.

<sup>1</sup> World Economic Outlook, Update January 21, 2014

<sup>2</sup> Global Economic Prospects, Update January 2014

<sup>3</sup> OECD Economic Outlook – No.94, Update November 19, 2013

## Review of operations

For the Messer Group, the financial year 2013 was influenced by very modest economic growth in Europe which continues to be affected by the sovereign debt crisis in the euro area. In addition, economic conditions in China remained largely unchanged from the previous year, which was reflected in continuing sluggish economic activity and in particular in persistently low levels of steel production. These macroeconomic conditions, and especially the absence of hardware sales in 2013 – in contrast to the previous year when application of IAS 17 (in conjunction with IFRIC 4) had given rise to the recognition of such sales – resulted in the Messer Group for the first time experiencing a 5.7 % fall in sales compared to the preceding year. We therefore failed to achieve our forecast of „at least slight growth in sales of 1 %“ for 2013, primarily due to the change in the volume of hardware sales recognized in each year in accordance with IAS 17 (in conjunction with IFRIC 4). The Messer Group’s EBITDA for 2013 was 2.4 % down on the previous year. However, despite these developments, our forecast of an EBITDA margin of 20 % for 2013 was exceeded by an actual EBITDA margin of 22.5 %. The Messer Group managed to reduce its net debt by over € 8 million from K€ 449,494 at the end of previous year to K€ 441,151 at December 31, 2013. Based on financial liabilities of K€ 543,577 at the end of the reporting period, the ratio of financial liabilities to the balance sheet total was 26.4 %, which represents a significant improvement on our forecast of 29 % for 2013.

## Overall situation

### Earnings performance

Messer Group generated worldwide sales of K€ 1,026,622 in 2013 (2012: K€ 1,088,275) which can be analyzed by region as follows:

Sales	Jan. 1 - Dec. 31. 2013	Jan. 1 - Dec. 31.2012	Growth 2013
Western Europe	336,292	343,354	-2 %
China, Vietnam and Peru	330,314	375,436	-12 %
Central Europe	187,435	199,768	-6 %
South-Eastern Europe	172,581	169,717	2 %
	<b>1,026,622</b>	<b>1,088,275</b>	<b>-6 %</b>

The Messer Group’s sales in the financial year 2013 were 5.7 % down on the previous year’s figure. A key reason for the decrease was the absence of hardware sales in 2013 resulting from the application of IAS 17 (in conjunction with IFRIC 4). Hardware sales recognized in the financial year 2012 had totaled K€ 72,836. Excluding the hardware sales recognized in accordance with IAS 17 (in conjunction with IFRIC 4), sales edged up year-on-year by 1.1 %. In view of the fact that the lack of the above-mentioned hardware sales was taken into account in the forecast for 2013, sales expectations for 2013 were met. Business developed in the various regions as follows:

### Western Europe

Sales followed a largely stable trend compared to the previous year. Increases in sales in 2013 compared to the previous year, especially in Italy and Switzerland, offset declines recorded for industrial

gases operations in Belgium and Spain. In France, which accounts for the lion's share of the Messer Group's business activity in Western Europe, sales remained more or less stable in spite of the difficult economic climate in 2013. The main contribution to this was made by the CO<sub>2</sub> plant in Lacq, which was taken into service at the beginning of the year and which produces 65,000 tonnes per year of liquefied CO<sub>2</sub> for the food processing market. Our company was thereby able to further consolidate its strategic position as number two on the French CO<sub>2</sub> market.

### **China, Vietnam and Peru**

Sales in China dropped by 13 % compared to the previous year. This was attributable to the fact that no hardware sales were recognized in 2013 on the basis of the requirements of IAS 17 (in conjunction with IFRIC 4). This contrasted with the previous year when two air separation plants went into operation at the Sichuan Pangang Messer Gas Products Co. Ltd. and Xichang Pangang Messer Gas Products Co. Ltd. joint ventures, which, in line with the requirements of IAS 17 (in conjunction with IFRIC 4), resulted in a one-off sales impact of approximately € 66 million in total. Excluding the hardware sales recognized in accordance with IAS 17 (in conjunction with IFRIC 4), sales increased by 7 % compared to the previous year. Overall, the slower economic growth rate in China and the persistently low level of production of our steelworks customers had a significant impact throughout the financial year 2013.

In Vietnam sales rose once again year-on-year by a good 12 %, helped by good production capacity utilization for liquefied gases in the north of the country and by entry into CO<sub>2</sub> business in the south. In Peru, on the other hand, a slight downturn in sales (-2 %) was recorded, although this results exclusively from the approximately 5 % devaluation of the Peruvian sol against the euro.

### **Central Europe**

Compared to the previous year, sales recorded for the Central Europe region were down by 6 %. This was largely attributable to the commissioning of a nitrogen generator at Messer Tatragas s.r.o. in Slovakia in the previous year, which had resulted in 2012 in the recognition of one-time revenue amounting to 7 million from hardware sales in accordance with the requirements of IAS 17 (in conjunction with IFRIC 4). In addition to this, however, the difficult economic and business conditions in general were also felt in countries such as Austria, Slovakia and the Czech Republic. Only in Poland was the business climate more or less unaffected by these negative economic conditions in the region, resulting in a stable trend in sales from our industrial gases operations there.

### **South-Eastern Europe**

In contrast to all the other regions, the Messer Group's sales in South-Eastern Europe rose by just under 2 %, with a slight fall occurring only in Bosnia-Herzegovina. The strongest growth rates – at around 5 % in each case – were recorded in Bulgaria, Slovenia and Turkey. The increase in sales in Turkey was offset by more than 10 % by the strong devaluation of the Turkish lira against the euro. Adjusted for currency factors, sales rose sharply by 16 %. The two largest companies in the region, with registered offices in Serbia and Hungary, each recorded sales increases of approximately 1 %. Sales from business operations in Romania rose by 2 %, while sales in Croatia and Macedonia remained flat.

The Group recorded an EBITDA of K€ 231,143 for the financial year 2013 (2012: K€ 236,681).

EBITDA	Jan. 1. - Dec. 31. 2013	Jan. 1. - Dec. 31. 2012
EBIT	103,902	110,320
Amortization/ depreciation of intangible assets and property, plant and equipment	127,203	126,359
Dividend income <sup>1</sup>	38	2
<b>EBITDA</b>	<b>231,143</b>	<b>236,681</b>
Sales	1,026,622	1,088,275
Margin	22.5 %	21.8 %

<sup>1</sup> Dividend income from non-consolidated companies

The Messer Group's EBITDA for 2013 was 2 % down on the previous year. Despite this drop, our forecast of an EBITDA margin of 20 % in 2013 was exceeded by an actual EBITDA margin of 22.5 %.

### Messer Group

Overall, the Messer Group recorded a group net profit (including profit attributable to minority interests) of K€ 65,899 for the financial year 2013 (2012: K€ 62,617). The gross profit amounted to K€ 457,772 (45 % of sales) and the operating profit amounted to K€ 103,902 (10% of sales), K€ 6,418 lower than one year earlier, mainly due to the 6 % fall in sales. Impairment losses amounted to K€ 4,000 on goodwill (2012: K€ 4,348) and K€ 10,037 on property, plant and equipment and other intangible assets (2012: K€ 10,300). The entities affected have so far only recovered slowly from the financial and economic crisis and their outlook for future developments was rendered uncertain by the re-emergence of the euro debt crisis in 2011/12. For this reason, forecasts of future net cash inflows for these entities were revised down.

Profit before tax and minority interests is stated after a net interest expense of K€ 23,489, which represented an improvement of K€ 2,020 on the previous year due to the lower level of debt during the year. Other financial result for the year 2013 improved by K€ 7,724 compared to the previous year, mainly due to the higher fair values of those derivatives not designated as hedges (and for which a loss was recorded in the previous year). Taking into account all of the above factors, the group net profit after deduction of profit attributable to minority interests totaled K€ 45,980 and was therefore K€ 6,076 higher than in the previous year.

## Financial position

Group Treasury is responsible for overall liquidity, interest rate and currency management. The most important objective of Group Treasury is to ensure that a minimum level of liquidity is always available to ensure solvency at all times. High levels of liquid funds help to improve our flexibility, security and independence. If necessary, we can call on additional liquidity potential under further various available credit lines amounting to € 92.4 million.

## Financing

Net debt as of December 31, 2013 stood at K€ 441,151 (2012: K€ 449,494) and is broken down as follows:

Net debt	Dec. 31, 2013	Dec. 31, 2012	Change 2013
Financial liabilities	543,577	564,521	
Cash and cash equivalents	(102,426)	(115,027)	
	<b>441,151</b>	<b>449,494</b>	<b>-2 %</b>

The Messer Group managed to reduce its net debt by K€ 8,343 from K€ 449,494 at the end of previous year to K€ 441,151 at December 31, 2013. Based on financial liabilities of K€ 543,577 at the end of the reporting period, the ratio of financial liabilities to the balance sheet total was 26.4 %, which represents a significant improvement on our forecast of 29 % for 2013.

