



2012 annual report
**Health
Safety
and the
Environment**

Our balance

Forbo Flooring B.V.

creating better environments



FLOORING SYSTEMS

Our balance

This is the 2012 annual HSE report of Forbo Flooring B.V. We evaluate the company's performance of the past year with regard to its **health, safety and environmental (HSE) policy**, and present our HSE objectives for 2013. This report succeeds the 2011 annual HSE report which was published in June 2012.

Each year, as part of our HSE policy, we publish an HSE report to inform our internal and external stakeholders. As such, this report forms an important part of our communication plan, the ISO 14001 environmental management system and the OHSAS 18001 occupational health and safety system.

Background images

Photo cover & photo page 8

Project: **Waikato Hospital**

Location: Hamilton, New Zealand

Floor covering installed: 1700 m² of Marmoleum Real

Photo page 4:

Project: **Modez Mode & Design Hotel**

Location: Arnhem, the Netherlands

Floor covering installed: 450 m² of Unexpected Nature of linoleum, Cork linoleum and Bulletin Board

Photo page 14:

Project: **Maria-Lenssen-Berufskolleg**

Location: Mönchengladbach, Germany

Floor covering installed: 2200 m² of Marmoleum Vivace, Walton Cirrus and Walton Uni

Photo page 20:

Project: **Dutch railways intercity trains**

Location: the Netherlands

Floor covering installed: 25000 m² of Marmoleum Striato

Photo page 24:

Project: **Artevelde Hogeschool**

Location: Ghent, Belgium

Floor covering installed: 1200 m² of Marmoleum Decibel and 500 m² of Bulletin Board for the wall

Photo page 28:

Project: **Waterford Regional Hospital**

Location: Waterford, Ireland

Floor covering installed: 1800 m² of Marmoleum Vivace, Marmoleum Real and Marmoleum Dutch Design. Aquajet technology used.



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Joost Dirkx director Human Resources

'Keeping the balance
by making **well-considered choices'**

Our balance

This annual report focuses on the sustainable business practice of Forbo Flooring. Our linoleum floor coverings are the most sustainable floor coverings in the world. Sustainable in the sense of ecologically sound, but also in the sense of excellent performances that easily stand the test of time. In terms of durability, our linoleum is by far the best choice.

This 2012 sustainability report serves to look back on the past year and to look forward to 2013. The choices we make and the activities we undertake help us to continuously keep a balance in terms of our obligations towards our customers, employees, local residents, shareholders and other stakeholders. Short-term results will also have to contribute to long-term investments and effects.

For Forbo, 2012 was a year in which we were faced with the harsh reality of the economic crisis. Nevertheless, I do not think we should be unhappy about the way in which we concluded the year. After all, financial performances cannot be separated from performances in the fields of safety, quality, sustainability and customer satisfaction. Sometimes, one carries just that little bit more weight and we have to take compensating measures to restore the balance. However, all our employees work hard to keep our customers satisfied and to continuously improve our performances. We particularly focus on safety. Thanks to the unabated attention we paid to working safely last year and the improvement of safety awareness, 2012 has seen a lot fewer incidents.

In terms of the staff planning, 2012 was quite a challenge. Due to falling market demand, we needed less (new) personnel. Because of the importance of product development in these challenging times, we did invest in expanding our research and development capacity, despite the economic hardship.

With the 'Forbo in Balans' project, we aim for sustainable employability of our staff. The object of the project is a joint focus on employability, health and a healthy lifestyle, a safe and inspiring working environment and a task set geared to the workload capacity of staff. Many employees literally stood on the scales, with the balance going the wrong way at times. By taking joint responsibility, the balance is restored. The employer facilitates and encourages a healthy lifestyle and as such hopes employees will consciously opt for a balanced and healthier lifestyle. In 2012, a lot of steps were taken in terms of sustainable employability and this will be followed up in 2013 and subsequent years.

You may have already noticed, but 'balance' is the theme of this annual report. At times, doing business in 2012 felt like trying to find our balance on a tightrope in a headwind. However, as a major employer in the Dutch Zaanstreek region, we have an obligation towards our customers, members of staff and local residents to accept our social responsibility, also in times of economic hardship. This annual report serves to account for our performances of 2012. And may it be an inspiration to further improve the sustainability balance in 2013.

On behalf of the management team,



Joost Dirkx
Director Human Resources

Excellence in Flooring

A new vision, mission and strategy. In today's difficult times, we constantly have to make choices that bring balance in terms of our performances and obligations towards our customers, employees, local residents, shareholders and other parties involved. Where are we heading, how do we respond to social trends and economic developments?

Best brand

Management of the Forbo Flooring division developed a new vision, mission and strategy in 2012. The starting point is the current position and what Forbo aims to achieve in the next five years. We operate on a difficult market that will not recover just like that. Still, the main goal of Forbo is to realise a strong, sustainable growth of at least 5% per year. In order to achieve this, our new strategy is subdivided into a number of key aspects which Forbo will focus on in the next few years. One of them is to become innovative leader in the field of flat, compact flooring. Another goal is to ensure our customer service and sales and marketing processes become 'the standard' in the floor covering industry. Forbo Flooring is known as a flooring company with high-quality products, highly skilled employees and an excellent level of service. Forbo aims to reinforce this level, so that the Forbo brand is ultimately known as the best floor covering brand. The overall vision therefore is: Excellence in Flooring.

Green floors

Sustainability has been one of the key aspects in Forbo's policy for years now. In its new strategy too, sustainability is an important subject. One of the goals is to realise environmentally aware leadership by placing sustainability in the core of our organisation and business. The Forbo slogan still is: Creating Better Environments. The environment remains a very important theme in our industry. The construction industry is one of the biggest sources of increased CO₂ concentrations in the atmosphere and Forbo does form part of that industry. Even though the floor in a building only has a small part in this, it is still vital to look for green alternatives. Linoleum is Forbo's greenest floor, but we also continue to develop more environmentally friendly versions of our other floor coverings.

New cross-dock warehouse

For years now, Assendelft has been the site where floor covering products from various Forbo branches are united for transport to our customers. The advantages of this are that customers only have one delivery per day and we need fewer trucks - which results in fewer costs and it is less harmful to the environment. The process of combining products in a single truck is called cross-docking. Cross-docking activities have expanded enormously during the past few years. The existing warehouse is no longer big enough, which is why in 2012, the Board of Directors in Switzerland approved an



investment proposal to build a new cross-dock warehouse. The Province of Noord-Holland has granted planning permission and De Geus constructors of Broek op Langedijk have started the construction process. If all goes to plan, the warehouse will be operational in the autumn of 2013.

Inspiring working environment

'Working with respect for each other' and 'job satisfaction' are important concepts in our company. After all, an inspiring working environment keeps staff balanced. An environment that provides our approximately 650 employees with the space and opportunity to develop themselves to become the most skilled and the most committed in the industry. We do our best to achieve that. Forbo Flooring B.V. has developed into one of the largest employers in the Dutch Zaanstreek region. As we aspire innovation and inspiration for all our employees, we have been carrying the international quality mark for strategic staff policy, Investor in People, since 2004.

Forbo Flooring Systems, the division we form part of, has twelve production locations and sales offices in more than thirty countries. These production locations manufacture floor coverings for both the project and private markets. Forbo Flooring's product range comprises linoleum, vinyl, carpet tiles, needle felt, Flotex flocked floors and entrance floor covering. In addition to the floor product itself, installation and maintenance service products are of course an important addition. Our site in Assendelft is where we design, develop and manufacture an extensive international linoleum range. The Forbo Flooring Systems division forms part of the Swiss Forbo Group, which is listed on the Zurich stock exchange and has its registered office in Baar.

FORBO IN 'HET KLOKHUIS'

Het Klokhuis filmed at the Assendelft plant in February. Het Klokhuis is an educational television programme for children that explains various, often technical subjects in a way that is easy to understand. Twelve years ago, the programme already had an item about the production of linoleum. Apparently people are still very interested in Forbo's linoleum, so they sent a film crew to record everything one more time. The script was written by the editors of Het Klokhuis and Forbo's Dutch marketing department. The show shows everything: from the design and production of linoleum to the logistics process and installation. The film crew was highly impressed, which has led to some enjoyable images. The show was broadcasted on one of the Dutch TV channels on 10 October. The video will be repeated on Het Klokhuis several times in the next three years.

Visit www.hetklokhuis.nl/tv-uitzendingen/ to watch the video about the production of linoleum.



Seizing opportunities in challenging times

Jelle van der Zwaan Operations director Linoleum and Site manager

Unlock the potential of Linoleum

'In terms of linoleum, the market is very challenging at the moment', says Jelle van der Zwaan, Operations director Linoleum. 'Our customers come from sectors that are financed with public money, such as schools and hospitals. They have to look after the pennies. We are not unaffected by the crisis either. At the same time we want to build on the future. Creating beautiful new products, investing in more sustainability, further develop our cross-docking activities, which means fewer transport movements and fewer CO₂ emissions. We need innovation on all fronts. Where lies the balance between our ambitions and falling turnovers? By seizing opportunities, despite the fact that volumes are under pressure.'

