

t-time

A MAGAZINE FROM TRELLEBORG GROUP

2-2021

Solutions that seal, damp and protect critical applications.

PLUS
FRESH FROM
THE BOTTLE

THE NEW DIGITAL
LANDSCAPE

SMART PORT
SOLUTIONS

Gentle on the ground

Tires offering high performance and soil protection.



CONTENT

08

FRICITION CONTROL

A new sealing solution that is like squaring a circle is the result of the efforts of Bernhard Haass and his team.

15

DIGITAL PRESENCE

In 2020, the pandemic turned the status quo in many areas upside down. But Trelleborg was prepared for the digital challenge.



20

PROTECTING THE SOIL

Discover why a farmer in the beautiful Italian countryside chooses Trelleborg tires to be gentle on the land.

29

UP TO THE CHALLENGE

A new high-performance plasterboard forming belt is proving that it can meet the strict specifications of the gypsum industry.



Cover photo:
Trelleborg

The next issue of *T-Time* will be released in October, 2021.

Responsible under Swedish Press Law:

Patrik Romberg,
patrik.romberg@trelleborg.com

Editor-in-Chief: Karin Larsson,
karin.larsson@trelleborg.com

Co-Editor: Donna Guinivan

Production: Appelberg
Publishing

Project Manager:

Erik Aronsson

Language Coordinator:

Kerstin Stenberg

Art Director:

Frida Diaz and Tom Barette

Printing: Trydells Tryckeri

Subscription:

trelleborg.com/en/media/
subscribe

Address: Trelleborg AB (publ)
Box 153, SE-231 22 Trelleborg,
Sweden

Tel: +46 (0)410-670 00

Fax: +46 (0)410-427 63

T-Time is published three times a year. The opinions expressed in this publication are those of the author or people interviewed and do not necessarily reflect the views of Trelleborg. If you have any questions about Trelleborg or wish to send us your comments about *T-Time*, please email: karin.larsson@trelleborg.com

linkedin.com/company/
trelleborggroup
twitter.com/trelleborggroup
facebook.com/trelleborggroup
youtube.com/trelleborg
trelleborg.com

Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of about SEK 33 billion (EUR 3.13 billion, USD 3.57 billion) and operations in about 50 countries.

The Group comprises three business areas: Trelleborg Industrial Solutions, Trelleborg Sealing Solutions and Trelleborg Wheel Systems.

The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on Nasdaq Stockholm, Large Cap.

www.trelleborg.com



EDITORIAL

INNOVATION IS KEY TO OUR GROWTH

At **Trelleborg**, we put a lot of effort into making it easy to do business with us. We want to use technology to streamline and simplify our external offerings, with the ultimate aim of providing our customers a simpler and better solution. This includes smart and intelligent products, communication with our customers, and new business models or sales approaches.

In this issue of *T-Time*, I am happy to present a couple of our initiatives. To prevent aroma carryover from one beverage to another, we have created new software for the bottling industry that shows which seal

compound is the best match for different beverages. And as more of our lives go online, webinars have become one of the biggest new go-to points as ways of meeting and sharing ideas with our customers.



Peter Nilsson,
President and CEO



Passing the taste test

Our growing taste for flavored beverages is a challenge for the bottling industry. To tackle the issue of aroma carryover from one drink to another, Trelleborg partnered with filling specialist Krones. Part of the successful outcome is a completely new aroma-resistant sealing material.



PHOTO: KRONES

Walk into any supermarket or convenience store and you'll find an abundance of choices in the beverage section, with rows of energy drinks, sodas and juices. Even water is no longer just natural but often flavored to satisfy any taste or preference.

This multitude of alternatives is great for the thirsty, but our desire to try the new and tasty has created a challenge for beverage producers and the bottling industry. The trend toward flavored drinks has put new focus on the issue of aroma carry-over from one beverage to another

after changeover in the filling process. Beside the risk of wasting hundreds of liters of beverages, aroma migration can cause unwanted downtime, extra monitoring, and consumer complaints. In the worst-case scenario, it can even lead to fines or result in barring products from sale.

"Flavor migration is a risk that must not be underestimated, particularly when intense aroma compounds are used," says Dr. Eva Beierle, Development Engineer Aseptic and Process Technology at German packaging, and bottling machine manufacturer, Krones. Beierle sees great benefits from

Above: Filling machine from the German manufacturer Krones.