In 2005 the Messer Group took up a US Private Placement („USPP I“) amounting to a total of USD 252 million with various investors. An amount of USD 116.5 million fell due on August 2, 2012 and an amount of USD 135.5 million (subject to an interest rate of 5.46 % p.a.) falls due on August 2, 2015.

The second US Private Placement (“USPP II“) dated June 8, 2011 was concluded with various banks and has a term of ten years. USPP II falls due for payment at the end of the term and is broken down as follows:

Amount	Interest rate p. a.
€ 80.0 million	4.55 %
€ 80.0 million	4.6975 %
USD 57.0 million	4.86 %

The Revolving Facility Agreement (“RFA“) dated June 8, 2011 and amended on July 11, 2012 for an amount of € 150 million falls due for payment on August 2, 2015 and has been made available by various financial institutions. Interest is based on IBOR (Interbank Offered Rate) in the currency in which amounts are drawn down plus a margin, depending on the ratio of net debt / EBITDA.

On August 2, 2012 the Messer Group refinanced the portion of the USPP I that fell due on that date. The following terms and conditions apply to the credit arrangements in conjunction with the refinancing: US Private Placement („USPP III“) for USD 100 million and € 46.3 million. USPP III falls due for payment at the end of the term and is broken down as follows:

Amount	Interest rate p. a.	Maturity
K€ 23.148	3.680 %	August 2, 2022
K€ 23.148	3.680 %	August 2, 2022
K'USD 12.500	4.040 %	August 2, 2022
K'USD 25.000	4.160 %	August 2, 2024
K'USD 25.000	4.430 %	August 2, 2027
K'USD 37.500	4.040 %	August 2, 2022

The USD-denominated amounts were fully hedged by cross currency interest rate swaps at a rate of € 1: USD 1.32626, therefore giving an equivalent of K€ 75,400.

USPP III is secured by the same collateral given to secure existing credits. In this context, shares in individual group entities have been pledged and guarantees provided by individual group entities. USPP I and the RFA fall due for payment on August 2, 2015. If all covenants are being complied with at that date, the USPP II and USPP III lenders will release the collateral given. One point worthy of mention is that the net debt (i.e. gross debt less liquid funds)/EBITDA covenant has now been expanded to include a computation for the Messer Group excluding China.

### Cash flow statement

Abridged version in K€	Jan. 1. - Dec. 31. 2013	Jan. 1. - Dec. 31. 2012
<b>Profit before tax</b>	<b>86,458</b>	<b>83,556</b>
Cash flows from operating activities	217,771	181,965
Cash flows from investing activities	(181,627)	(159,122)
Cash flows from financing activities	(45,495)	(14,296)
<b>Change in cash and cash equivalents</b>	<b>(9,351)</b>	<b>8,547</b>
<b>Cash and cash equivalents at the beginning of the period</b>	<b>115,027</b>	<b>107,489</b>
Currency translation impact on cash and cash equivalents	(2,555)	(1,009)
Cash, change in group reporting entity	(21)	–
Cash and cash equivalents classified as held for sale	(674)	–
<b>at the end of the period</b>	<b>102,426</b>	<b>115,027</b>

At K€ 217,771, cash flows from operating activities were K€ 35,806 higher than in the previous year. Operating cash flow in the previous year was negatively impacted by a number of items, most important of which was a K€ 21,191 increase in finance lease assets due to the application of IAS 17 (in conjunction with IFRIC 4). Expenditure on the construction of new air separation plants which fall under the requirements of IAS 17 (in conjunction with IFRIC 4) was lower overall in the financial year 2013.

The increase in cash outflows for investing activities again reflected the continued high level of investments made by the Messer Group. During the period under report, capital expenditure rose again, up K€ 20,718 from the previous year. This was offset by proceeds from the disposal of fixed assets amounting to K€ 5,079.

Cash outflows from financing activities amounted to K€ 45,495, which was K€ 31,199 higher than the previous year's figure and was attributable to various factors.

The cash outflow of K€ 45,495 includes K€ 5,728 relating to the net reduction of financial debt, which contrasts with new debt raised in 2012 amounting to K€ 19,815. Dividend payments to other shareholders amounted to K€ 15,313. The parent company withdrew K€ 9,960 from capital reserves during the financial year.

These outflows were offset by payments from other shareholders amounting to K€ 2,012 and capital reductions at the level of affiliated companies amounting to K€ 6,088. The Messer Group's cash and cash equivalents, at K€ 102,426, were therefore lower than their previous year's level of K€ 115,027.

In 2014, the Messer Group will require further capital to fund its expanding business operations and scheduled capital expenditure and to repay loans and interest as they fall due, even though our focus in the medium-term will be to consolidate net debt levels relating to operations outside China. These funds will be generated out of cash flows from operating activities, existing funds and credit lines available to the Group. The Messer Group's strong position in the various markets in which it already operates, combined with expansion into new markets, will enable us to maintain our robust financial position.

The Group has committed to purchase or invest in the construction and maintenance of various production facilities. Obligations under these agreements represent commitments to purchase plant and equipment at market prices in the future. The Group is also party to long-term contracts which give rise to obligations. As of December 31, 2013, purchase and capital expenditure commitments and long-term contracts amounted to K€ 126,123 (2012: K€ 136,026).

### Capital expenditure

Capital expenditure is aimed at safeguarding existing business and opening up opportunities for growth. In accordance with normal business principles, the Messer Group invests primarily in projects which will secure supply capabilities and/or which create opportunities for profitable growth.

The Messer Group's capital expenditure on property, plant and equipment and financial investments totaled € 188.3 million. The capital expenditure ratio corresponds to 18.3 % of sales. Also worthy of mention is an amount of € 9.2 million invested in production facilities for customer supplies which – following their completion in 2014 – will require to be treated as a finance lease arrangement in accordance with IAS 17 (in conjunction with IFRIC 4). A large proportion of capital expenditure in 2013 related, as in the previous year, to the upgrading of production plants.

Capital expenditure by region was as follows:

Capital expenditure	Jan. 1. – Dec. 31. 2013 in K€	Jan. 1. – Dec. 31. 2012 in K€
Western Europe	43,255	55,308
China, Vietnam and Peru	90,424	63,407
Central Europe	23,984	27,495
South-Eastern Europe	30,629	21,151
	<b>188,292</b>	<b>167,361</b>

Capital expenditure in Europe is currently focused on investment in distribution channels and selected growth projects, The latter include the air separation plant newly taken into service in September 2013 plus the related capacity expansion in Austria and the commissioning planned for the beginning of 2014 of a 15,000 Nm<sup>3</sup>/h liquefaction plant at the Tarragona site, which should lead to a further increase in the Group's share of the liquefied gases market in Spain. At the beginning of 2013, Messer France commissioned a 65,000 tonnes per year CO<sub>2</sub> production plant in Lacq, further consolidating its strate-

gic position as number two on the French CO<sub>2</sub> market. In Serbia, a start was made on the construction of a second air separation plant to supply an existing on-site customer. In Poland, construction work is now under way for a second air separation plant for liquefied gases, which enables us to continue to benefit from the country's strong economic development. In Germany, a plot of land was acquired in Siegen, where the filling plant of Messer Industriegase GmbH is located. This acquisition will enable filling capacity to be developed at that site in order to meet increased market demand. Furthermore, investments were made in various generator projects for the on-site supply of customers in Germany, Poland, Slovakia, the Czech Republic and Hungary.

Messer continues to push ahead with several investment projects in China, so as to enable it to follow the expansion strategies of its on-site customers and participate in the general growth of this market. A second new air separation plant with a capacity of 40,000 Nm<sup>3</sup>/h is currently being constructed at the main site of our joint venture partner Pangang in Panzhihua. As well as supplying products for the Chinese steel industry, Messer is also raising the tempo at which liquefied gases business in China is being expanded. Construction work on new plants for the bulk gases market is being carried out at several suitable sites; for example, the new joint venture Chongqing Pangang Messer Gas Products Co. Ltd. invested in an air separation plant at a new chemical park in Changshou in Chongqing province, which was taken into service at the beginning of 2014. This will be Messer's first air separation plant in Chongqing province, and will open up opportunities to forge new business relations with chemical sector clients and generally benefit from the market potential of this province. The second air separation plant of Messer Gas Products (Zhangjiagang) Co. Ltd. in a chemical park near Shanghai was taken into service in May 2013 and at the start of 2014 a further air separation plant will be commissioned in an industrial park of the city of Shunde, in Guangdong province, with a view to participating in the local dynamically growing liquefied gases market. Further air separation plants to expand the liquefied gases market are under construction in Sichuan, Yunnan and Zhejiang provinces. Moreover, investments have been made to broaden the base of our operations in China, notably by entering the CO<sub>2</sub> business. Construction has commenced of the first CO<sub>2</sub> plant in Mianyang in Sichuan province via a joint venture with Sichuan Meifeng Chemistry Co. Ltd., a Chinese stock exchange-listed company in the chemicals sector. Furthermore, construction work has started on a state-of-the-art specialty gasworks in Wujiang in Jiangsu province.