'So the crux is sustainable growth versus healthy business operations. In order to face that challenge we need to really focus on our objectives. We have to set priorities. That sounds basic, but if we sell less, Operations can compensate that by reducing losses: less raw material waste, fewer rejected products, less standstill. That is why it's so important to work on improvements. But what does all this mean to the employees? Our strategy aims to have everyone in the company actually contribute to those goals. On the principle of 'Unlock the potential of Linoleum', we ask all our employees to make a contribution from within their sphere of influence. The Operations department has

formulated ten strategic objectives, focusing on growth, improvement and development. Every employee contributes to a number of initiatives, big or small, that doesn't matter. Everything is subject to agreement and the results are evaluated during performance interviews. This way, all objectives are implemented throughout the organisation transparently and specifically. The response has been very positive. We employ very loyal people who have a lot of knowledge and experience. They see opportunities to realise their own ideas, giving them more control too. That generates positive energy. And when that leads to visible results, it's very inspiring.'



HSE policy statement

Forbo Flooring B.V. develops, manufactures and sells linoleum products. We also sell vinyl floor coverings, Flotex, needle felt, carpet tiles, entrance floor coverings, installation equipment, maintenance products and service products.

Forbo Flooring B.V. assumes its entrepreneurial responsibility regarding employee health & safety and the environment (HSE). Since HSE management is considered an essential part of our policy, it has been made an integral part of all our activities. All aspects with regard to products and production processes are subject to continuous improvement and are always carried out in accordance with the relevant rules and legislation without compromising our ambitions.

Forbo Flooring B.V. sees sustainable development as the core of its operations and as the basis for the new strategy for the period until 2017. The employer and employees share responsibility in that respect. This principle is safeguarded by investing in the development, involvement, motivation and health of the employees and by getting everyone involved in our pursuit for Excellence.

The objective of the Flooring division is to reduce the environmental impact of its production processes and products in the entire lifecycle by 25% between now and 2016. Forbo Flooring B.V. wants to make a substantial contribution to this. We aim to continuously improve our production methods and to make them more sustainable in order to offer all our stakeholders better perspectives. In the course of that:

- we make optimum and efficient use of all relevant natural raw materials, additives and water
- we make minimum and efficient use of energy, while pursuing the best possible use of renewable energy
- we reduce residual waste and cuttings during installation of our product, and reuse and recycle them to the greatest possible extent
- we apply sustainable principles to the design and construction of new product and development programmes.

Forbo Flooring B.V. makes every effort to ensure that the work is carried out in such a way that any damage to the health and well-being of employees and third parties is prevented. We feel it is necessary for our employees to experience their working environment as safe and healthy. The emphasis is on the continued embedding of safety awareness and assuming personal responsibility in the aim for a safe and healthy working method and lifestyle. We wish to structurally reduce the number of injuries by at least 10% per year.

Forbo Flooring B.V. stimulates dialogue among its employees, customers and other interested parties, the Works Council and the authorities. Active and effective communication with these parties helps us to critically review our HSE performance and to make improvements.

With regard to enforcing and improving aspects in the field of HSE, Forbo Flooring B.V. stipulates its policy and objectives on an annual basis in accordance with the ISO 14001 and OHSAS 18001 systems. The result is disclosed to all employees of Forbo Flooring B.V. and to the public by means of the HSE annual report. Our objective is to publish the annual HSE reports as a sustainability report in accordance with the international Global Reporting Initiative guidelines within the next four years.



Jelle van der Zwaan

Site manager of Forbo Flooring B.V.

OBJECTIVES

SAFETY, HEALTH AND WELL-BEING, THE ENVIRONMENT

Solid performances,

Evaluation 2012

Safety

Minimising the number of injuries/incidents

In 2012, we realised a reduction of 32% in terms of injuries/incidents! That is more than our target of -20% and we have also managed to hold on to a drop since 2010. Out of the 32 accidents, 4 led to sickness absence. That is 5 less than in 2011 and significantly less than the past few years. An excellent result.

We aim to realise 100% of the measures based on injury reports and hazard identification & risk assessment action items within the set term. In 2012, 82% of measures was realised before the deadline (62% in 2011).

Increase safety awareness

The target for the minimum number of reports is 10 times the number of injuries. In 2012 there were 408 reports of hazardous situations. The target minimum number of reports was 320, so that objective too was achieved. The number of reports has remained virtually the same as in 2011 (425).

In 2012 we completed the safety awareness training programme for all employees. A total of 95% of the intended employees took part. In addition, the Operations department has started a training programme about safety leadership.

Objective 2013

Safety

Minimising the number of injuries

We want to hold on to the decreasing trend and aim to structurally reduce the number of injuries until 2017 by 10% per year compared to the previous year.

That is a 100% score in terms of realising the measures within the agreed deadline.

Increase safety awareness

We will continue the safety awareness program and encourage people to submit reports: the target remains a minimum of 10 times more preventive reports than injuries. We will continue to focus on leadership and holding each other to account.

In 2013, we will prepare a programme to further structure leadership in the field of safety.

Evaluation 2012

Health & Well-being

Sickness absence

With a corporate sick-leave average of 4.23% we failed to achieve our 3.75% objective. The result is comparable to that of 2011. Compared to the national average, it is a good result.

Health and lifestyle

'Forbo in Balans' was a success in 2011. This campaign was evaluated in 2012 and new activities will be undertaken in 2013.

A task force of smokers and non-smokers has been set up in order to pursue a smoke-free site in the future.

Preventive Health Survey (PHS)

The 2012 PHS was conducted among the production departments. One specific point for attention was shift work. Findings will be implemented as improvement measures.

Exposure

Exposure to fumes and dust in the Mixing department has been drastically reduced following the commissioning of an improved extraction system and placing covers over parts of the mixing line.

Trials to prevent exposure to talc dust at the granule storage have proved successful. Experiments with other cleaning methods are being carried out, so the floor no longer has to be covered in talc.

Objective 2013

Health & Well-being

Sickness absence

A maximum corporate sick-leave average of 3.75%. The focus with regard to sickness absence will be more on prevention.

Health and lifestyle

In 2013, the focus will be on sustainable deployability, health and vitality. We will encourage employees to accept personal responsibility for their health and vitality and we can help them with coaching programmes in that respect.

We are also aiming to realise a smoke-free site by 2015, the first measures for which are to be taken in 2013.

Preventive Health Survey (PHS)

The 2013 PHS will be conducted at the Logistics, Maintenance and R&D departments. The results of the 2012 PHS were reason to continue the organisation's health policy, even during economic hardship.

Exposure

We will in general continue our studies into and the improvement of the working environment, with the MAC value serving as limit value.

We will continue our study into alternative methods for cleaning the granule storage without using talc, thus preventing exposure to particulate matter.

Evaluation objectives 2012 and new objectives 2013

powerful ambitions

Evaluation 2012 The environment

Environmental awareness

In 2013 we will again pay attention to sustainability. Successful ideas will be continued and the results will be communicated. The Sustainability e-learning module that forms part of the Forbo Way to Win Sustainability programme has not been rolled out yet due to technical issues. We expect it to be rolled out during the first six months of 2013.

New integrated environmental permit

Various studies were conducted within the framework of the application for a new environmental permit. This has provided a better and revised overview of the environmental aspects of the business.

Saving energy

Energy consumption per m² of linoleum is set to rise compared to 2012. This was 82.5% in 2012. The figure rose to 88% in 2013, whereas the target was a maximum of 85%. As such we failed to achieve the objective. Electricity consumption in the offices, which we wanted to further improve, has been reduced by 12%, a good result.

Reducing residual waste

The objective for granulate residual waste was set at 0.012 tons/ton of product. In 2012, we disposed of a total of 0.016 tons/ton. The target seems to be a challenging one, as we again failed to meet it.

In 2012 we aimed for 50 customers to actively take part in collecting external linoleum cutting residues for our recycling programme. A total of 40 customers took part, resulting in 20 full containers being returned to Forbo.

We have continued to encourage the reduction of paper in 2012. Unfortunately, we used 4.5% more paper than we did in 2011. One positive aspect is that printing paper has become more sustainable since the end of 2012: from FSC paper to 100% recycled fibre.

Objective 2013 The environment

Environmental awareness

In 2013 we will start a project to further increase environmental awareness among all employees. We will also start a campaign to further explain the sustainable qualities of linoleum to all our customers and employees.

New integrated environmental permit

An updated overview of our environmental aspects provides us with a new basis to continue to improve our environmental performances.

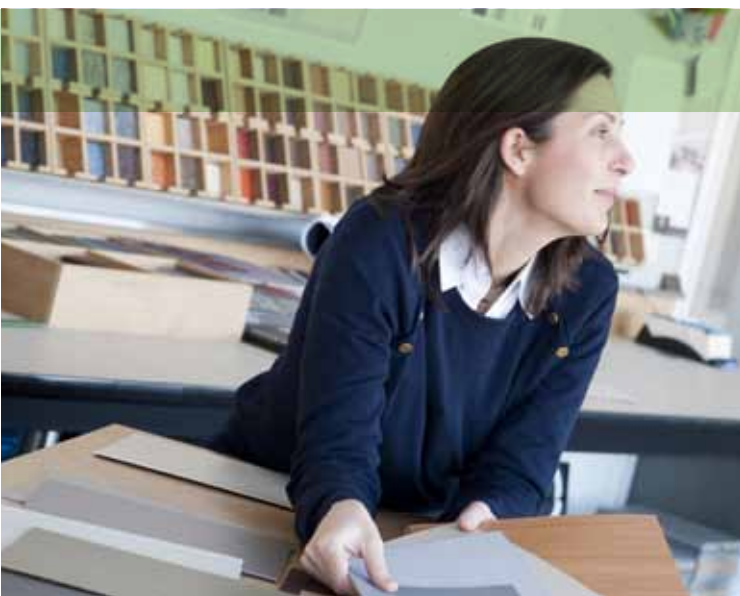
Saving energy

A number of specific energy projects have been scheduled for 2013:

- switching off the incinerators of the Esterification department during weekends
- insulating a number of tanks following a positive feasibility study
- finding out if the extraction output from the stoves of the Trimming department can be reduced
- continuing the study into saving energy in the drying rooms

Reducing residual waste

The 2013 objective for granulate residual waste was again 0.012 tons/ton of product. As Calender 1 makes a considerable contribution to residual granulate, a separate improvement programme has been formulated, with the objective of reducing this substance by 20% compared to 2012.