“By combining Krones’ expertise in beverage trends and development with Trelleborg’s expertise in elastomer sealing materials, we found that the type of elastomer materials used in the machine’s sealing components is a significant factor in aroma carryover,” says Tim von der Bey, Project Manager for the collaboration project at Trelleborg.

A large filling machine can have up to 3,000 different seals. Pipes, heat exchangers, valves – all of them require seals to connect parts, control pressure and add the right amount of beverage to each unit. Frequent seal changes are costly and time consuming, putting strains on flexibility. Hence, step one was to discover what type of seal would be most sustainable and best suited for different types of beverages.

For nearly two years the Trelleborg lab in Stuttgart, Germany, hosted rigorous testing of the most commonly used elastomers in the bottling industry. ▶

“We have reinvented the way we provide information on sealing materials.”

Tim von der Bey, Trelleborg

Trelleborg’s newly developed aroma-resistant sealing material, as it offers its customers increased production flexibility.

Everyday millions of glass bottles, cans and plastic containers run through Krones’s bottling lines all over the world. Many plants produce a variety of drinks and greater variety means shorter production times, and more changeovers, which despite rigorous cleaning processes increase the risk of aroma carryover. To tackle the issue and investigate exactly where and why aroma carryover occurs, Krones partnered with Trelleborg Sealing Solutions.



PHOTO: SHUTTERSTOCK

Different types of sealing materials were exposed for weeks, and in some cases even months, to everything from aromatic fruit juice and cola-flavored sodas to vodka, detergents, and curry-spiced tomato ketchup.

The aim was to determine the susceptibility to flavor migration, as well as the durability of sealing materials when exposed to heat and to the cleaning chemicals used in the industry. Simultaneously, Krones' R&D Lab in Neutraubling, Germany, evaluated flavor migration through both gas chromatography and human test panels.

"To measure the amount of aroma that migrates, the exposed sealing materials were left in water for

"The Isolast® materials did not absorb aromas and showed virtually no detectable effect on the taste of subsequent beverages."