In Vietnam, the second air separation plant for the on-site customer Hoa Phat, which will provide additional production capacities for the liquefied gases market in the north of Vietnam, will be taken into service at the beginning of 2014.

### Net assets

The consolidated financial statements are drawn up in accordance with International Financial Reporting Standards (IFRS), as applicable in the EU. The balance sheet total at December 31, 2013 amounted to K€ 2,060,291, of which the largest proportion (80 %) related to non-current assets (2012: 81 %). Tangible and intangible assets represented the largest combined item on the assets side of the balance sheet (70 %). The carrying amount of these two items together increased by K€ 17,152 as a result of further investments. Non-current lease receivables and cash at banks account for 7 % and 5 % respectively of total assets.

At 56 %, the equity ratio (including minority interests) remained at a similar level to the previous year. Gross debt accounted for 26 % of the balance sheet total and decreased by K€ 20,944 compared to one year earlier.

### Cost of capital percentage for employed capital

The ROCE for the past year was 8.01 %, calculated as follows:

ROCE	Jan. 1. - Dec. 31. 2013	Jan. 1. - Dec. 31. 2012
EBIT	103,902	110,320
+ Amortization of/Impairment losses on goodwill	4,000	4,348
<b>EBIT adjusted</b>	<b>107,902</b>	<b>114,668</b>
: Capital employed	1,346,913	1,341,206
<b>ROCE in %</b>	<b>8.01 %</b>	<b>8.55 %</b>
<b>Derivation of capital employed from the balance sheet</b>		
Other intangible assets and property, plant and equipment	1,127,508	1,099,304
Finance lease receivables	138,974	149,122
Net working capital	80,431	92,780
<b>Capital employed</b>	<b>1,346,913</b>	<b>1,341,206</b>

### Operating assets

Net working capital stood at K€ 80,431 at the end of the reporting period (2012: K€ 92,780) and comprised the following:

Net working capital	Dec. 31. 2013	Dec. 31. 2012
Inventories	57,173	52,048
Trade receivables	164,906	172,654
Trade payables	(137,797)	(129,014)
Advance payments received	(3,851)	(2,908)
	<b>80,431</b>	<b>92,780</b>

The decrease in net working capital compared to the previous year was mainly attributable to lower trade receivables and higher trade payables. The ratio of inventories less advance payments from customers plus receivables on the one hand and trade payables on the other was, as in the previous year, approximately 2:1; the ratio of net working capital to sales went down from 9 % to 8 %.

Receivables management measures initiated in 2012 enabled us to maintain DSO (Days of Sales Outstanding) in 2013 at roughly the previous year's level (58 days at December 31, 2013 compared to 57 days one year earlier).

### Overall statement on the Group's financial condition

Despite the challenging economic climate, the Messer Group was able – excluding the one-time hardware sales recognized in accordance with the requirements of IAS 17 (in conjunction with IFRIC 4) – to increase its worldwide sales year-on-year by 1.1%. The improvement in the operating EBITDA margin from 21.8 % to 22.5 % is particularly gratifying, whereas the EBITDA for the Messer Group, at € 231 million, was slightly down on the previous year's figure of € 237 million.

The Messer Group's return on capital employed (ROCE) amounted to 8.0% (2012: 8.6 %). Comparison with the previous year shows that the level of the operating result has fallen slightly, although accompanied by further net increase in property, plant and equipment.

Good progress is being made in consolidating net debt levels relating to our operations outside China, which currently forms the focus of our medium-term planning. In 2013, for instance, net debt (excluding China) relevant for the net debt covenants was reduced by € 14 million to € 432 million. This is also reflected in the net debt figure of € 441 million for the Messer Group as a whole, which – for the first time – was a good € 8 million lower than at the end of the preceding year.

These developments represent good progress and are testimony to the stability and sustainability of the Group's business model. The Messer Group, operating in the two principal regions of Europe and China, has a global presence and good regional diversification in a number of countries or provinces within the two principal regions, so that falling demand in individual markets or downturns in specific sectors can often be offset.

## Events after the end of the reporting period

In accordance with a sales contract signed on March 10, 2014 and completed on March 11, 2014, the Messer Group sold its industrial gases business in Italy for € 40 million to an Italian joint venture, in which the Praxair Group holds a stake. Based on the sales price of € 40 million, the transaction is expected to give rise to a gain of € 17.7 million.

In accordance with a sales contract signed on March 10, 2014 and completed on March 11, 2014, the Messer Group acquired 100 % of the industrial gases business of Praxair SAS, France, for a price of € 40 million. The aim of the transactions is to increase market share and sales in France. Synergies and rationalization will boost profitability in France considerably.

Reciprocal long-term product supply contracts were signed in conjunction with the two transactions. Neither transaction requires notification or approval under competition law either at EU level or in Italy and France.

## Outlook

### Macroeconomic and sector-specific risks

With the situation on global financial markets continuing to ease in 2013 and economic indicators in the USA and Europe showing signs of improvement, especially in the second half of the year, confidence in expectations for 2014 rose over the course of 2013. This was evident in the forecasts published at the beginning of 2014 by the world's leading economic institutes, among them the IMF and the World Bank. These forecasts now predict that the growth rate will be slightly higher than in 2013 in view of the fact that some of the more acute risks appear to be receding. The IMF forecasts that worldwide GDP in 2014 will grow in real terms by 3.7 %, an improvement of 0.7 percentage points over the previous year, while the World Bank expects the growth rate to accelerate by 0.8 percentage points from 2.4 % to 3.2 %. Both organizations expect the advanced economies to be the driving force for the increase in global GDP, with the euro area – after nearly two years of recession – being attributed the greatest potential for improvement: this region is expected to grow by a good 1 % in real terms in 2014. Measures initiated by the US Federal Reserve at the end of 2013 to taper the scale of quantitative easing are fuelling expectations of a change in international capital market flows, as seen already in the first outflows of capital from a number of emerging markets and developing economies. The consequence in 2014 is likely to be a slowdown in the growth of the countries affected and a stronger economic recovery in the advanced economies. The IMF and the World Bank estimate that economic output (GDP) in developed industrial countries will increase by a good 1 %, whereas the emerging and developing markets will only see a rise of approximately 0.5 %. Nevertheless, real GDP growth in the emerging markets and developing economies of around 5 % overall will continue to outstrip that of the advanced economies where the figure is expected to land at approximately 2 % overall. The world economy remains nevertheless vulnerable, above all because of the fragile financial and sovereign debt situation, primarily in the euro area but also in the USA and Japan. The identification and rigorous implementation of a medium-term strategy to reduce debt levels – just as importantly for the USA and Japan as for the euro area – remains a necessity if economic growth is to become more stable in the future. Both the IMF and the World Bank expect commodities prices to continue to fall in 2014, although not so sharply. On the other hand, a modest rise in the inflation rate is forecasted for 2014 in the advanced economies.

Furthermore, our forecast is based on no corrective payment having to be made in conjunction with the renewable energy (EEG) levy. Moreover, on the basis of assertions made by the Serbian State, we have assumed that the operations of the steel works will not be discontinued. We refer to the Risk Report for further information.

### Outlook for the Messer Group

Our focus in the medium term is still to consolidate net debt levels for operations outside China, with the aim of attaining a ratio of net financial debt to EBITDA not exceeding 2.5 by the end of 2015. As well as the pursuit of investment activities at a level conducive to achieving this aim, we also intend to raise sales at a pace appropriate for the prevailing economic conditions and to take advantage of opportunities, wherever they arise, in order to stabilize or improve the profitability of the Messer Group. To this end, an internal profitability program was developed and implemented in 2013, with the emphasis placed on the liquefied and cylinder gas business.

We view economic prospects in Europe with cautious optimism. The main focus in this region will therefore be on further exploiting the production capacities created in recent years, in particular in Belgium, Germany, France, Austria, Spain and Turkey. Future investment decisions will be taken in line with the stated strategy of consolidating net debt levels in the medium term.