Forbo floors, green

The Next Generation of Marmoleum

In 2012 we worked hard on a new linoleum collection. Before the collection was designed, we visited more than two hundred architects around the world in order to evaluate the previous collection. The wishes of the architects have been translated into a new collection: The Next Generation of Marmoleum. The collection offers no fewer than 76 new colours, and a lot of traditional colours have been revamped. The architects made it clear that they felt the previous sample book was not exactly user-friendly. In order to better serve customers, the new collection has been subdivided into four groups, each with their own identity. This has resulted in four sample books that each tell their own story. The collection comprises books with marble, striped, plain and playful colours. The communication pillars for this collection are that Marmoleum is the most sustainable floor of its kind, has the lowest maintenance costs and offers the biggest choice in terms of design. The new collection enjoyed its worldwide launch early 2013.

Marmoleum is made of 97% natural raw materials. These are materials that are easily recyclable like linseed oil, pine resin, jute and wood flour, or which are abundant, like limestone. Marmoleum carries the Cradle-to-Cradle Silver certificate and has the lowest Life Cycle Assessment score in the segment of flat, resilient floors.

Life Cycle Assessment (LCA)

We like to know the footprint, the environmental impact, of our products. A Life Cycle Assessment (LCA) helps us in that respect. An LCA is a measurement that measures the energy consumption, the circulation of materials and the environmental impact of the products. The measurement helps us to assess where or for which products improvements can be made. We aim to improve the environmental performance of our products by continuously finding ways of reducing the potential harmful impact of our products on the environment.

Sustainable products

In 2012, Forbo Flooring introduced a number of sustainable products, that are in line with our strategy to relieve the environment and they honour the slogan Creating Better Environments.

Coral Welcome

The Coral Welcome collection is manufactured at Forbo Flooring Coral in Krommenie. It is the only textile entrance floor covering in Europe made of recycled material that is nonetheless suitable for heavy-duty project use. The polyamide yarn of the floor covering is made of Econyl®: recycled industrial and domestic waste. The supplier claims that fishing nets are among the products to be recycled. The tuff screen to which the yarn is secured is made of recycled PET bottles. Only the back is a 'new' product, but Forbo is looking into the possibilities of manufacturing a back made of recycled material.



products

Sarlon Absolu

Sarlon Absolu is a new range of acoustic vinyl. In contrast with other PVC floors, the products in this collection have vegetable softeners instead of petrochemical softeners. The new softener used by Forbo to produce this collection originates from the oil of the Ricinus plant. With a growth cycle of only a year, this natural material can be recycled fast. Only green energy and environmentally friendly ink is used for the production of Sarlon Absolu at the Reims plant. The range is fully recyclable and reusable.

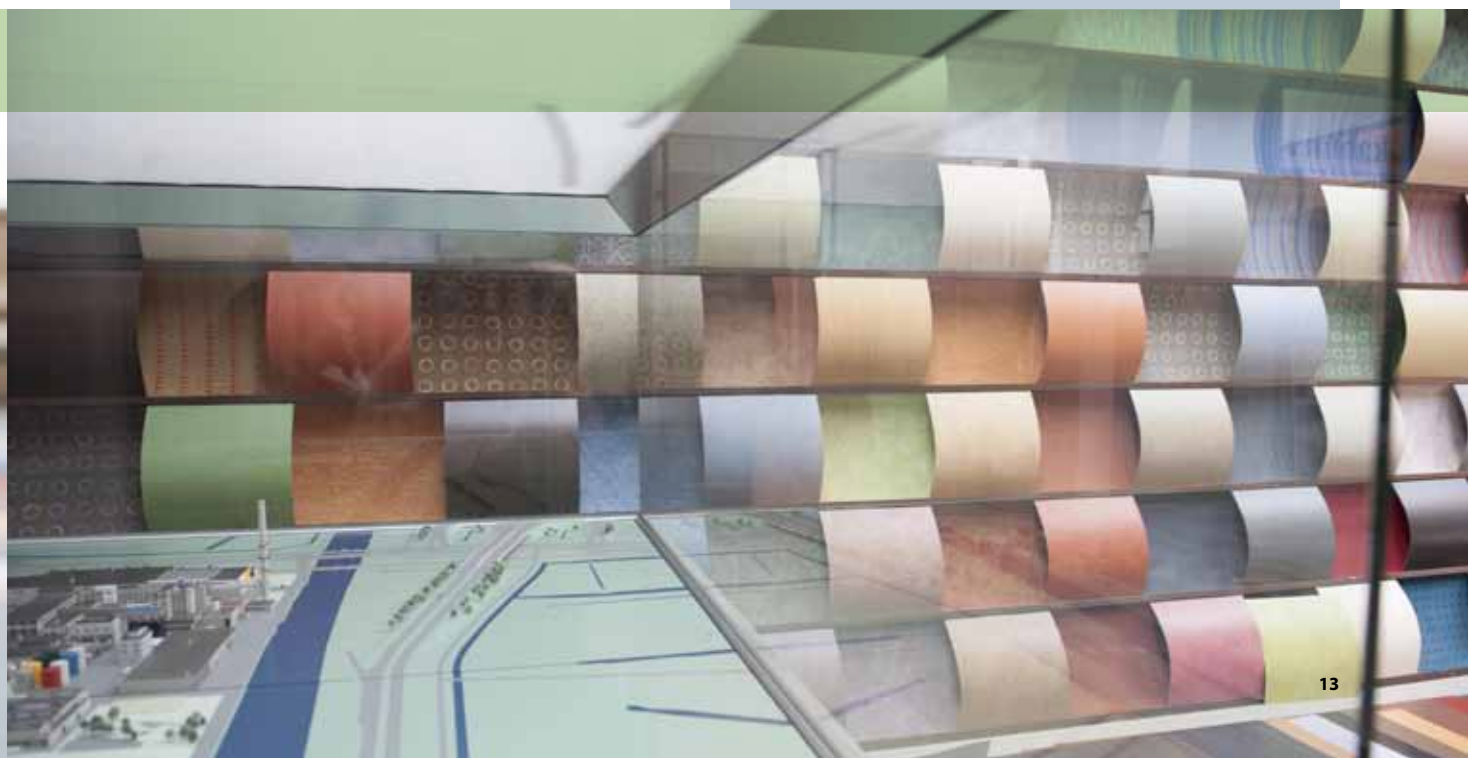
Protective finish: Topshield2

Maintenance requirements in the healthcare and educational sectors have become increasingly stricter during the past few years. At times, the maintenance costs during a product's life meant a PVC floor was less expensive than a linoleum floor. Forbo has therefore been working on the development of a new finish for linoleum. In 2012, our linoleum was given a new finish: Topshield2. It is a tough, water-based acrylic solution that is applied in two layers. Topshield2 is resistant against stains from, for instance, chemicals and alcoholic disinfectants, but also against scratches and marks left by rubber soles. The finish is tougher and as such more durable. Another advantage is that the top layer is easy to repair. As such, linoleum floors with Topshield2 equal or even outperform any other flat floor. Forbo is proud of the fact that the cleaning industry network supports Topshield2.

BALANCE BETWEEN PRODUCTION AND MINIMUM ENVIRONMENTAL IMPACT

The production of linoleum is a complex process that hardly differs from the process of a hundred years ago. A mixture of linseed oil, resin, wood flour, limestone and pigments produces coloured granulate. A calendering process turns this into sheets two metres in width. The linoleum then dries for a period of fourteen days, after which it is cut into rolls.

As mentioned before, we try to minimise the environmental impact caused by our production process. We are always looking for a balance between production and environment. That is why a local waste processor has been collecting cuttings from our customers since 2011, returning them to our plant in Assendelft. Here, the returned material is recycled and reused for new rolls of linoleum. Using residual waste has proved to be a resounding success which we are proud of. We will therefore continue that process in the next few years, also on an international basis.



A man with a beard and short hair, wearing a black polo shirt with the 'Forbo' logo, stands in a large, empty classroom. He is holding a large fan of colorful linoleum samples in his right hand. The classroom has rows of desks and chairs, large windows on the right, and a high, vaulted ceiling with a central light fixture.

Peak production
and quieter times
balanced

Fok Klompmaker Forces team leader

The Next Generation Forces

The Next Generation of Marmoleum, Forbo's new linoleum collection, offers a wide range of colours and designs. In order to offer retailers, architects and other customers a good overview of the versatility and unique designs, we make sample charts and four different sample books, among other things. The Forces department prepares the Marmoleum to compose these items.

'The production of samples starts in the bleaching cabinet', says Fok Klompmaker, the Forces team leader. 'The production of Marmoleum generates a yellow layer on the material, which disappears when it is bleached in daylight. It brings up the real, sparkling colour. In 2012, we bleached 2,400 rolls for sample material. This is then turned into sheets that have to even out in the heat room. Once they've cooled down again, they are cut to size and stacked on a pallet by a robot. Design numbers used to be printed onto the samples in ink and a thinning agent. We now use a labelling machine: better for the environment and for the employees.'