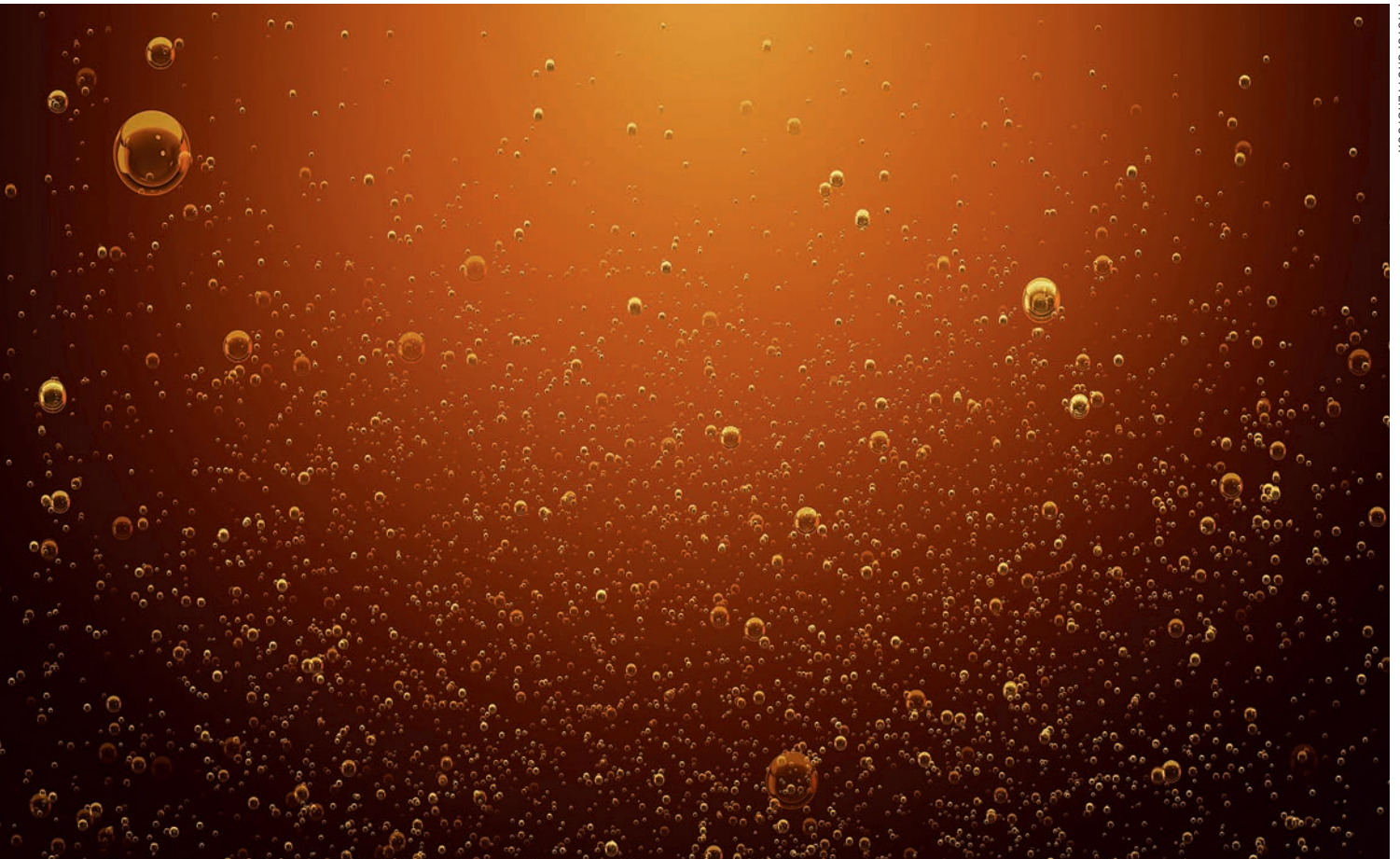
Martin Krüger, Trelleborg

different periods of time," Beierle says. "Then we let a group of 20 to 30 people evaluate and rate the water."

The result: both good news and bad news. The good news is it gave new in-depth knowledge about how different types of elastomers behave when exposed to strong flavors, heat, and cleaning

chemicals. This information now helps customers choose the most suitable seal.

The bad news is that the most commonly used sealing material in the food and beverage industry, EPDM (ethylene propylene diene monomer rubber), turned out to be the most susceptible to aroma carryover, increasing the risk of





Above:
Layout for a
typical filling plant.

flavor migrating from one drink to another. On the other hand, EPDM had the best chemical resistance and durability against cleaning agents.

FKM (fluorocarbon) also performed well in terms of chemical resistance, but for aroma carry-over the results changed depending on the beverage. Apple-flavored water, for example, tended to damage the FKM seals.

“Best-in-class were seals made of FFKM (perfluoroelastomer), such as the Trelleborg Isolast® FoodPro® compounds,” says Martin Krüger, Area Sales Manager responsible for food and beverages at Trelleborg Sealing Solutions. “The Isolast materials did not absorb aromas and showed virtually no detectable effect on the taste of subsequent beverages.”



Martin Krüger,
Area Sales Manager,
Trelleborg
Sealing Solutions.

The research concluded that there is no perfect seal compound on the market suitable for every use. For many lightly flavored beverages, EPDM is a suitable material, especially since high temperatures are often necessary in the production process. Isolast is the ultimate for sealing in food and beverage applications, but with a higher cost, may be overengineered for some processing. To help guide customers, Trelleborg created a new tool to find the best match.

“We have reinvented the way we provide information on sealing materials by creating a customer-tailored software-as-a-service solution,” von der Bey says.

Based on the type of beverage and the cleaning agents, the new software shows which seal compound is the best match for certain beverages.

“Selecting the optimum sealing material is critical in preventing aroma carryover and certainly has a positive impact on both our customers and those of Krones,” von der Bey says. “But we did not want to stop at that. Our findings resulted in the development of a completely new and superior aroma-resistant sealing material.”

“With the new compound we have a sealing material that is both affordable, durable and low in flavor migration,” Beierle says. “It’s a huge benefit to be able to tackle the drawback of all the other compounds and at the same time optimize one that is perfect for the beverage industry.”

The new compound will be available at first for Krones’s customers exclusively. ■

For more information:
martin.krueger@trelleborg.com



Bernhard Haass is
Design Manager for
the development of
Friction Control.

A smooth opening

Plenty of materials provide an effective seal between two surfaces, but they don't usually allow those surfaces to easily slide against each other. To develop something that does both is like squaring a circle. But that's what Bernhard Haass and his team have achieved with Friction Control.

TEXT MICHAEL LAWTON **PHOTO** HILARIUS RIESE ▶



Bernhard Haass started out as a qualified mechanical engineer, but he has worked in seals all his life. He's now Design Manager for the EMEA area for seals and profiles at Trelleborg Industrial Solutions, working with a team of six people and responsible for design development in four facilities. This team is behind the development of Friction Control, a new concept, which solves the old problem of seals being susceptible to damage from friction if they need to slide.