The China region accounted for 30 % of net sales and more than one third of the EBITDA of the Messer Group in 2013. The net debt/ EBITDA ratio for the China region is well below 0.5 (Messer Group: 1.9), underlining the importance of Chinese operations for the sales, profitability and internal financing of the Messer Group. We remain confident in our prediction that the market will continue to burgeon in this region. The most recent economic performance figures nevertheless illustrate how vulnerable the local steel industry is. We have decided upon a substantial package of measures aimed at reducing the high level of dependency of our Chinese operations on the local steel industry over the coming years. These measures include concentrating on on-site projects for liquefaction in connection with chemical production processes (including coal gasification), developing the liquefied and specialty gases business and expanding the scale of CO<sub>2</sub> business.

According to the current estimates of the various economic research institutes, we expect energy costs, which are all-important for our industry, not to rise significantly for the time being. We have also assumed in our forecasts that no corrective payments will have to be made in conjunction with partial exemptions from the EEG levy and that our Serbian subsidiary's largest customer will remain in business.

The main financial performance indicators for the Messer Group are forecast to develop as follows in the coming year:

	2014 compared to 2013
Sales	sharp growth
EBITDA	slight decrease
Capital expenditure	sharp decrease
Net debt	slight decrease
ROCE	decrease

### Overall statement by management

The economic environment is likely to remain challenging in the new financial year 2014, with the pace of economic growth rising slightly once again. The advanced economies and especially the euro area are likely to account for the greater part of this upturn. By contrast, the dynamic growth rates of the emerging markets and developing economies may be held down somewhat in the short term by increased international capital outflows.

The Messer Group considers that it is well placed to meet the forthcoming challenges and aims to achieve strong sales growth in 2014, helped in part the recognition of hardware sales in accordance with IAS 17 (in conjunction with IFRIC 4). In terms of actual industrial gases business, sales growth is still expected to be stronger in Asia, with particular importance attributed to the expansion of the liquefied gases business in China. A further significant proportion of growth – a good one third – is expected to come from business in Europe on the back of the efficient utilization of the production capacities

created in recent years. EBITDA and ROCE will continue to be influenced in the short term by upfront expenditure necessary to achieve the desired diversification of our business in China.

Decisions with respect to future levels of investment are taken in line with the medium term strategy of consolidating net debt levels – especially in relation to operations outside China. Investment activities at a level conducive to the pursuit of this aim, combined with a sound earnings performance, should ensure that the Messer Group's net debt does not increase.

### Forward-looking assertions

The Outlook Report contains forward-looking assertions which are based on the management's current appraisal of future developments. These assertions are not to be interpreted as a guarantee that these expectations will in fact be met. Future business performance and earnings of the Messer Group are dependent upon a number of risks and uncertainties and may therefore diverge significantly from the forward-looking assertions made here.

## Report on opportunities

As an international supplier of industrial gases, opportunities basically arise for the Messer Group from the multifarious usages of industrial gases to produce products needed in all fields of life and in all countries of the world. Through investment, we are able to exploit available opportunities to realize the full potential of the business and to maintain/ strengthen our market position. We are also taking advantage of the opportunities arising from internationalization – in particular in the light of positive developments in emerging economies – by purposefully expanding our facilities in these regions. This also enables us to engage in new markets with long-term growth potential. We encourage the identification of new opportunities by embedding employee motivation in the Group's values and by fostering ideas management.

The main opportunities which could be significant for the net assets, financial and earnings position of the Messer Group are as follows:

### Macro-economic opportunities

The general economic environment plays an important role for our operations, our financial and earnings position and our cash flows. Our forecast for 2014 is based on the expectation that future macroeconomic conditions correspond to the description provided in the Outlook Report section of the management report. If the world economy as a whole, or in regions or countries of relevance for our business, performs better than described, our sales and earnings could exceed the forecasted amounts.

### Market opportunities

We still expect the market to grow sharply, particularly in China, but, for the purposes of the outlook for 2014, have not assumed a further increase in the growth rate. A sharp economic upswing could have a positive impact on the Group's sales and earnings.

We forecast a modest economic recovery in Europe. A faster economic recovery, especially in the southern European countries of the euro area, could have a positive impact on our sales and earnings.

### Opportunities arising from industrial gases applications

Our products are used worldwide in a variety of production processes. In the field of application technology, the Messer Group continuously analyzes multifarious processes in order to facilitate more efficient production processes for our customers through the use of industrial gases. New applications identified in this way may open up new business opportunities which could have a positive impact on our sales and earnings.

### Opportunities arising from optimization measures

The strategic program "C7" implemented in 2013 with a view to improving profitability includes specific measures aimed at boosting sales, improving business processes and reducing costs by 2015. If the various measures are implemented more quickly or more successfully than expected, this could have a positive impact on our sales and earnings.

### Opportunities created by our employees

The Messer Group promotes „ideas management“ at all levels of the organization and employees are encouraged to submit improvement proposals with local and/or international relevance. Furthermore, human resources development programs and other training offers are available to encourage the systematic development and exploitation of our employees' potential. If we achieve better progress with these measures and methods than currently expected, this could have a positive impact on our sales and earnings.

## Risk report

As an international supplier of industrial gases, the Messer Group is exposed to opportunities and risks which inevitably arise in connection with entrepreneurial activities. Moreover, future earnings will depend both on the operating performance of the gases business and on the state of the economies in individual countries, a factor over which the Messer Group has no influence. It is the task of all concerned to take advantage of opportunities when they arise, whilst at the same time ensuring that risk is kept to a minimum and pro-actively managed.

The main risks which could be significant for the net assets, financial and earnings position of the Messer Group are as follows:

### Risks arising from general economic trends

The industrial gases business is subject to intense competition. The level of competition is increasing in conjunction with the process of globalization. This highly competitive environment could reduce Messer's earnings and cash flows in the future. The Messer Group operates globally, making it susceptible to local political, social and economic conditions and to the resulting risks arising in each market.

### Market risks

We supply a cross-selection of industries and sectors (including steel, metal processing, chemicals, petrochemicals, food and beverages, healthcare and glass) on the basis of long-term contracts over periods of up to 15 years in Europe and up to 30 years in Asia. A significant reduction in market demand in any one of these key industries or sectors could adversely affect future earnings and impair future growth prospects. Our strong position in China also means that this region makes an above-average contribution to our earnings, and conversely, any economic downturn on this market would have a negative impact on earnings.

### Cost risks

Regulatory or government amendments or interventions in the energy sector may lead to rising energy prices in some countries. The re-occurrence of crisis situations within oil-producing countries, the growing demand for energy in emerging economies, particularly in China and India, give reason to believe that long-term oil and energy prices will continue to rise with a corresponding impact on supplies and primary products necessary for the Messer Group's business. Purchase prices of some important bought-in products, such as helium, fluctuate considerably. Although Messer is often able to pass on cost increases partially to its customers via price escalation clauses or reduce the risk by entering into long-term purchase agreements, it is possible that price increases for energy and bought-in items could adversely affect the profitability of the Messer Group.

The Priority of Renewable Energy Sources Act (abbreviated in German as "EEG") regulates the preferred supply of electricity from renewable sources to the electricity grid and guarantees its generators fixed feed-in tariffs. Some of our subsidiaries are covered by the relief scheme for electricity-intensive manufacturing companies and receive a partial exemption from the levy to promote renewable sources of energy in Germany ("EEG levy"). The European Commission instigated a formal investigation procedure into the EEG ("State aid proceedings") on 18 December 2013 against the German State to establish whether the partial exemption from the EEG levy granted to electricity-intensive companies

is compatible with the EU State aid provisions. If the European Commission's decision is negative, our subsidiaries could be exposed to substantial corrective payments. We have calculated the theoretical risk at K 9,637. The cancellation of the exemption will also have a negative impact on future earnings. However, it should be pointed out that our contracts contain clauses to the effect that electricity price rises can be passed on to our customers.

### Selling price risks

The industrial gases business is subject to intense competition. The level of competition is increasing in conjunction with the process of globalization. The intense competition may lead in certain countries to disproportionate downward price trends which could have a negative impact on future sales and earnings. The integration of new member states into the EU entails risk in that many previously state-run businesses will need to be privatized and restructured in accordance with EU and International Monetary Fund requirements. The number and scale of state grants could be drastically reduced, culminating in numerous closures and mergers in these countries, and an adverse impact on the Group's sales. In these circumstances, the downward pressure on selling prices would probably increase.

### Operational risks

An operational interruption at one of our production facilities can result in loss of supplies to customers. We endeavor to avoid this situation by regularly maintaining and monitoring our equipment. In the event of breakdowns or defects, emergency plans and instruments are in place to reduce the financial consequences of a business interruption at one of our customers. The Messer Group is currently expanding its supply structure and maximizing flexibility in order to ensure that supplies to customers are safeguarded even in emergency situations. The range and quality of our products depend on the availability of bought-in hardware and on the production equipment used (e. g. cylinders, tanks) on the one hand and on the quality of service/products of our suppliers and business partners on the other.