Sheets for more than 350,000 sample books, 107,000 loose samples, 34,000 larger loose samples, 42,000 sample charts... it's enormous. The semi-finished products for the new swatches need to be ready before the start of the year. Fok: 'Peaks are unavoidable. We use agency workers, but the workload continues to be high. No matter what happens, we have to get it all done in time. And that means overtime. It's not something we enjoy, but at least we know it's going to happen. After that, we can relax a bit and there's time to alternate between bleaching, cutting, collecting, assembling and drilling. That variety is nice, things don't get boring and everyone can learn how to operate all the different machines. This way, we keep a balance between a high workload and quieter times.'

Locations and products

Our products are manufactured in Europe. Each day, thousands of employees make their way to twelve plants distributed across the Netherlands, the United Kingdom, France, Switzerland and Russia in order to manufacture our products.

Assendelft, the Netherlands

The complete linoleum collection, with the exception of linoleum tiles, is produced in Assendelft. Ranges such as Vivace, Walton, Touch and Striato are popular among both architects and consumers.

Kirkcaldy, Scotland

In addition to linoleum on rolls, tiled linoleum is an extremely important product for Forbo Flooring. The entire linoleum tile range is manufactured in Kirkcaldy, Scotland.

Krommenie, the Netherlands

Coral entrance floor covering is tufted in the plant in Krommenie. Collections such as Classic, Duo, Grip and Welcome each offer their own characteristic solution to different problems where dirt and moisture absorption in clean-walk zones are concerned.

Telford, England

This small plant in England also manufactures entrance flooring systems, but in aluminium profiles. The profiles are fitted with brushes, rubber or textile and are the first line of defence in stopping the dirt before even entering the building.

Coevorden, the Netherlands

This plant manufactures for both the consumer and projects markets. Our Novilon range is very well-known among consumers. The Allura vinyl strips, Eternal vinyl rolls and Flex vinyl tiles are more geared towards the professional market.

Reims, France

Needle felt and vinyl are the spearheads in Reims. In the case of vinyl, the emphasis is on specific properties, such as acoustic vinyl, but also on local French ranges, as the focus in France is very much on vinyl.

Ripley, England

The specially flocked floors are produced under the name of Flotex in Ripley, England. The Flotex Classic and the Flotex HD base are manufactured here. In addition to Flotex on rolls, this plant also manufactures Flotex tiles.

Château Renault, France

After the white Flotex floor has been manufactured in Ripley, England, it is transported to France for digital printing. Two enormous digital printers print the standard Flotex HD designs as well as any other random design in accordance with the customer's preference.

Giubiasco, Switzerland

A highly specific product is manufactured in Switzerland which is applied purely on the basis of its functional properties. Colorex is applied in e.g. operating theatres or antistatic rooms.

Bamber Bridge, England

Carpet tiles for the office market, for example, is a product the Forbo Flooring collection cannot do without. In addition to a Tessera collection for the international market, a large part of the production in Bamber Bridge is intended for the domestic English market.

Cortonwood, England

Luxurious carpet tiles, a personalised colour design or a specific colour combination for the customer and fully woollen carpets are all produced by the Westbond plant. These carpet tiles are manufactured in accordance with a special manufacturing technology that was developed in-house and subsequently applied in luxurious high-prestige projects.

Kaluga, Russia

This modern plant produces project vinyl collections for the local Russian market. The plant was entirely refurbished in 2009 and brought into line with the required Russian and European standards, plus the Forbo Flooring quality requirements.



Ambition and safety

A clear focus and specific goals for every employee should safeguard the balance between decisiveness and thoroughness, between speed and safety. Getting employees involved in our strategic objectives serves to increase interest and motivation. After all, interested and committed employees remain healthier and deployable for longer and perform better. Forbo asks its employees to actively serve as an inspiring motor of our dynamic organisation.

SAFETY

'I work safely because I want to'

Safety awareness is held in high regard at Forbo, because people being unaware of danger plays a major role in unsafe situations and incidents. The large-scale safety awareness programme, which has been urging employees to change the corporate culture since 2009, costs time and energy. How does this relate to daily activities? The new corporate culture should lead to a healthy balance between the ambition to grow on the one hand and precision and permanent improvement on the other. The challenge is to take specific steps in order to further embed safety awareness in the organisation. With our new 2013-2017 strategy, we want to reduce the number of injuries by at least 10% each year. The ultimate goal is to achieve a mature safety culture: 'I work safely because I want to'.

New record without lost-time injuries

The year 2012 was concluded with a total of 32 injuries. With 32%, the objective of a 20% reduction for 2012 was amply achieved. The number of lost-time injuries was reduced by more than half: four in 2012 compared to nine in 2011. We also recorded a new record in 2012 for the number of days without lost-time injuries: 182 days. The old record stood at 150 days in 2006. In two years' time, all the attention we have paid to safety and safety awareness has led to considerably fewer injuries in 2012.

The four lost-time injuries led to 58 lost-time days (2011: 69 lost-time days). The injuries did not result in permanent injury. 44% of injuries fall in the lightest category: injury was sustained, but this was so minor that no first aid treatment was needed. But even these types of injuries are followed up. After all, they tell us a certain activity was not completed in full control. Falls, trips, sprains, bumps and cuts are the most common incidents. The number of entrapments (one of the highest risk categories) fell to three during the past year (2011: eleven). This is the result of a lot of improvements implemented in the field of machine safety.



balanced

Continuous focus

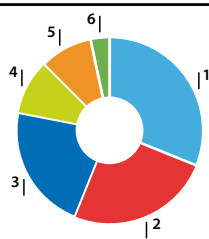
In 2012, the number of reports of unsafe situations (unsafe actions, unsafe situations and near-injuries) remained virtually unchanged: 408 compared to 425 in 2011. We amply achieved our objective of at least ten reports for each lost-time injury (408 reports, whereas it should have been 320). All reports lead to improvement measures. Our objective is to complete improvements within the set term. So far we have not quite succeeded, but during the past year, 82% of improvements had been implemented within the set term. A total of 830 improvements were completed.

In 2012 we paid ample attention to the follow-up of the machine risk assessment for the Calander 4 and Calander 1 departments. In the same year, we introduced a new machine risk assessment for the Drying Rooms. This was the first time for us to change the generic part of the risk assessment for Calander 1 and the Drying Rooms. We have been able to collect generic input for the risk assessment from all layers of the departments through interviews with employees while they were working, combined with external expertise. And during those interviews, we once again raised safety awareness levels among those employees. This was well-received and this approach will be continued at other departments in 2013.

Incident at the Oxidation department

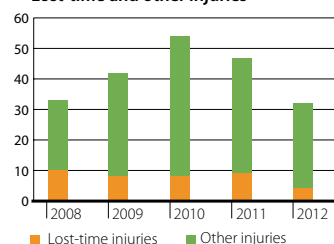
Unfortunately, we experienced an explosion in the flue gas system of the Oxidation department. A build-up of condensate and high temperatures in the flue gas system led to an incipient fire. This resulted in system breakdowns and a number of resets of the system's aeration ventilators. When the aeration ventilations were switched on again, the oxygen supply caused fumes to dilute. This created an explosive mixture that led to an explosion that affected the entire system. Fortunately, no one was injured, but the department could not operate for three weeks. The environmental damage was reduced to black smoke coming from the chimney for about two minutes (combustion products NO_x , CO , CO_2 , soot and dust). That same evening, the entire system underwent a controlled switch-off, plus a controlled cooling and safeguarding process. Odours could be detected in the immediate vicinity of the Oxidation department, but no complaints were received from local residents. The entire flue gas system of the Oxidation department has been cleaned. Condensate and other residual substances from the system were removed from the site as waste. An active study into the safety of the system and the incident led to a large number of improvement measures. The monitoring process has improved, for instance. Furthermore, the aeration ventilators and the boiler can no longer be switched on just like that, it has to be done in stages. The evacuation protocol has been tightened and the process in emergency situations can now be controlled from a distance.

Type of injury 2012 (in %)

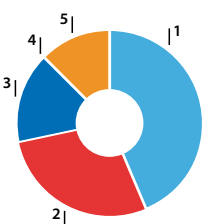


1	Falls/sprains	10	32%
2	Bumps	8	25%
3	Cutting	7	22%
4	Burning	3	9%
5	Entrapment	3	9%
6	Electrocution	1	3%
Total		32	100%

Lost-time and other injuries

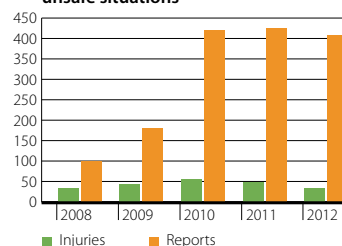


Severeness of injury 2012 (in %)



1	Lost time injuries without further treatment	14	44%
2	Injuries with First Aid	9	28%
3	Injuries requiring First Aid in a hospital	5	16%
4	Injuries requiring alternative activities	0	0%
5	Lost-time injuries	4	12%
Total		32	100%

Injuries and reports of unsafe situations



Time out for safety

By taking specific steps we wish to further embed safety awareness in the organisation. Safety-related interviews between managers and employees is one such step. In 2012, 100% of the scheduled safety observation rounds were carried out. We even conducted another seven. The objective of the safety observation rounds is to raise the level of safety awareness and to remove any doubts in respect of safety. This also shows the involvement of management when it comes to the safety of employees. Visiting other departments to talk about safety leads to interesting and valuable collateral benefits, particularly thanks to the participation of team leaders. Half of these visits had to be rescheduled (54% compared to 35% in 2011). We must continue to keep time free for safety observation rounds and to keep a good balance between safety and other priorities.