As Haass says, "In general, the better the sliding properties, the worse the sealing properties – and alternatively, the better the sealing properties, the more sensitive the sliding system is to abrasion."

Opening a sliding door that is sealed with a conventional gasket is rather like pulling a rubber eraser over a piece of paper. There are bits of rubber all over the page, and that is not what you want with a seal.

"Development of Friction Control resulted from an inquiry that came from inside Trelleborg," Haass explains. "We receive about 2,000 enquiries a year, some from customers, some internal. To answer these, we create simulations, develop solutions, and build prototypes. At this stage, it's often like handi-crafts, but then we must prepare cost calculations, and finally go to industrial production."

These enquiries result in the development of up to 500 new products every year.

Bernhard Haass

Working in seals since 1993, Bernhard Haass is married with two grown-up sons. He lives in a village about 50 kilometers away from his base in the small town of Miltenberg in Germany, between Würzburg and Frankfurt, where he is Design Manager for seals and profiles in the EMEA region at Trelleborg Industrial Solutions. This is the area he comes from. "I'm a real country boy," he says, "and I definitely wouldn't want to live in a big town."



Right: The new Friction Control solution has a very low coefficient of friction combined with extremely high abrasion resistance.



“The world of seals is a varied world.”

Bernhard Haass, Trelleborg

Haass says it's a pleasure to see a premium passenger car go past and know that his group developed some of its innovative gaskets. Or to look at the Shard in London, where his team worked with steel builders to develop customized seals.

The internal enquiry behind Friction Control concerned the growing size of glass panels in modern facades. The aluminum frames that hold them expand and contract with the weather and the changing load of the ceilings. These forces are so large that the frames can move several centimeters. Glass is not elastic, so the gaskets are fitted to the facades to allow them to slide.

Inherently when facades slide on gaskets there is abrasion, so various workarounds have been found. One is to limit the area of contact between the gasket and the sliding element, but that reduces overall functionality. Another is to use a less effective seal, such as a brush or flock seal – they slide well, but do not seal well. Or you could bond

another substrate that slides well on to a seal, but there's always the danger that the two will separate.

For the new Friction Control solution, Haass used a standard sealing elastomer, Ethylene Propylene Diene Monomer (EPDM), and coated it with a film made of another plastic, Ultra-High-Molecular-Weight Polyethylene (UHMW-PE). This has a very low coefficient of friction combined with extremely high abrasion resistance.

“It's not a new material,” says Haass. “It is already used by Trelleborg in a variety of applications such as vehicles to prevent plastic parts from squeaking as they rub against each other, and in industrial applications like dock or flood gate fenders, where conventional solutions require regular servicing and replacement.”

You cannot extrude or mold UHMW-PE, it can only be made into a foil. Trelleborg uses thicknesses of between 0.1 and 0.2 millimeters bonded by vulcanization to an EPDM gasket during extrusion.

Fitted between glass and frame, Friction Control allows the facade frame to move in relation to the glass without damaging the seal. A thin strip of the new gasket on doors ensures there is no draft and avoids a threshold to, for instance, allow smooth wheelchair access.

There are plenty of uses still to come for Friction Control in other industries. “We are thinking about sealing between concrete pipes, which are very rough,” Haass suggests. But it could also be used for sliding doors and gates, or in roller blind guides, or to line hoses.

Haass enjoys working in his field: “Rubber people are a bit different; a relatively small group, you're always meeting them,” he says. “And we're involved in all kinds of industries – heavy construction, automotive, window manufacture – it's what makes this job special. The world of seals is a varied world.” ■

For more information:
www.trelleborg.com/en/career





FRESH AIR

TEXT DONNA GUINIVAN

ILLUSTRATION NILS-PETTER EKWALL

What is essential? Fundamental to life is the air that we breathe.

Keeping this vital resource as fresh as possible is critical. Trelleborg focuses on ways to do this, from sustainable measures at its manufacturing facilities to supporting agriculture to effectively oxygenate the atmosphere, from providing components for solar panels to supplying wide range of solutions for wind power. ■

1. Wind power

Minimizing energy pollution, innovations from Trelleborg feature on wind turbines globally to maximize wattage produced on-land and increasingly offshore.

2. Tractor tires

The design of the tread on Trelleborg's tires protects the soil. That means plants can grow more effectively and through photosynthesis oxygenate the air.

3. Solar panels

Harnessing the sun to produce energy now represents a viable alternative to fossil fuels, on the large scale on solar farms or for individual houses.