### Acquisition risks

The Messer Group is continually developing new strategies. As well as expanding and strengthening our existing business and continually optimizing our sourcing and logistics processes, we are intent on achieving growth both organically and through other means such as acquisitions and joint ventures. Our aim is to consolidate operations on existing markets and to divest non-core business operations. The sale of entities or business activities can, however, result in retrospective risks for the Group. Whenever a risk is probable, appropriate provision is recognized in the consolidated financial statements. When deciding to make acquisitions or entering into new partnerships there is always a risk that future market potential and the feasibility of projects being put into action may have been wrongly predicted. The Messer Group therefore has internal committees which highlight the development potential of a project prior to its approval and analyze any information which has a bearing on decisions which need to be made. In order to be as certain as possible that M&A projects have future development potential, due diligence investigations are carried out by experienced staff in specialist departments before any acquisitions are made in connection with M&A projects. Risk is also reduced by including relevant terms of agreement in sales contracts.

### IT risks

The use of state-of-the-art information technology plays a decisive role in handling and securing business processes within the Messer Group. Our IT center in Germany provides the scope to create a modern and efficient infrastructure and to improve our business processes where necessary. This

concentration does, however, mean that there is a greater risk of business interruption, cyber criminality and willfulness, caused by natural hazards or human error. In order to avoid this risk, our IT center applies its own IT risk management system, including ongoing testing of the system architecture. Particular attention is paid to the provision of IT infrastructure and services and especially to guaranteeing fail-safe and interference-free operations. The integrity and reliability of the data and important information are ensured by means of appropriate measures, services and systems. Most of the business processes of the Messer Group are provided by internal or external IT services. The security and compliance of the information systems are set out in the IT strategy objectives, on the basis of which the Messer Group designs, implements and reviews measures to ensure protection of data, applications, systems and networks on an ongoing basis. Both preventive and corrective measures are considered in this process.

### Financing risks

We require funding to finance our growth and ambitious capital expenditure program. We are therefore dependent on the financial sector remaining stable and liquid. Messer is reliant on cash flows from operating activities to repay debt. This is dependent to a large extent on the ability to generate positive cash flows from operating activities.

The Group has recognized goodwill in the consolidated balance sheet. The application of IAS 36 (i.e. the performance of impairment tests) could result in the requirement to recognize impairment losses on goodwill, if the business and market prospects of a group subsidiary or cash-generating unit deteriorate compared to the original date of measurement. Impairment losses could have a significant adverse impact on earnings and on balance sheet/ performance ratios. The shares of the largest customer of our Serbian subsidiary, Messer Tehnogas AD, were taken over by the Serbian State in January 2012. The customer operates a steel manufacturing plant at the Smederevo site in Serbia, on the same site where we operate air separation plants for the steel works and for the Serbian market. For the purposes of the impairment test performed for the Serbian unit we assumed – in line with our overall outlook for the business and on the basis of assertions made by the Serbian State – that the operations of the steel works will not be discontinued.

There is always a risk that financial and debt crises could result in global economic downturns or slowdowns. The Messer Group will continue to observe developments very closely. Cost reduction measures and capital expenditure programs initiated and implemented in recent years have helped to counter the negative impact of previous financial and economic crises. Many of these programs remain in place. The potential future deterioration in the creditworthiness of our customers increases the risk of bad debts and delay of joint projects. The structure of the Messer Group's receivables is disclosed in the notes to the consolidated financial statements.

It is essential that we ensure compliance with the covenants attached to the USPP I, II and III and to the RFA financing arrangements. One point worthy of mention is that the net debt (i.e. gross debt less liquid funds)/EBITDA covenant has now been expanded to include a computation for the Messer Group excluding China. Financial risks can also arise for the Messer Group from changes in exchange and interest rates. The management of interest rate, currency and liquidity risks is carried out by Group Treasury based on guidelines laid down by management. Group Treasury identifies, measures, and hedges these financial risks. The Messer Group currently employs marketable forward currency contracts, interest rate swaps and cross-currency interest rate swaps as hedging instruments. Treasury

guidelines contain general risk management principles and specific rules for defined areas such as the exchange rate risk, interest rate risk, the use of derivative financial instruments and the investment of surplus cash. The related risks are observed continuously and the scope of hedging adjusted where considered necessary.

### Legal and contractual risks

Enterprises are confronted from time to time with allegations that they have infringed industrial rights or legal obligations, that defective products have been supplied or that environmental protection laws have not been adhered to. Regardless of their prospects of success, this type of claim can result in very high defense costs. In cases like these, the Messer Group defends itself energetically with the support of both in-house and external experts.

Our international operations are subject to a wide range of country-specific environmental legislation and regulations in areas such as gas emissions, groundwater pollution, the use and treatment of dangerous substances as well as ground surveys and decontamination. This can give rise to liability risks in conjunction with either past or current operations. New environmental requirements, partially resulting from the adoption of EU directives in the new EU member states, necessitate that our existing environmental standards (which are already at a very high level) are brought into line with the new requirements. This may result in higher production costs and modifications to the production process. The financial year 2013 shows, however, that the implementation of stricter environmental regulations often results in a more efficient production process and a higher quality product.

### Overall statement by management

The above-mentioned opportunities show that both internal and external potential are involved. We endeavor to develop in-house potential on a targeted basis and will put external potential to good use whenever the opportunity arises. The risks presented above are not the only ones to which the Messer Group is exposed. Some risks, which have not yet been identified or which are not considered to be significant from today's perspective could have an adverse impact on the Messer Group if general business or economic conditions were to change. However, no risks were identified in 2013, either individually or in aggregate, which could have a material adverse impact on the going concern status of the Messer Group. From today's perspective, no such risks are pending in the foreseeable future. The principal risks during the period under report encompassed market developments and production processes. Organizational measures are in place to identify potential risks at an early stage. Our vigil risk management system (described below) and pro-active management of risks enable us to reduce risk.

## Risk management

The principles that dictate our approach to risk management are stipulated by the Executive Management. Risk management is directed at safeguarding the going-concern status of group entities and increasing the value of the business; for this reason it plays a crucial role in all decision-making and business processes. The existing management structure and the reporting processes which are in place ensure that not only developments that could jeopardize its going-concern status are reported regularly and in good time to the relevant levels, but also that other developments which pose a threat to the achievement of short-term performance targets (such as EBITDA or cash flow) are reported. This allows management to initiate measures at an early stage to mitigate any business and/or financial risks. Risk managers have been designated at each of the subsidiaries with responsibility for ensuring the proper functioning of local reporting systems. Working together with local risk managers, the group risk manager prepares a risk report for the Messer Group as a whole at the start of each year which is discussed by the Executive Management and communicated to the Supervisory Board of the Messer Group in good time. The risks recorded in the risk report are categorized by nature and classified by probability of occurrence. Risk perception in the current selling environment has exacerbated the risk profile of Messer Group entities in the financial year 2013 compared to the previous year.

Messer is adequately insured against potential claims or liability risks, to which it is exposed; these policies ensure that the financial impact can be kept within defined limits or completely avoided. The scale of insurance coverage is continuously optimized in response to the specific situation of group companies.

The Messer Group GmbH's internal audit department carried out ten status audits (seven follow-up audits/three first-time audits) at European Messer Group companies during 2013. In addition, a process audit was carried out of the Vietnamese activities to identify potential areas of improvement. In China, the local central organization carried out internal audits during the year (most of them relating to tax matters) and some status audits. The regular follow-up audits, which check at appropriate intervals that the previous findings and recommendations have been implemented effectively, are still considered to be a core aspect of the internal audit department's activities. The audits by the internal audit department at the same time include advisory activities in the sense that information on best practice is passed on and cross-border assistance is organized; this takes account of the respective current standards of the entities in the various countries. In addition, a regular exchange of information takes place with the external auditors in order to make the best use of available know-how, on a results-oriented basis, during the respective audits. Where necessary, other central functions are also called upon in an advisory capacity (including SHEQ and Corporate Logistics). On the basis of the audits conducted in 2012 and 2013, the Messer Group's corporate guidelines were adapted in one section (testing the creditworthiness of new customers) and a new section was added (dunning). Compliance with corporate guidelines is tested and sample testing of voucher/document controls performed within the various business processes, in order to check the effectiveness and commercial sense of processes as well as the accuracy and reliability of financial reporting. Findings were clarified and recommendations made to improve the transparency of business processes.

The Group's Safety, Health, Environment, Quality (SHEQ) department continues to carry out audits and risk analyses in order to reduce the accident ratio even further.

State-of-the-art technologies are employed in the IT area in order to keep the risk from electronic data processing to a minimum. Unauthorized access to data and systems and a significant loss of data are ruled out to the greatest extent possible. The efficiency, operational availability and reliability of systems are constantly being monitored and improved. Messer's security concept also includes a detailed emergency plan. In order to minimize risks, the various technologies employed by the Messer Group are regularly tested to ensure that IT-based business processes are safe.