In 2012 we completed our general safety awareness training programme (Last Minute Risk Analysis). This formed part of the collective labour agreement. A total of 517 employees took part (2012: 194), which is 95% of the intended employees. The training programme focused on taking a moment to think about safety before starting a job, a moment that applies to everyone, everywhere. The departmental managers and team leaders of the Operations department followed a training programme about leadership. Both training courses received a positive response.

Fire brigade and first aid

The fire brigade was called out fourteen times in 2012 for fire or overheating and once for an explosion, the one in the Oxidation department. In 2011, that figure was ten. With the exception of the explosion, it concerned overheating and (incipient) fires which were

under control fast. Two members of the company fire brigade left in 2012. We now have three new members, bringing the total to seventeen. Sixteen is the minimum, eighteen the preferred total. In 2012, three of the four scheduled evacuation exercises were held. The fourth one will be held early 2013. New muster points were used during the evacuation exercises and the remote operation of the Oxidation department was also tested.

There were eighteen injuries in 2012 that required onsite first aid treatment. Effective first aid reduces the consequences of an injury. Currently, we have 95 first aiders and 144 employees who can operate an AED (Automatic External Defibrillator). Our policy always assumed two first aiders per shift. In 2013 we will structure the first aid assistance across four areas: Warehouse Finished Products, Oxidation, Mixing and Trim. A good distribution of a sufficient amount of first aiders, taking illness and holidays into account, has therefore become even more important. The number of onsite AEDs has been increased to eight: two were added, one at the Oxidation department and one on the tennis court. Every member of the company fire brigade holds an AED certificate. When the Front Office contacts the Ambulance Control Room with a request for resuscitation, the external ambulances and company fire brigade are notified at the same time to provide immediate assistance and support.

HEALTH AND SUSTAINABLE EMPLOYABILITY

A healthy policy

If there's one subject where balance is topical, it's health. Good health is important to everyone. Healthy employees form the basis of the success of our organisation and are an incentive for effective and pleasant collaboration.



But how to keep your employees healthy and motivated until they leave the company? Forbo makes sustainable investments in its employees: in their development, involvement, motivation and health.

Aging

Given the age structure at Forbo and the anticipated influx and outflow, half of our employees will have reached the age of 50 in about ten years. By then, a third of them will be older than 56. There will be more bottlenecks in the workload and employability, and sickness absence levels will rise. This will lead to personal issues, extra costs, organisational problems and friction in terms of teamwork. We do of course want to prevent this as much as possible, which is why we developed a policy aimed at improving the health and vitality of all employees.

Smoking policy

In addition to the many current activities, we introduced a number of new subjects in 2012. One of them is the Forbo Smoke-Free project group, started in November in 2012 with the aim of having the company smoke-free by January 2015. The task force will start a campaign to convince employees to stop smoking and to offer support.

Collaboration with the Occupational Health Service

At the end of 2012 a new contract was concluded with 365 / ArboNed, our occupational health service. The collaboration with 365 now offers more room for a preventive policy. That means more attention for health and health risks. In the new format, a vitality & health expert and job coach will hold consultations at the company, in addition to the company doctor. When required, employees are offered assistance when there are health and employability issues.

The Works Council unanimously voted in favour of this new contract.

Age-related staff policy

In February 2012, the report of conclusions and recommendations from the task force was presented to the management team. These recommendations relate to four categories, namely:

- collective bargaining
- staff policy, terms of employment and leadership
- research, study or exploration
- management and the organisation.

The recommendations are gradually incorporated in the organisation's objectives. Employer and trade unions will discuss how to achieve integration of an age-related staff policy in our benefits package.

Preventive Health Survey (PHS)

In 2012, the PHS focused on employees in the production department. A total of 223 employees were invited, of which 176 (79%) took up the invitation and participated in the survey. The survey does of course focus on working conditions and work-related symptoms of staff. However, there is also much attention to lifestyle factors, the so-called BRAVO themes that relate to exercise, smoking, alcohol, nourishment and relaxation, work ability (the degree to which an individual is mentally and physically capable to perform his work well) and the 'mental temperature' (the level of wellness at work).

The conclusions and recommendations following the 2012 PHS particularly relate to lifestyle factors and working conditions.





Same content,
striking format

Aart van Dijk Operations vocational training manager

De Leider Draait Door

Forbo encourages all its employees to keep learning. Within the Investor in People framework and the development-oriented staff policy, a lot is invested in training. Colleagues follow courses to further develop themselves, to stay up-to-date in their discipline or because they need to for a particular job they're after. However, Safety training is mandatory. That means it is more of a challenge to make those training courses interesting for everyone.

'Using cherry pickers safely, safe hoisting, the safe use of hazardous substances. All safety-related training has to be periodically repeated, as a certificate is only valid for so long and legislation can change', says Aart van Dijk, Operations vocational training manager. 'Also, refresher courses are good. Safety awareness deserves continuous attention, also at managerial level. They have to emanate the importance of safety awareness. That requires felt leadership. That means a manager has to feel his role from the inside. He needs to develop an inner drive to encourage his staff to work safely. That's nothing new, really. So in order for staff to not forget

the course, I wanted to make it more exciting. The same content, but a more striking format. That's how I came up with the idea of De Leider Draait Door, similar to De Wereld Draait Door TV show. We used a partner system, we showed videos and discussed various brief subjects. And we applied a lot of humour. We were looking for a healthy balance between content and format. We laughed, we got emotional at times, but ultimately it's about safety awareness sinking in. Our message: use your common sense. Be aware of potential dangers and act accordingly. Your brains protect you, you protect your brains.'

Recommendations will also be made to increase the mental ability to cope and to reduce the risk of stress-related complaints. This can be done through training and coaching, for instance. The report and all conclusions and recommendations have been discussed by the Human Resources department with departmental management and the HSE department. The recommendations have been converted into action plans.

Sickness absence 2012

In 2012, the sickness leave rate of 4.16% was again slightly higher than the target of 3.75%. This is virtually the same result as 2011, when the year was concluded at 4.1%. The reporting frequency remained 0.99, which means that the number of reports is on average slightly lower than one report per person per year.

Social media

The use of social media is embedded in our society. In order to anticipate the many developments in this field, Forbo Flooring conducted a study into developments in that respect that may be of interest to the company. This has resulted in the active use of LinkedIn. Forbo Flooring set up a career page on LinkedIn, in line with the central website www.forbo-flooring.nl. We use the career page to tell people what it is like to be working for Forbo Flooring. It will also show vacancies that people can apply for straight away. In the future we will find out how to use other social media such as Twitter in our HR policy.

Major step regarding exposure to talc

Talc is used as an anti-adhering agent in the granule storage. A study conducted by the external occupational hygienist showed that the overall exposure to talc dust in the granule storage was too high if no dust masks were worn. In 2011, employees started a trial during which no talc was used. Instead, the floor was kept clean by using a scrubbing machine. These trials were extended into 2012, in the course of which different cleaning agents and floor coatings were tested. The trials have proved successful and as a result we have come so far that we will not be needing talc at all in the granule storage. This is a major step following longterm exposure to talc in the mixing department.

Safe site access

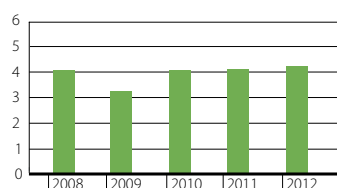
In 2012, the Municipality of Zaanstad started the redevelopment of the Assendelft Noord industrial area. The access road from the rail tracks no longer runs via Dorpstraat, but straight to Industrieweg. The municipality will, in collaboration with Forbo, construct a separate cycle lane that leads directly to Forbo. This new cycle lane will ensure cyclists will also be able to reach Forbo safely.

DEVELOPMENT-ORIENTED STAFF POLICY

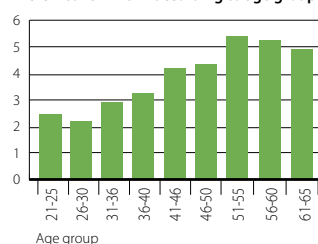
A balance in work, development and career

Each year, during the performance interviews, new agreements are entered into with all employees on training and development. These arrangements are incorporated in our annual training & education programme. The basic principles are future opportunities in combination with the employee's wishes.

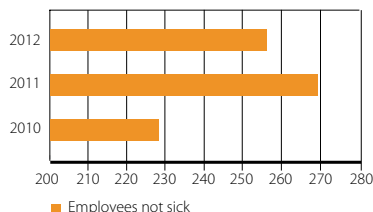
Sick leave (%)



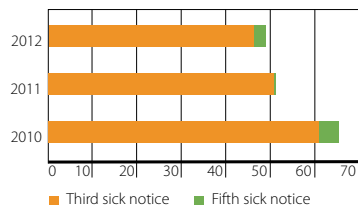
Sick leave in 2012 according to age group (%)



Bonus sick leave



Penalty sick leave



Short, medium and long-term sick leave in 2012

			(2011)
1 - 7	days	0.73%	(0.75%)
8 - 42	days	0.96%	(1.01%)
43 - 365	days	1.78%	(1.45%)
Outstanding cases of illness		0.41%	(0.89%)
Total		4.16%	(4.10%)

Causes of sick leave 2012

In 2012, a total of 616 people reported sick. These sickness reports are divided into five categories.