A focus for all Trelleborg facilities globally is to continue to lower their environmental impact. Measures include those like in the UK, where all energy sourced is now renewable, and the initiative in Spain that saw its car park covered with solar panels.

NEWS



PHOTO: TRELLEBORG

Flying high

Trelleborg launches the unique and revolutionary Turcon® VL Seal® II for the hydraulic sealing of actuators in flight controls and landing gear, and seals in landing gear shock absorbers.

This new seal generation offers enhanced sealing efficiency, easier installation, and even greater reliability. Extensive tests have proved its outstanding 'zero' leakage performance,

which extends service life and minimizes maintenance needs.

Turcon VL Seal II is available in a range of Turcon materials for use in a wide variety of extreme operating conditions. These are combined with O-Ring compounds that are suitable for use in all hydraulic fluids and service parameters.

Mitas to equip KTM

Mitas, part of the Trelleborg Group's portfolio of solutions, is partnering with KTM Sportmotorcycle GmbH to fit the 2021 KTM 1290 SUPER ADVENTURE S with TERRA FORCE-R tires. KTM 1290 SUPER ADVENTURE S is a high-performance adventure bike, which needs an equally high performance tire.

Mitas TERRA FORCE-R is designed specifically for 90 percent road and 10 percent off-road use. It is ideal for riders looking for a tire that's able not only to perform at highway speeds and on country roads, but also to handle gravel whenever the rider feels the desire to explore off-road.



PHOTO: PEXELS



PHOTO: TRELLEBORG

New tire range for loaders and dumpers

Trelleborg is expanding its radial tire range for loaders and dumpers with new additions to the EMR range of earthmover radial tires for critical construction applications.

The new tire sizes for the EMR 1042 and EMR 1051 ranges offer superior traction, enhanced damage protection and durability, as well as a reinforced carcass and sidewall protection to extend tire life and increase rider comfort.

Acquisition of composite hose supplier

Trelleborg has finalized the acquisition of Dutch company, Gutteling Group BV. The company develops and sells composite hoses to the chemical industry and is the market leader in hoses used for the ship-to-ship transfer of Liquefied Natural Gas (LNG).

Gutteling has its head office and production center in Rotterdam, the Netherlands, with an additional production site in the Czech Republic and a sales office in the US. In 2020 the company's total sales amounted to about 115 million SEK.



PHOTO: ALTIN OSMANLI/ALAMY



VIRTUALLY THERE

As more and more of our lives go online, we look at how Trelleborg has faced up to the challenges of supporting its customers in an increasingly digital world.

TEXT DONNA GUINIVAN PHOTOS TRELLEBORG ►

BETTER BUSINESS DIGITAL COMMUNICATION

2020 was a vastly different year, with the pandemic turning the status quo in many areas upside down. Face-to-face business transactions were limited, driving conversations online that usually took place between engineers over a desk. This left many companies behind, but for Trelleborg it was a challenge they were prepared for.

“Digital communications are not new,” says Robert Zahiri, who heads up global marketing communications at Trelleborg Sealing Solutions. “If you look at the buyer’s journey, the earliest stages in making purchasing choices have progressively moved online. Engineers turn to search engines to find potential suppliers, browsing websites, reading about companies online or

looking at reviews. That has become the norm.”

Generally, that research resulted in a visit from a sales engineer. When that could not happen, digital communications moved from the first stages of a buyer’s journey to its entire length, from initial contacts to the final purchase and beyond.

“This was a trend that we anticipated would happen,” Zahiri says. “The situation last year just accelerated the process.

“Our focus in developing our digital presence is obviously about making sure that we are heard in the online environment, but more importantly it’s about providing a service to make engineers’ lives easier.

“Over the last few years, we’ve

invested heavily in an extensive selection of resources. These include calculators, selectors, converters, material compatibility tools and technical white papers. Our renowned CAD service and sealing solutions configurator provide proven solutions with drawings that engineers can place into their designs. And for those new to sealing, we offer a wide choice of e-learning, from basic lessons to more specialized tutorials. During 2020 we saw substantial use of these offerings.”

Social media has also become a critical part of the new digital reality.

“Our team focuses on providing added value content over our channels and making sure our product experts feel comfortable and are

Below:

An expert panel discusses key issues at the virtual conference held at the TK Elevator Test Tower in Rottweil, Germany.



“There will always be the place for face-to-face meetings but with lessons learned, digital is here to stay.”