Tax laws and competition regulations can also give rise to business risks. For this reason, the Group obtains a full range of advisory services from in-house and external experts.

Income and operating cash flows are, to a large extent, unrelated to market interest rates, since the Group does not hold any significant interest-bearing assets. Loans or credits subject to variable interest rates are hedged partly with the aid of interest rate swaps (cash flow hedges of future interest payments). Under these arrangements, loans with variable interest rates are converted in substance to ones with fixed or maximum rates. In conjunction with the interest rate swaps, the difference between fixed contractual interest rates and variable interest rates is settled at specified intervals (computed by reference to an agreed amount). At the balance sheet date, derivative financial instruments had only been entered into with renowned international financial institutions.

Corporate Governance within the Messer Group includes a whole range of in-house rules and measures aimed at preventing the occurrence of risks. The first stage of the risk management system is to assess risks throughout the organization. This risk assessment is conducted by the Group's corporate departments for the respective areas of responsibility and by each consolidated subsidiary for its own business. The assessment of risks is updated each year. All information relating to risks is collated centrally by the Corporate Compliance Officer (CCO). Training is organized and carried out as appropriate to cover identified risk areas and to highlight best practise for avoiding the occurrence of a risk as far as possible. Mandatory compliance guidelines are in place for all Messer Group entities, including in particular the „Code of Conduct“ and „Group Guidelines“. All first and second-tier managers of the Messer Group and its consolidated subsidiaries have confirmed that they have received these guidelines, examined their content and comply with the regulations contained therein. Furthermore, all employees have been informed of the content of compliance guidelines of relevance to them and have also confirmed compliance with them. Management and staff are regularly informed about, and receive training on, the content of these guidelines, other policies and code of conduct rules. On the basis of a matrix structure, the Compliance department cooperates closely with the Safety, Health, Environmental & Quality (SHEQ), Medical, IT, Audit, Legal and Insurance departments. Internal audits are carried out to check that compliance guidelines – in particular the Group Guidelines – have been appropriately implemented, thus ensuring good risk management procedures throughout the organization, including conduct and reporting rules, the requirement for approval at the appropriate level as well as application of the dual control principle for legally binding agreements with third parties. Incidences of non-compliance are followed up and the appropriate actions taken where necessary. At the same time, any such incidences are used to reflect on how additional preventive measures could re-duce the risk of non-compliance in the future.

Bad Soden am Taunus, March 12, 2014

Messer Group GmbH

## Consolidated Balance Sheet

of Messer Group GmbH, Sulzbach/Taunus, as at December 31, 2013 (in K€)

in K €		Dec. 31, 2013	Dec. 31, 2012
<b>Assets</b>	Intangible assets	415,486	439,058
	Property, plant and equipment	1,023,747	983,023
	Investments accounted for using the equity method	58,450	59,023
	Investments in other companies and financial investments	9,401	3,775
	Deferred tax assets	14,624	14,268
	Other non-current receivables and assets	134,535	144,923
	<b>Non-current assets</b>	<b>1,656,243</b>	<b>1,644,070</b>
	Inventories	57,173	52,048
	Trade receivables	164,906	172,654
	Income tax assets	1,138	2,327
	Other receivables and other assets	51,094	47,452
	Cash and cash equivalents	102,426	115,027
	<b>Current assets</b>	<b>376,737</b>	<b>389,508</b>
	<b>Non-current assets held for sale</b>	<b>27,311</b>	<b>136</b>
<b>Total assets</b>	<b>2,060,291</b>	<b>2,033,714</b>	
<b>Equity and Liabilities</b>	Share capital	100,000	100,000
	Reserves	847,816	817,783
	Profit after income tax	45,980	39,904
	Other comprehensive income	(79)	25,920
	<b>Equity attributable to shareholders of the parent company</b>	<b>993,717</b>	<b>983,607</b>
	<b>Non-controlling interests</b>	<b>151,803</b>	<b>148,362</b>
	<b>Equity</b>	<b>1,145,520</b>	<b>1,131,969</b>
	Provisions for employee benefits	38,681	37,443
	Other provisions	9,620	9,125
	Non-current financial debt	511,988	479,665
	Deferred tax liabilities	35,253	39,425
	Other non-current liabilities	6,014	13,438
	<b>Non-current liabilities</b>	<b>601,556</b>	<b>579,096</b>
	Other provisions	27,346	19,474
	Current financial debt	31,589	84,856
	Trade payables	137,797	129,014
	Income tax liabilities	6,916	5,593
Other current liabilities	101,358	83,712	
<b>Current liabilities</b>	<b>305,006</b>	<b>322,649</b>	
Non-current liabilities held for sale	8,209	–	
<b>Total equity and liabilities</b>	<b>2,060,291</b>	<b>2,033,714</b>	

## Consolidated Income Statement

of Messer Group GmbH, Sulzbach/Taunus, for the Year Ended December 31, 2013 (in K€)

in K €	Jan. 1 - Dec. 31, 2013	Jan. 1 - Dec. 31, 2012
Net sales	1,026,622	1,088,275
Cost of sales	(568,850)	(629,939)
<b>Gross profit</b>	<b>457,772</b>	<b>458,336</b>
Distribution and selling costs	(278,245)	(273,225)
General and administrative costs	(91,317)	(86,783)
Other operating income	24,449	23,352
Other operating expenses	(4,757)	(7,012)
Impairment losses on goodwill	(4,000)	(4,348)
<b>Operating profit</b>	<b>103,902</b>	<b>110,320</b>
Income from investments accounted for using the equity method	3,489	3,978
Other investment results, net	9	(56)
Interest income	1,919	2,435
Interest expense	(25,408)	(27,944)
Other financial result, net	2,547	(5,177)
<b>Financial result, net</b>	<b>(17,444)</b>	<b>(26,764)</b>
<b>Group profit before income taxes</b>	<b>86,458</b>	<b>83,556</b>
Income taxes	(20,559)	(20,939)
<b>Group net profit for the year</b>	<b>65,899</b>	<b>62,617</b>
Of which attributable to:		
shareholders of the parent company	45,980	39,904
minority interests	19,919	22,713

## Consolidated Cash Flow Statement

of Messer Group GmbH, Sulzbach/Taunus, for the Financial Year 2013 (in K€)