• Flu/short illness	450
• Locomotor apparatus	104
• Psychological	14
• Other	48
Total	616

Sick leave was caused by an accident 26 times:

• Industrial accident	4
• Sports injury	10
• Traffic accident	5
• Other type of accident	7
Total	26

In 2012, 1.9% of the total wage bill was invested in external training. This is exclusive of the costs of counselling and time off due to attending the courses. All training efforts combined represent an investment of 22,314 working hours, which is equal to 12.8 working years.

Professionalization and safety

In 2012, ample attention was paid to professionalization and safety. In order to further professionalise, staff followed professional study programmes and management skill courses. To improve safety awareness, 194 members of staff took part in the LMRA course (Last Minute Risk Analysis). The LMRA course increases safety awareness on the work floor by teaching staff a strategy that enables them to recognise risks and prevent injuries. In 2012, the development-oriented staff policy was continued unchanged. The number of internal appointments and promotions is a reliable measure of employee development. In 2012, a total of 71 colleagues were appointed new job roles.

Development assessments

In 2012, nearly all employees of Sales & Marketing Nederland took part in an online assessment. The goal is to gain more insight into behavioural preferences, competencies and motivations and to make employees more aware of their points for development. The results of the assessment serve as a tool to map out departmental and individual training needs.

Team Leader Course

The Team Leader Course started in 2011. Following on from that, meetings were held in February and March 2012 with all team leaders of the Operations departments. The themes were communication and work consultations. In September and October, the format and content of a course on leadership and safety was determined with the members of the programme council under the name of De Leider Draait Door (DLDD).

De Leider Draait Door

For the demonstrated leadership in combination with safety training course we deliberately opted for a title that would raise interest and that would enable us to come up with exciting content. The message of this course was not only to let participants make use of hierarchic leadership, but to also teach them to demonstrate more of 'felt' leadership. The format was analogue to the well-known Dutch TV show, De Wereld Draait Door: videos, photos and presentations to get the discussion going, to give examples, to make matters negotiable and to surprise the audience. With a healthy balance between cheerful and serious moments. Four sessions were held, each of them with a wide range of disciplines and hierarchic levels. The training course was attended by 90 employees from the Production, Production Support, Logistics and R&D departments. The evaluations from the participants have been very positive, and they were able to apply the training subjects to their jobs straight away.

Training programmes and courses 2012	
IT/applications	10
Chemistry	1
Commerce	19
Communication/ personal effectiveness	77
First aid	128
Financial/economic/managerial	7
Forklift truck	56
Logistics	80
Management/supervision	100
Retirement	5
Personnel/organisation/training	5
Process technology	40
Project management	9
Secretarial	2
Languages	8
Technology general/other	141
Electrical/electronics	17
Health & Safety	335
Total	1,040

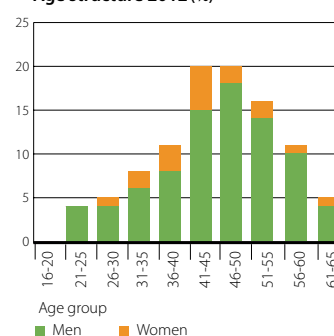
Influx 2012	
Corporate IT	5
Financial & ICS	1
Flooring Controlling	2
Flooring HR	1
Innovation & Product Management	6
Operations	11
Sales & Marketing	2
Strategic Marketing & Communication	3
Total	31

Outflow 2012	
Corporate IT	3
Financial & ICS	2
Flooring HR	1
Innovation & Product Management	1
Operations	24
Human Resources	1
Sales & Marketing	6
Strategic Marketing & Communication	1
Supply Chain	1
Total	40

Number of employees



Age structure 2012 (%)



STAFFING LEVELS

Production capacities

The effects of the crisis also hit Forbo in 2012. Due to cuts in the collective sector, investments in hospitals and schools (traditionally the biggest market for Marmoleum) fell. However, other sectors too saw fewer constructions or refurbishments. As a result of this falling demand for our floor coverings, production levels of linoleum fell too. On the other hand, we had to produce our latest collection, The Next Generation of Marmoleum, because all new colours had to be in stock at the start of 2013. These apparent contradictions demanded the necessary flexibility and creativity from our staff. Once stocks had been built up, one of the six shifts was removed from the calanders so as to move along with falling production levels. We have been able to absorb this from the flexible shell, with agency workers and secondees.

Despite the painful measures to let production capacities move in proportion to demand, we made considerable investments in the organisation in 2012. The research and development capacity for linoleum and the innovation capacity of the Flooring division grew significantly in 2012. These investments in the product development capacity should in time have an effect on demand for linoleum and as such on the production capacities required.

FTE development

The number of agency workers fell sharply, but the FTE development of Forbo employees only showed a slightly downward trend. As at 31 December 2012, there were 609 fulltime equivalent jobs, compared to 613 as at 1 January 2012. Twenty-seven people joined

the company in 2012, ten resigned, three retired (early or otherwise), termination agreements were concluded with eight and ten employees left the company during their trial period, following a long-term illness or because their fixed-term contracts expired.

Pension and collective labour agreement

The collective labour agreement between Forbo and trade unions FNV Bondgenoten, De Unie and CNV Bedrijvenbond terminated in April 2012. A new pension agreement formed part of the collective bargaining. The premiums paid by the employer and employees for the old final salary scheme had not been cost-effective since 2009. Due to the changed interest structure and increasing life expectancy, the commitments of the pension fund had risen to such an extent that the financial situation of the pension fund came under a lot of pressure. There was a realistic threat of having to cut accrued pension rights. However, the employer and employees have agreed on a new, conditionally indexed average salary pension scheme that does better justice to the pension ambitions of both parties. This scheme was combined with a 15 million Euros lump-sum payment by Forbo into the pension fund. This lump-sum payment helped to prevent the intended cut of more than 4% on accrued pension rights.

WORKS COUNCIL

Works Council activities

In 2012, members of the Works Council served in the Code of Conduct, the Age-Related Staff Policy and Balanced Forbo task forces (HSE committee member). The Forbo Smoke-Free by 2015 task force is new. The Works Council dealt with a number of requests for advice and consent.





Balance doesn't happen overnight

Roland Prantl senior functional consultant SAP Competence Center

"Once I give in, I can't stop"

Working out six days a week. That demands a lot of time and energy. However, Roland Prantl is also the fulltime senior functional consultant SAP Competence Center. As such, he has to make trips abroad every now and then. So how does he combine his demanding job with his workouts and does he have any time left for his family and other private matters?

"All in good time", says Roland. "Yes, I do work out at "De Club" for half an hour every lunch break. I've been doing so since Forbo started to contribute to membership, about three years ago. I enjoy it, because I sit down the rest of the day and it makes me feel fitter during the afternoons. It gets my blood flowing, I think clearer. I spend the evenings with my family, Saturdays too. Sunday morning is me-time, that's when I go long-distance running. It's not a chore to me, but part of my daily routine. When I'm abroad I often use the hotel facilities, but I don't mind not working out so much for a week. I often bump into colleagues at "De Club". Some people

are too fanatic when they start, but you'll never last that way. You have to gradually build it up. If you want to feel good, you need to do a bit more than taking regular exercise. I watch my diet, for instance. I eat two pieces of fruit every day. Now I sound like a goody two-shoes, but I'm also addicted to chocolate. But once I give in to that, that's it, so I have to muster the discipline not to overdo it. You are the only one who can do something about it. The most important thing is to choose. To be aware of what's good for you and to make time for that. Balance doesn't happen overnight."

Recommendations have been made about the digital salary slip and requests for consent were processed in connection with the Code of Conduct, changes to the corporate restaurant rota and the installation of two cameras. The 2011 request for advice about the loss of the Compensation & Benefits Manager in 2012 was withdrawn following an agreement with the Executive Board about the time spent by the Divisional Compensation & Benefits manager in Assendelft. The Works Council has proposed to change the company regulations in terms of the powers to consult information in the access control system.

The Works Council has evaluated specific subjects with employees, such as the digital salary slip, changes to Calanders 2 and 4 and the corresponding job rating and the implementation of the reorganisation at Sales & Marketing NL. Consultations about this were held with the FNV trade union executive in March. The new company doctor was introduced at the end of May, with both the Works Council and HSE committee members being present. Other subjects discussed at Works Council meetings included prices in the corporate restaurant, an update on the pension situation, changes to Oxidation/Esterification management, the presentation of The Next Generation of Marmoleum collection, changes to the Drying Room management reports, an explanation to new contract agreements with the occupational health and safety services and an explanation about the use of online assessments at Sales & Marketing NL.

HSE Committee

In 2012, the HSE Committee continued inviting departmental managers to its meetings. Two departmental managers were asked about their vision on safety and the environment. As agreed, two consultations took place with the HSE manager. Furthermore, the committee closely followed the Class base system for reporting unsafe situations, and it forwarded issues to the persons responsible. The committee also conducted a number of safety observation rounds. In 2013, the new HSE committee will see if these observation rounds still serve a purpose and actually add value to the other observation rounds.

For a more comprehensive report from the Works Council and HSE committee, we refer to the Works Council's 2012 annual report.