Robert Zahiri, Trelleborg

effective at joining online conversations,” Zahiri says. “Sales teams forced to work from home support engineers virtually by offering advice on social networks.”

And, he adds, it’s not just the young people who have taken this approach.

“Our most successful person in this area has been with the company for over 25 years. He’s relished new technology, and as an expert in his field he’s worked with many

engineers on product development after making contact via LinkedIn.”

Webinars have become one of the biggest new go-to points.

“We ran online webinars prior to the pandemic, but it would just be a few per year,” Zahiri says. “During 2020 our engineers recognized that these were a great way to replace customer visits when groups of engineers would meet together, so 32 took place.


“There were nearly 3,000 registrations for last year’s live webinars, and they are becoming increasingly popular. Just recently we ran a webinar for our SealGlide coating and a training session in Chinese. For each of these alone we had between 400 and 500 attendees. Those are truly impressive figures.”

With exhibitions and customer events canceled, a need arose for other ways of meeting and sharing ideas on a larger scale.

“Each year we ran Innovation Days for our customers within Europe that were well attended and valued. These allowed us to interface on key issues, presenting our innovations to support novel product development. With no possibility of a physical meeting, we looked to a virtual solution.”

Two virtual conferences focusing on electrification, sustainability and digitalization were livestreamed over two days, one in the summer and the other in the fall.

“We checked out other companies that had tried to do this, and we wanted to do much better,” Zahiri says. “So we hosted the events in iconic venues. The first conference was at the Classic Car Lounge in Sindelfingen, near



TLC Plus

Help online

All areas of the Group produce tools to aid in design, specification and use of Trelleborg solutions. Here are a few examples of what is available.

SafePilot: Professional piloting/navigation software uses touchscreen technology to safely dock ships.

SiteGuide: Helps pipe repairers calculate required liner/mat and resin to rehabilitate a pipe or manhole.

TLC Plus: An advanced sensor-based system that recommends optimum tire pressures for tractor tires.

Wear Indicator System: Wireless alerts highlight when hoses fitted with electronic sensors are worn.

Stuttgart, and the second at the TK Elevator Test Tower in Rottweil, both in Germany. We engaged a professional moderator and film team, and involved renowned guest speakers and Trelleborg experts, as well as incorporating some fun aspects such as live music and a cartoonist, trying to make the streaming experience represent attending the in-person event.

“Spaces for our physical conference were always limited. Streaming it live meant that nearly 1,000 took advantage of being virtually present.”

Asked if things would return to the way they were, Zahiri said that was unlikely.

“There will always be the place for face-to-face meetings but with lessons learned, digital is here to stay.” ■

For more information:
www.trelleborg.com/en/seals/resources/e-learning



The balancing act

Today's global ports must balance the need to offer reliable and cost-efficient vessel throughput with upholding strict safety standards. Trelleborg's docking and mooring innovations aim to extend the window of port operation safely, efficiently, and sustainably.

TEXT ANDREW MONTGOMERY PHOTO TRELLEBORG

Global maritime trade has almost doubled in the past 20 years. According to a report from Statista, ships loaded 5.9 billion tons of cargo in 2000, and just over 11 billion tons in 2019. What's more, vessels are becoming bigger all the time. Larger container ships and bulk carriers provide operators and customers with cost-efficient economies of scale, while cruise ships have become vast floating hotels.

The sustainable trend in public transport means ferries are increasing in size too. And sustainability is behind vessels moving to alternative power sources. The larger ones are switching to liquid natural gas, while smaller ones are starting to embrace hydrogen, hybrid, and full-electric solutions. For an electric vessel, the sooner it's moored, the sooner it can start charging.

But many ports' infrastructures can't keep up with these rapid changes. Increasing peak traffic in big container

terminals or cargo handling ports means that ships can queue up offshore for hours, days or even weeks, waiting for a berth to moor and unload. Currently, the arrival delay for 45 percent of all container vessels is more than eight hours, according to Statista.

Such downtime is costly to shipping companies and their customers, especially when transporting perishable goods. The ports themselves become liable for demurrage; a fee payable to the shipowner when a vessel is unable to unload.