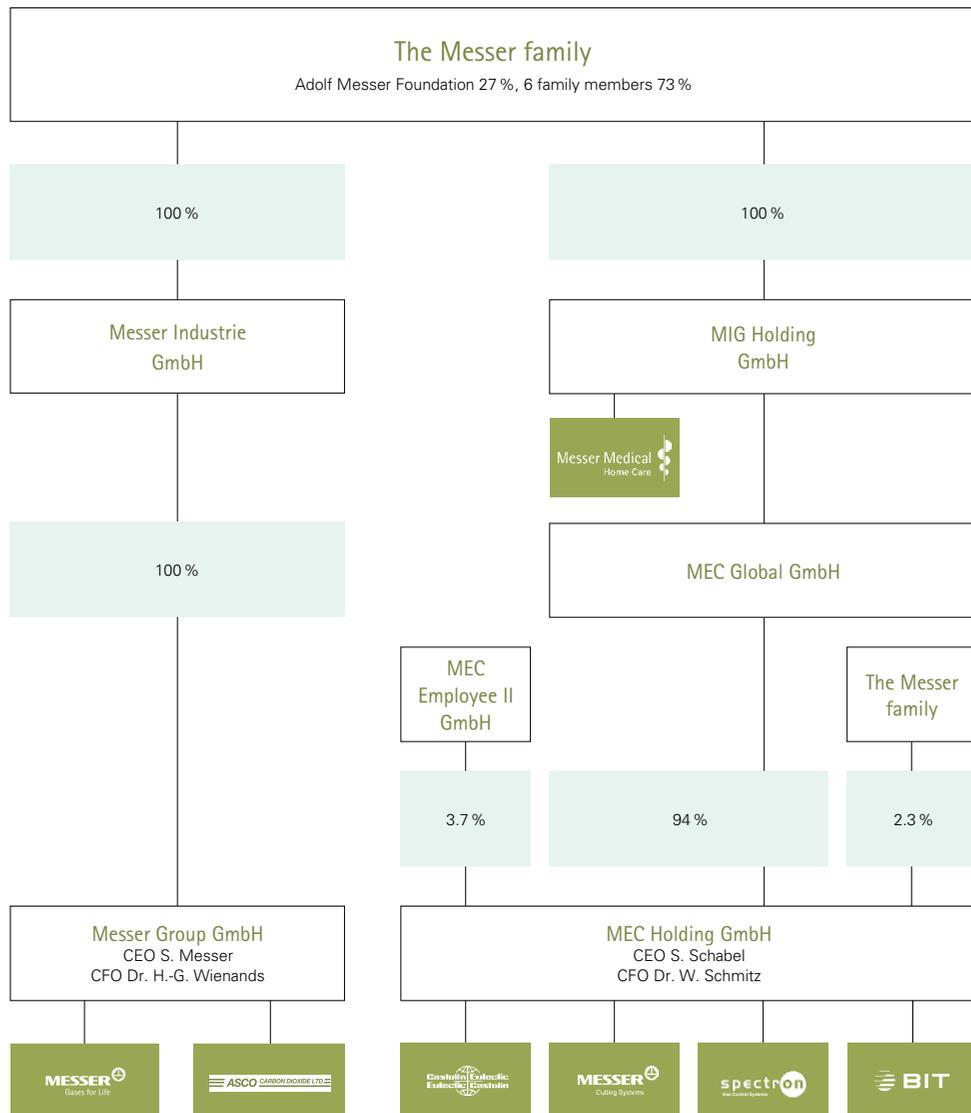
in K €	Jan. 1 - Dec. 31. 2013	Jan. 1 - Dec. 31. 2012
<b>Group profit before tax</b>	<b>86,458</b>	<b>83,556</b>
Income taxes paid	(19,592)	(19,679)
Depreciation and amortization of property, plant and equipment and intangible assets	127,203	126,359
Gains arising on change in group reporting entity	(2,270)	–
Loss / (gains) on disposals of fixed assets	(2,634)	(1,059)
Changes in investments in associated companies	(3,489)	(3,978)
Interest result, net	23,489	25,509
Other non-cash financial result	(2,547)	4,403
Changes in assets resulting from finance lease arrangements	997	(20,194)
Changes in inventories	2,560	(3,818)
Changes in receivables and other assets	(16,610)	7,969
Changes in provisions	6,054	(3,806)
Changes in trade payables and other liabilities	18,152	(13,297)
<b>Cash flow from operating activities</b>	<b>217,771</b>	<b>181,965</b>
Purchase of property, plant and equipment and intangible assets	(185,948)	(162,910)
Purchase of investments and other non-current assets	(1,854)	(4,889)
Acquisition of shares of minority shareholders	(773)	(58)
Proceeds from disposals of property, plant and equipment and intangible assets	5,079	6,348
Proceeds from disposals of investments and loans	(19)	(50)
Interest and similar income	1,888	2,437
<b>Cash flow from investing activities</b>	<b>(181,627)</b>	<b>(159,122)</b>
Changes in capital by shareholders of Messer Group GmbH	(9,960)	–
Proceeds from non-current financial debt	17,533	127,321
Proceeds from current financial debt	26,952	25,713
Repayments of non-current financial debt	(15,838)	(22,104)
Repayments of current financial debt	(34,375)	(111,115)
Dividends paid to minority shareholders	(15,313)	(8,291)
Contributions by minority shareholders	2,012	337
Capital reductions at the level of associated companies	6,088	–
Interest and similar expenses paid	(23,878)	(24,793)
Other financial result, net	1,284	(1,364)
<b>Cash flow from financing activities</b>	<b>(45,495)</b>	<b>(14,296)</b>
<b>Changes in cash and cash equivalents</b>	<b>(9,351)</b>	<b>8,547</b>
<b>Cash and cash equivalents</b>		
<b>at the beginning of the period</b>	<b>115,027</b>	<b>107,489</b>
Exchange rate impact on cash and cash equivalents	(2,555)	(1,009)
Cash relating to changes in group reporting entity	(21)	–
Cash funds classified as held for sale	(674)	–
<b>at the end of the period</b>	<b>102,426</b>	<b>115,027</b>



## Messer World

Along with Messer Group and ASCO Carbon Dioxide, “Part of the Messer World” also includes the sister companies Messer Cutting Systems, Castolin Eutectic, BIT Companies and Spectron Gas Control Systems – and Messer Medical Home Care, which has been independent since 2011. They all offer application-specific expertise and products which help optimise manufacturing processes, extend the life of production equipment and materials, or significantly enhance quality.

## Organisational structure



## ASCO Carbon Dioxide

### Technology focus

In 2013, ASCO focused on technology: besides launching new products related to dry ice production, we concentrated above all on CO<sub>2</sub> recovery. The new ASCOSORB stack gas recovery technology converts waste gas, which previously remained unused, into a profitable source of CO<sub>2</sub>. The technology offers tremendous energy savings over conventional stack gas recovery technologies. ASCO also offers units for recovering CO<sub>2</sub> from sources with higher purity (e.g. for alcoholic fermentation processes or ammonia production). ASCO strengthened the personnel structures within the R & D and sales department in order to further advance and promote the various technologies.

### Positive development

The market was still driven by inhibited willingness to invest and by last years' unsure economic conditions. Nevertheless, last year's result has been exceeded remarkably and the positive trend has been continued.

### Broad product portfolio

ASCO Carbon Dioxide is a provider of customised and complete CO<sub>2</sub> solutions. Our product portfolio includes automatic dry ice production machinery, CO<sub>2</sub> production plants and recovery systems, dry ice blasting equipment, CO<sub>2</sub> storage tanks, CO<sub>2</sub> cylinder filling plants, CO<sub>2</sub> vaporisers and other CO<sub>2</sub> accessories.

Product development and service are built on two solid foundations: the first is our more than 80 years of practical experience in everything pertaining to CO<sub>2</sub> and dry ice, and the second is our highly qualified and dedicated workforce. This unique combination of extensive expertise and broad product portfolio provides our customers with complete and customised solutions from a single source.

The entire Messer Group relies on ASCO as its competence centre for CO<sub>2</sub> and dry ice.

[www.ascoco2.com](http://www.ascoco2.com)



## Messer Eutectic Castolin Group

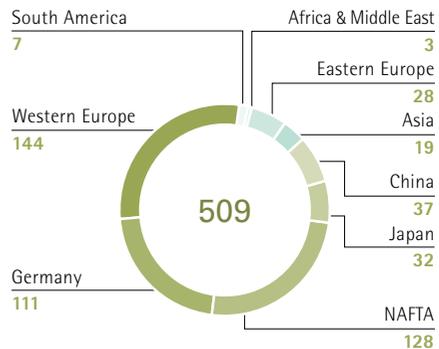
For the MEC Group, 2013 saw divergent trends in our key markets. While we can look back on very successful business growth in North America, India and China, we experienced adverse economic trends in Latin America as well as in our traditional markets in Europe. In 2013, we achieved total sales of 509 million euros in the MEC Group, a decrease of 10 per cent on the previous year. Nevertheless, we were able to finish 2013 in profit and with a positive cash flow.

We implemented an extensive, growth-oriented investment programme in 2013 and successfully completed numerous projects. We are pursuing our core strategies with further projects and investments, supported by the implementation of new initiatives which are key to the future profitable growth of our group of companies. We are well placed across the MEC Group to be able to benefit from the opportunities offered by the improving economic situation. The first signs of an economic recovery can be seen in a number of key markets relevant to us.

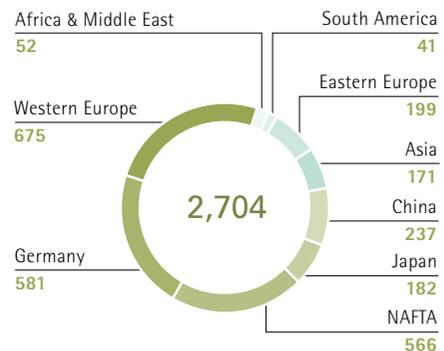
[www.mec-holding.com](http://www.mec-holding.com)

### Key figures 2013

Sales of MEC Group by region in millions of euros



Number of MEC Group employees by region



## Castolin Eutectic

### Sales and earnings trend

The 2013 financial year could not replicate the previous year's high level of sales. Our worldwide net sales fell by 9 per cent compared with 2012. Nevertheless, in this business unit too, we were able to finish the year in profit and with a positive cash flow. The share of CastoLab service activities has made an ever greater contribution to the company's net profit and represents an important element of our core strategy.

### Growth through CastoLab service strategy

As in previous years, we also made significant investments in this area in 2013, expanding our position as a technology leader in thermal spraying and coating applications through the acquisition of the internationally oriented Monitor Coatings Group. Our developments and activities aimed at strengthening the CastoLab Services business area are the foundation for further growth in the strategic oil and gas, cement, steel, energy and aerospace sectors.

In 2013, we launched a series of new projects, such as the construction of new CastoLab workshops in Poland, Japan and Dubai, the construction of a European central warehouse in the Frankfurt area, and investments in laser coating technology, which will be a key area in our future growth.