SUGGESTIONS AND RELAXATION

Suggestion Box

Eighty suggestions were submitted in 2012, 73 of which were processed by the committee. A total of 25 of those were rewarded, while 45 were rejected and three were awarded with an incentive. The entries included thirteen requests for revaluation. The number of suggestions submitted fell by 35%. Operations submitted most of the suggestions, namely 64 (including those thirteen requests for revaluation), but other departments chipped in too. A total of € 22,740 in rewards was paid out, the highest individual payment being € 6,000. The number of pending suggestions rose to 122 as at 31 December 2012.

Classification of suggestions received 2012

Operations (Production/Logistics)	64
Human Resources	7
Sales & Marketing NL	5
Finance & ICS	4
Total	80

Successful sporting event

Each year Forbo Flooring's Sports and Leisure Council organises a range of activities. This year, the council decided to make the Forbo Family Cycling Day even more attractive. In consultation with the sports clubs this led to the Forbo Sporting Event: apart from the customary cycling and walking events, people took part in a fitness walk, a tennis clinic, a fitness clinic and a long-distance cycling trip. Various exciting activities had also been organised for the children. Thanks to the cooperation from the clubs, this first Sporting Event was a big success. The reactions from the nearly 550 participants have been very positive. Thanks to the Sporting Event, the number of members of the trim club has risen.

Plus...

This year saw the bi-annual trip for retirees and that too had been revamped. Only former employees and their partners were invited, making it possible to host the event on a single day, at a single location, motel Akersloot. It was a very successful day. Sinterklaas was celebrated on 1 December. Due to a breakdown he nearly didn't make it, but a truck brought him right up to the door of the corporate restaurant. Very exciting for the children, who unwrapped their presents with big smiles on their faces. The bingo nights led by Peter Denneman took place as normal. Peter is a worthy successor of Jan Gravesteijn, who had been a bingo master for nearly 45 years. The photo club and other clubs at Forbo also remain active. We are of course pleased to know there are always volunteers at Forbo willing to help out with the various events.

Responsible production,

We are proud of our beautiful green products. And we are proud of our production processes which aim to leave the smallest footprint possible. Still, the process does affect the environment; it consumes energy. It generates residual substances and odours, CO₂ is emitted. We are aware of that and we want to keep those effects to a minimum as best as we can. Production, turnover and healthy working conditions are important in order to facilitate a healthy business. However, we also spend a lot of time and energy on coming up with improvements that contribute to environmentally friendlier products and processes. We encourage our employees to think about responsible production in order to keep our planet earth habitable for future generations.

EFFICIENT IN ENERGY

The production of linoleum requires energy. Forbo uses natural gas and green electricity as primary sources of energy. The higher the production levels, the more efficient energy consumption gets. So a fall in production is a challenge when it comes to the efficient use of energy. Burning natural gas produces CO₂. Since 2008, Forbo Flooring has been buying green energy, and as such contributes to less consumption of fossil fuels.

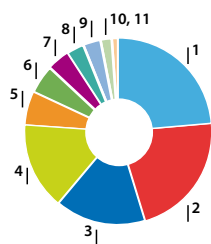
We convert some of the sources of energy into secondary sources of energy such as steam, hot water and compressed air.

The four process phases that consume most energy are:

Oxidation	24%	heating up the boilers and heavy mixing work
Drying rooms	22%	steam humidification, compressed air drive, incinerator
Calenders	16%	electric and compressed air drive
Mixing department	15%	electric and compressed air drive

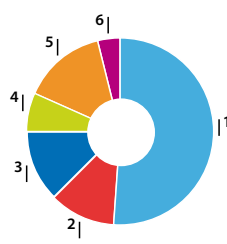
Reduced energy consumption

The consumption of energy depends on the amount of linoleum produced. In 2011 we used 8,283 thousand Nm³ of natural gas and 41.9 thousand MWh of electricity for the production of 22.8 million m² of linoleum. In 2012 those figures were 8,088 thousand Nm³ of natural gas and 40.8 thousand MWh of electricity for the gross production of 20.9 million m² of linoleum. So despite the fact that we produced approximately 8% less linoleum, energy consumption fell by approximately 2.5%, not 8%. Unfortunately, a fall in production results in a less efficient use of our systems. The reason is that we cannot switch off all machines when no production is in progress. The relative energy consumption per m² of product of 2012 is comparable to that of 2009, when we produced a gross 20.8 million m² of linoleum. As such, energy efficiency did not deteriorate during the past three years, but it did not significantly improve either.



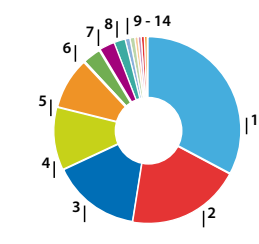
Energy consumption 2012

	%
1 Oxidation	23.8
2 Drying rooms	21.7
3 Calenders	16.3
4 Mixing department	14.8
5 Trimming	6.2
6 Storage & Distribution	5.0
7 Esterification	3.6
8 Offices	2.8
9 Not identified	2.7
10 Samples/raw materials	2.4
11 Recycling	0.7



Natural gas consumption 2012

Areas	Nm ³	%
1 Steam generation	4,155,115	51
2 Small-scale consumption	1,238,741	15
3 Incinerators drying rooms	1,017,985	13
4 Steam boiler	908,340	11
5 Esterification	537,411	7
6 Incinerators oxidation	230,235	3
Total	8,087,827	100



Electricity consumption 2012

Areas	kWh	%
1 Oxidation	13,417	33
2 Mixing department	8,130	20
3 Drying rooms	6,266	15
4 Calender 4	4,512	11
5 Calender 2	3,696	9
6 Storage & Distribution	1,324	3
7 Trimming	1,149	3
8 F and H buildings	769	2
9 Other	440	1
10 Head office	300	0.5
10 Laboratory/pilot factory	244	0.5
12 Calender 1	241	0.5
13 Recycling	219	0.5
14 Esterification	133	0.5
Total	40,840	100

now and in the future

However, we can still report some energy improvements for 2012. Electricity consumption at head office fell by 11%, which is a good result.

In 2012, magnets were fitted near the gas supply for the steam boilers. These magnets provide a maximum flow of gas at molecular level, facilitating a more efficient incineration process. According to the specifications, this can lead to a 5% gas saving for the steam boilers. We will be measuring these savings in 2013. A study into the reduction of the ventilation capacity for air circulation was conducted in the Drying Rooms. Although this study has not yet been fully completed, the results appear to be positive.

CO₂ emissions

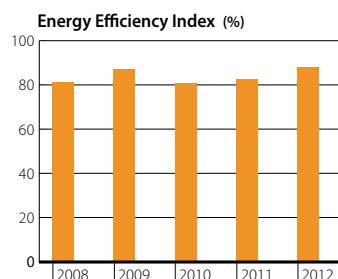
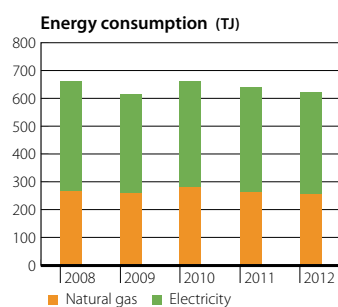
The emission of CO₂ is directly linked to the burning of natural gas at our location. Due to a fall of 3% in our natural gas consumption in 2012, CO₂ emissions fell accordingly. The total quantity is 14.4 kilotons, 12.2 kilotons falls within the CO₂ emissions trade. This is the CO₂ emitted by the steam boilers, the water boiler and low-volume consumption. Our annual emission rights are fixed at 10.1 kilotons of CO₂. That means we had to purchase 1.1 kilotons of CO₂ emission rights for 2012. A new trading period starts in 2013. That means some of the incinerators will also fall under the CO₂ emission trade with effect from 1 January 2013.

AIR NO_x

Nitrogen oxides (NO_x), like CO₂, are formed during combustion processes. However, the quantity that is formed depends not only on the natural gas consumption but also on the quality of the burner. NO_x contributes to acidification and can be a burden on NO_x-sensitive plants and animals in nearby wildlife areas. In 2012 we emitted slightly more NO_x from the BEES systems (steam boilers and hot water boiler) than in 2011 (2,813 kilos in 2012 compared to 2,523 kilos in 2011), while the overall natural gas consumption of these systems fell by 2%. This is the result of the fact that boiler 6 was used relatively more than in 2011. Boiler 6 has a slightly higher NO_x emission than boiler 7. The hot water boiler was also used slightly more often.

Odours studied again

The emission of volatile organic compounds (VOCs) happens especially during the esterification and oxidation of linoleum cement and during the linoleum drying process in the Drying Rooms. The emission of VOCs contributes to the acidification of the environment and causes that odour that is so particular to our company. In order to reduce these emissions, incinerators have been installed in the departments, which remove virtually all VOCs in flue gases and odour. These very extensive measurements conducted in 2011 and 2012 have given us a better and more complete insight in to our VOC/odour emissions.