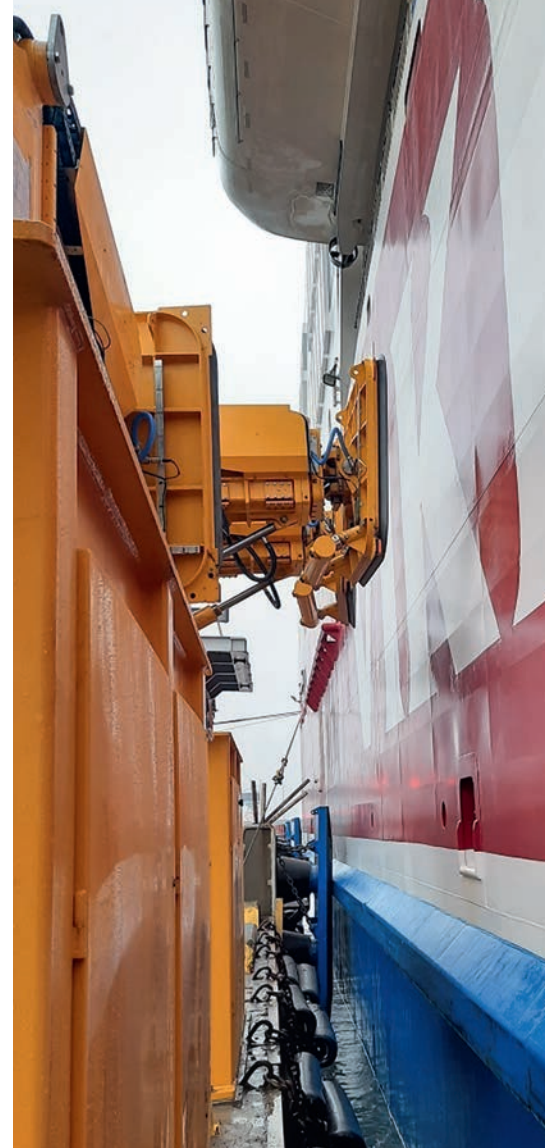
Thus, speeding up the mooring and unloading process is essential for increasing throughput, but this is hampered by the fact that much mooring is still done by hand. Berthing safely in a busy port when the winds are strong and the waves are rough, poses all sorts of safety challenges, as do overloaded mooring lines that can snap without warning and potentially cause a serious accident.

The obvious answer is automated mooring; something that is easier said than done.

"Docking and mooring is the last phase that has yet to be properly automated in the whole shipping operation," says Nick Labrosse, Sales and Marketing Director for docking and mooring at Trelleborg Industrial Solutions.

"Vessels can be tracked by satellite, via GPS or automatic identification systems, or using laser systems that can detect ships on approach," Labrosse says. "On the wharf itself, there are automated cranes and container movement machinery that are all fully automated. Yet we're still using mooring lines; we're not applying the intelligence we have to managing mooring lines or even eradicating them."

"I think there's skepticism and even a little fear among some in the marine industry toward what they perceive as an untested technology," Labrosse says.





Left: AutoMoor T40 units in operation at the port of Tallinn, Estonia.

“Trelleborg’s advantage is that we have the widest range of solutions.”

Nick Labrosse, Trelleborg



Above: The AutoMoor T40 Twin Arm rope-free automated mooring unit.

“A lot of traditional seafarers are used to doing things a certain way and are slower to change. But Trelleborg’s advantage is that we have the widest range of solutions, from traditional bollards to hands-free vacuum mooring. No other company has that breadth of products.”

At the simpler end of Trelleborg’s products are marine bollards that are tied with mooring ropes when vessels come in to berth. A step up from that is Trelleborg’s new smart bollard, which has a hook, though not one that can be quick released.

Labrosse explains, “They’re for customers that might say, ‘Hey, I’ve got snapping mooring lines. I don’t want a quick-release hook, but I want to know the load I’m experiencing so I can manage this issue.’ A smart bollard with its load cell can tell the customer when they’re running over their ideal mooring line tension.”

Quick-release hooks are a further step

toward a more automated approach, though they’ve been on the market for decades.

“They’re our main bread-and-butter product and an important part of our offering,” says Labrosse. “A bollard with a quick-release hook has a load cell to monitor the line load from the mooring lines, but it can also be quickly released in an emergency. These sell well in ports transferring hazardous materials such as liquid natural gas.”

The real revolution is automated mooring technology, and Trelleborg is playing a leading role with its DynaMoor and AutoMoor solutions.

“The driver behind DynaMoor was a mining industry customer,” Labrosse says. “It wanted a solution to cope with long-period swell waves at their port. DynaMoor constantly manages line tensions and reduces the peak mooring loads on a moored vessel, limiting the load.

“It’s a semi-automated system because port personnel still need to put the rope onto the unit,” he says. “But once it’s set, the mooring line tension is adjusted automatically, using hydraulics to pull a quick-release hook with the rope on it, away from the vessel. If there are loads acting on the vessel and winds or waves, the DynaMoor unit adjusts automatically.”