### Extensive Castolin Eutectic product range

The Castolin Eutectic business unit is one of the world's leading suppliers of products and services in maintenance, repair and wear protection for industrial facilities and factory equipment. Our product range includes consumables and equipment for technologically sophisticated applications in the areas of welding, coating and brazing. In addition, we offer our industrial customers specially developed product packages for complex applications in their industry. In 2013, we were able to complete the "DriITec product range" in our OilTec division and to present it to our customers for the first time at the Aberdeen oil expo.

Our products and services are available via our subsidiaries in over 35 countries as well as through a worldwide dealer network. Castolin Eutectic employs 1,470 people worldwide with field staff comprising more than 750 highly qualified engineers and international application specialists.

[www.castolin.com](http://www.castolin.com)

[www.eutectic.com](http://www.eutectic.com)





## Messer Cutting Systems

### World of Excellence

In 2013, the previous year's high level of sales could not quite be matched. This was due to the difficult economic development in the markets relevant to us. We saw a drop in sales in Brazil and Korea in particular, but also in our traditional Western and Southern European markets. By contrast, we achieved continued stable growth in the NAFTA area, in Scandinavia and in our Eastern European markets. In China, we managed to make up lost sales volumes and to achieve a pleasing profit level for 2013. In India, too, we were able to generate profitable growth through the construction of a new production facility and the development of our own sales organization.

With our continuous efforts to boost profitability, through new innovative products as well as high service quality, we were able to achieve satisfactory profit for 2013.

We regard most of the aforementioned economically difficult market regions as having bottomed out and expect an economic recovery with an accompanying improvement in the sales situation. The focus in 2014 will continue to be profitable sales growth and the expansion of our after-sales activities through additional services geared to the needs of our customers. Our ambitious R&D programme will ensure that we as a market leader in thermal cutting can continue to offer our customers an innovative product range in the future.

### Partner for cutting systems

Messer Cutting Systems is a global supplier of products and services for the metalworking industry. As a leader in the sector, we supply complete solutions and concentrate on advising our customers as well as developing customer-focused innovations. Messer Cutting Systems employs more than 800 people at five main production centres and is represented in over 50 countries with sales companies and service partners. The product portfolio includes oxyfuel, plasma and laser cutting systems ranging from manually operated machines to special machines for shipbuilding. Our portfolio is rounded off by spare parts, a repair service, modernization of older systems, maintenance and customer service, including all the environmental technology requirements. Software solutions from MesserSoft optimize production and business processes. We focus on intensive dialogue with our customers. This commitment is clearly expressed in our state-of-the-art training centre, the Messer Cutting Systems Academy.

[www.messer-cs.com](http://www.messer-cs.com)



## Spectron Gas Control Systems

### Sales and earnings

Due to its importance for the Messer Group, Spectron was first spun off as an independently operating business unit in 2011. Our activities continued to develop well in 2013; we almost matched the previous year's high level of sales and also posted a satisfactory profit.

### Broad spectrum of products

Spectron Gas Control Systems is the gas supply system specialist. Our product family comprises the appropriate fittings and instruments for a broad spectrum of gases. They cover the full range of appli-

cations from simple valves through to gas cylinder cabinets for semiconductor gases. Spectron also supplies alarm and control systems for gas applications as well as purification systems for ensuring the purity of gases. Our goal is to provide our customers with the highest levels of service, quality, reliability and technological expertise. With an additional production centre in the UK and a worldwide network of sales and distribution partners, Spectron is well positioned globally and always close to its customers.

Spectron thus continues to be a leading and innovative international manufacturer and supplier of fittings and systems for the efficient and safe use of gases across a wide range of applications.

In addition to the headquarters in Frankfurt am Main, Spectron also operates production and distribution centres in Coventry/UK and Shanghai/China.

[www.spectron.de](http://www.spectron.de)

## BIT Companies

### Sales and profitability

The BIT Group saw a drop in sales in 2013 due to the loss of a key account. Sales were down 16 per cent on the previous year. Nevertheless, the companies of the BIT business unit have quickly recovered from this and adapted to the new situation. Our US sites are now fully integrated and combined in one company in California. This has further strengthened our US market position as a leader in the development and manufacture of medical instruments.

As in previous years, we once again made significant investments in our own platform solutions and in product developments in 2013. The BIT Group will continue to focus on sustainable growth and the expansion of customer service in the future, both in Europe and in the growth markets of the USA and Asia.

### Comprehensive services

BIT Analytical Instruments is a leading developer and producer of diagnostic devices for special use in medical laboratories and hospitals. BIT instruments are produced in the USA, France, Germany and China and sold worldwide.

Alongside its own products, the BIT business unit also offers technological services in the area of contract development and manufacturing of medium to complex instrumentation. We also offer tailor-made automation solutions as well as after-sales equipment services for medical, diagnostic and industrial OEM manufacturers. In Europe and the USA, we are an independent market leader for high-quality IVD analysis systems in the high-end OEM market. Our long-standing customers include young companies and world market leaders.

At the end of December 2013, the BIT business unit had a total of 303 employees, more than a third of whom are engaged in development work.

[www.bit-companies.com](http://www.bit-companies.com)





## Messer Medical Home Care

### **Broad portfolio for the home care sector**

Since the end of 2010, Messer Medical Home Care Holding (MMHCH) has been developing product offerings and services designed for the treatment of patients at home across several European countries. These product and service offerings allow oxygen therapy at home, therapy for sleep apnea, monitoring for sudden death syndrome with small children, ventilation support and all training measures connected to these therapies.

Treating patients at home is key to health care systems across the world. It alleviates the strain on resources deployed in hospitals. Therefore home care is a solution for health care payers to manage cost and resources in a world whose population is ageing.

### **Focus on home care**

Within the Messer World, MMHCH concentrates solely on the home care area. In the past, these activities were integrated separately in the Messer Group, which made it difficult to focus and align them clearly.

We will continue to develop and market innovative solutions for patients, doctors and health authorities. We expect this to give us a sustainable and leading position across the entire healthsector. MMHCH currently has around 100 employees working day in day out dedicated to this mission.

[www.messer-medical.at](http://www.messer-medical.at)



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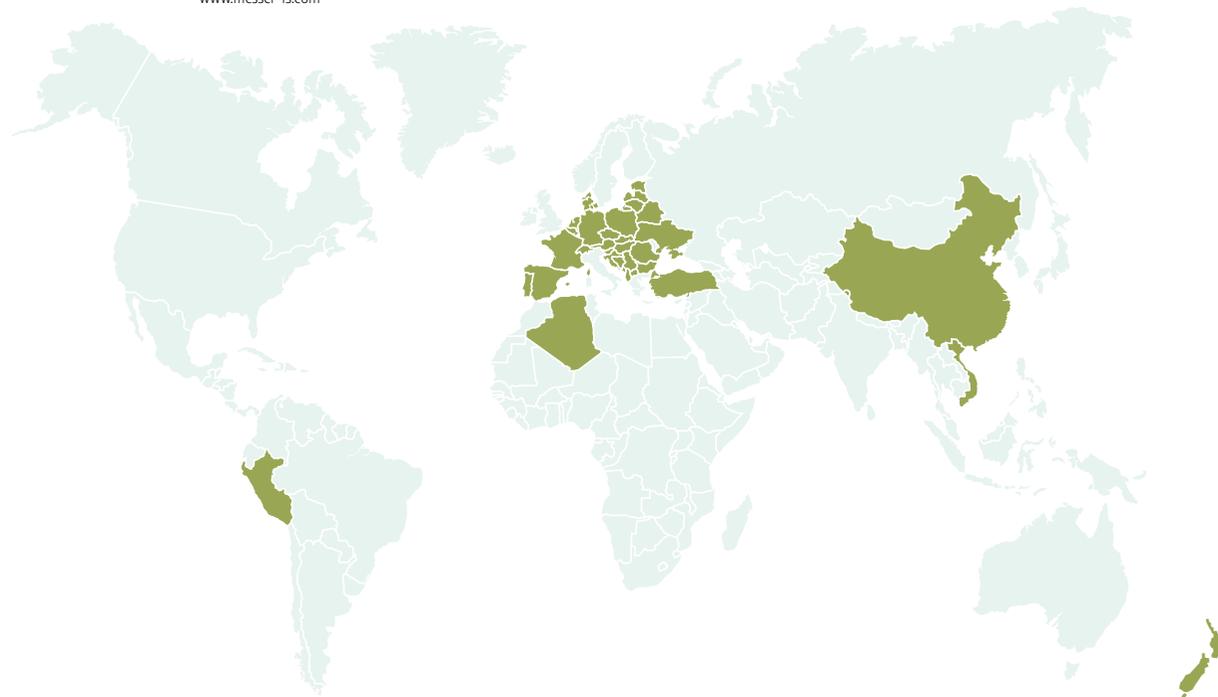
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### Translation

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