Less dust,
less waste,
produce more

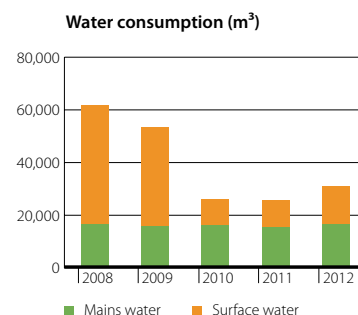
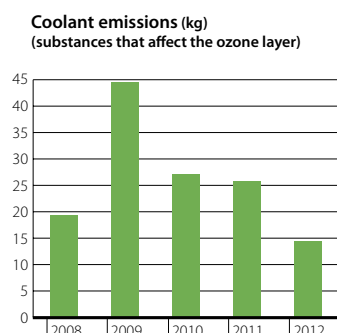
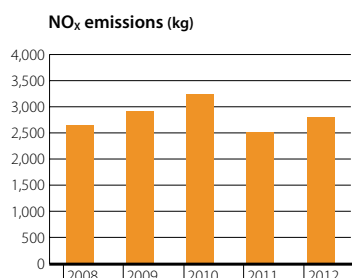
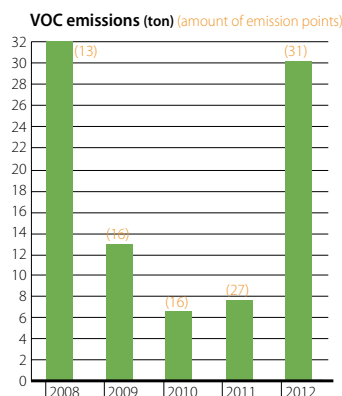
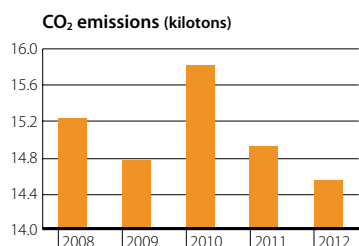
Jan Ayal mechanical engineer and **Herbert de Rooy** general production operator

One step forward thanks to innovation

Forbo's plant counts more than 130 conveyor belts. They transport the linoleum granulate. This coloured substance sticks to the belt, falls off one belt onto the other, it bounces up and down and forms clumps. And if you don't keep the belts clean, the product will be contaminated with the colours of the previous run. So is there another way of doing this, employees were wondering.

'Forbo's principle is that all materials have to be as natural as possible, so we always opted for canvas belts,' says Herbert de Rooy, general production operator. 'As granulate adheres to it too much, the belt is covered in a top layer of silicon. But that layer peels off, causing the product to be contaminated. This results in the loss of a lot of raw materials, the cleaning process is labour-intensive and costs much time. Time during which production stagnates. And all of that costs time. But that's the way we did it, linoleum had that name of being an difficult substance. Eventually, we did start looking at alternatives. Things had to improve on all fronts: fewer spills, less substance, a better working environment, less time needed to clean, higher production levels.'

'Together with a multi-discipline project group we conducted extensive research and formulated the requirements,' Jan Ayal, mechanical engineer chips in. 'We invited manufacturers to help think about a solution, and they were more than happy to do so. The exchange of knowledge and ideas was phenomenal. We're a year down the line now and we're in the test phase during which we will try out several belts and trial situations. It took a lot of time and energy, but we're already seeing excellent results: 50% less time needed to clean, 90% less waste, a more efficient use of materials and a dust-free environment for staff. A win-win-win situation for the environment, production and staff. The thing I really like is that we took some very big and innovative steps that now generate a visible result. We used to have stacks of dust, now there's hardly anything. We really took a step forward and we can also implement this in other departments.'



On the basis thereof, we calculated a new odour contour around our premises. Outside a contour of approximately 1 km around our premises, odour nuisance levels are virtually zero, but within the contour some nuisance may be experienced. The Mixing department currently is the biggest contributor to odour emissions.

During the past five years, VOC emissions were recalculated in accordance with prescribed calculation methods. Emissions should on average not increase over several years, but are determined only on the basis of the most recent emission measurements. As a result the annual emission figures show more differences, as the measurement varies significantly.

In 2012, VOC emissions were 30.1 tons from 31 emission points. In 2011, the figure was 7.6 tons from 27 emission points. The 22.5-ton difference can be explained as follows:

- 48% of newly charted emissions in the Mixing department
- 31% increase at known emission points at the Mixing department following improvements to the working environment there (previously diffused emission)
- 8% rise of emissions from Oxidation incinerators
- 4% rise of emissions from Trim 3 stoves
- 9% other.

The improved overview of emissions by measuring at more emission points gives us an insight that enables us to focus more on options to reduce emissions, while also still concentrating on optimising the indoor climate of the production departments.

Dust filters

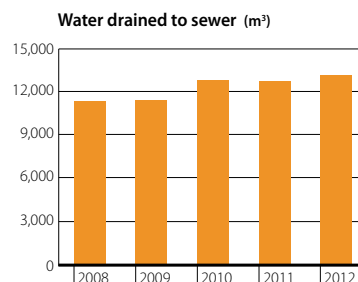
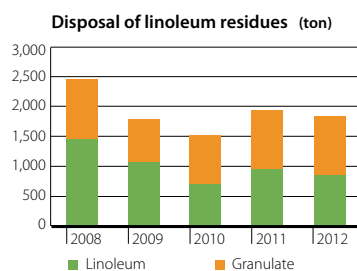
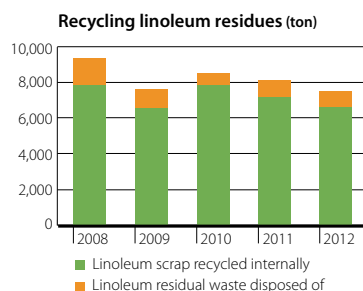
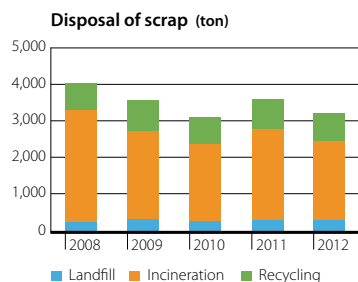
The manufacture of linoleum also produces dust. Dust contributes to spreading emissions and can lead to a higher level of particulate matter. Dust can be released during mixing in the Mixing department and when filling wood flour, limestone and scrap silos. In order to prevent the emission of dust, dust filters have been installed near these departments and systems. The functioning of these filters is regularly inspected as a preventive measure. The emission of dust is measured once every three years. No new measurements took place in 2012. The difference in the calculated emissions is therefore the result of a difference in operational hours: 1,163 kg in 2012 compared to 1,294 kg in 2011.

RESIDUAL WASTE

Residual waste used as raw material

During the manufacture of linoleum, typical residual waste such as linoleum and granulate is produced. This residual is produced when trimming the edges, during sampling, breakdowns or when material that fails to meet our high quality standards is rejected, among other things. A magnificent 86% of our internal linoleum residual waste does not leave the premises, as it is reused as raw material in our production process. The other 14% cannot be recycled and is disposed of as waste product.

In 2012, we disposed of 884 tons of linoleum (2011: 983 tons) and 889 tons of granulate (2011: 947 tons). Linoleum and granulate that are disposed of still have a high calorific value and are incinerated externally. The heat obtained from this process is converted into energy and returned to power plants. This year we will be conducting a test in which granulate waste will not be incinerated externally, but be put to good use in the tarmac industry.



As linoleum and granulate waste depend on the production figures, a production-relates HSE objective was formulated: 0.012 tons of granulate waste per ton of product. In 2012, we failed to achieve our objective for granulate residual waste (0.016 ton/ton). Among other things, this was caused by the execution of test productions in preparation of our new collection, quality differences and a number of incidents.

In 2012, we replaced seven conveyor belts with the aim of spilling less granulate from the belts. This project has been a success. The reduction on these belts is 99% and there are hardly any spills anymore. The new conveyor belts can help prevent 330 tons of granulate waste per year. In 2013 we will again be replacing a number of conveyor belts.

Less residual waste disposed of

Apart from linoleum and granulate residual waste, other waste includes paper, wood, jute and tin. In 2012, we disposed of a total of 3,289 tons of residual waste. This is 8.5% less than in 2011. A significant amount of residual waste is used externally as fuel to generate energy, as packaging material, jute bails and paper for instance are recycled. Residual waste that cannot be processed is disposed of.

ENVIRONMENTAL INCIDENTS

Thirty-three (potential) environment-related incidents took place in 2012. In 2011, that figure was 42. Of these 33 incidents, 24 more or less caused a negative impact on the environment. They included:

- an explosion
- nine breakdowns in the incinerators (twelve in 2011)
- twelve fire or overheating incidents
- two spills (methylated spirits and tall oil).

The other nine incidents did not affect anything outside the site boundaries, as they were dealt with internally or, in hindsight, did not cause any emissions. Incidents are reported internally to a central point, after which improvement measures are formulated in order to prevent repeats. All reports have been processed.

No complaints were submitted to the Province of Noord-Holland in 2012. In order to be able to respond well to any odour nuisance, Forbo recommends local residents to contact Forbo directly. This enables us to find out if Forbo is indeed the source and what may be causing the problem. No complaints from local residents were received by Forbo in 2012.

We hope you have enjoyed reading our 2012 HSE annual report.

In 2013 we will continue to work hard on the objectives set out in the report and on the further improvements in the fields of health, safety and the environment.

If you have any questions or comments about the report, please send them to mia.harkamp@forbo.com.

For more information about our company, visit www.forbo-flooring.nl.

Colophon

This is a publication of **Forbo Flooring B.V., Assendelft**

Editors **Lucia Fijlstra, Mia Harkamp, Laura Hellendoorn, Saskia Boot and Woord tekst en advies, Amsterdam**

Interviews **Birgitta Langen, Amsterdam**

Design **Frissewind, profs in communicatie en design, Amsterdam**

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For more information, please contact

Forbo Flooring B.V.
PO Box 13, 1560 AA Krommenie
Industrieweg 12, 1566 JP Assendelft
The Netherlands
+31 (0)75 647 7477
contact@forbo.com
www.forbo-flooring.nl

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