Like DynaMoor, AutoMoor has what Labrosse refers to as “listening” and “reactive” capabilities, but it goes one step further. The units eliminate mooring lines altogether and instead use new vacuum pad and passive damping technology to rapidly attach to a vessel and secure it to its berth. The whole mooring process can take a minute or less, compared with 30 minutes to several hours for ships moored under traditional methods.

It has taken several years to develop these automated products, but with orders starting to come in and customer installations planned during 2021, Trelleborg is leading the way toward safer, more efficient automated mooring solutions.

“I’m very hopeful that in the next ten years Trelleborg will be the leader in automated mooring solutions, with enough project references worldwide to not only be the industry standard for hook-release and traditional mooring solutions, but also for automated mooring solutions,” Labrosse says.

“We have enough of a customer base and client interest that we’ll begin to see our solutions become more commonplace around the world in a lot of different shipping sectors.” ■

For more information:
nick.labrosse@trelleborg.com



Ground protection

Managing a farm in the beautiful Viterbo region of Italy can be challenging. Sergio del Gelsomino wants to not only get the best from his soil but also do the best for it. We find out how Trelleborg helps him in protecting the essential.

TEXT CLAUDIA B. FLISI PHOTO TRELLEBORG

What is necessary in an agricultural tractor tire? Traditionally, the important criteria were seen as a combination of overall performance, including traction, the quality of work, lifetime cost and fuel efficiency. Now farmers increasingly recognize that tires must also address environmental and sustainability concerns.

The Italian farmer and entrepreneur, Sergio del Gelsomino, factors in all these requirements when managing his 80-hectare farm in the province of Viterbo, about 60 kilometers north of Rome in Italy. His choice of tires takes into consid-



Meeting farming needs

The TM1000 ProgressiveTraction® from Trelleborg, with its award-winning technology, entered the market in 2013.

According to Alessio Bucci, Product Marketing Senior Manager at Trelleborg Wheel Systems, this advanced tire addresses the agricultural sector's most pressing requirements: to increase power transmission efficiency to the ground while reducing soil compaction.

The TM1000 Progressive-Traction from Trelleborg boasts an extra wide footprint that provides premium flotation and minimal soil compaction. The technology allows the soil to return to its original state as an organic reactor, capable of absorbing air-bound nutrients, recycling crop residues and retaining water to ensure high crop yields in the short, medium and long term.

eration not only his core business – growing grain and forage crops on his estate – but also his agritourism activities, including a restaurant, cheese factory and gelateria.

Del Gelsomino selected Trelleborg's TM1000 ProgressiveTraction® tires for his tractors because they ensure high performance and maximum flexibility for his many needs. "We chose the TM1000 because it allows us to work in high-torque applications, while ensuring excellent traction," he says. "We have 12 tractors including two harvesters and several earthmovers. Our equipment is also used on neighboring farms, so we may be working up to 800 hectares."

Right:
A Trelleborg TM1000 Progressive-Traction® tire.



“It increases grip compared with standard tires, and at the same time lowers fuel consumption.”

Sergio del Gelsomino, farmer and entrepreneur

The double lug design of the TM1000 ProgressiveTraction tire is uniquely shaped to ensure performance, he points out. “It increases grip compared with standard tires, and at the same time lowers fuel consumption, resulting in reduced costs and minimized soil compaction.” The soil is an essential element when growing crops and its protection is vital to maximize yield and ensure food supply demands are met.

A better distribution of weight on the soil results in lower tire pressure, making the tractor tires

gentle on the ground to ensure higher crop yields, season after season.

Del Gelsomino notes that the tires carry more load at the same pressure compared with other tires – up to 40 percent more. Conversely, they require 40 percent less pressure at the same load. That’s good for Gelsomino’s business and for the environment as well. ■

For more information:
alessio.bucci@trelleborg.com

Feeding the world

The UN projects that the global population will increase from 7.7 billion in 2019 to 9.7 billion in 2050 and 11 billion in around 2100. UN Sustainability Goal number two is for zero hunger. It says a profound change of the global food and agriculture system is needed if we are to nourish the more than 690 million people who are hungry today – and the additional 2 billion people the world will have by 2050.

Increasing agricultural productivity and sustainable food production are crucial to help alleviate the perils of hunger.

It is therefore critical, with a limited amount of arable land available on the planet, that farming becomes more productive and efficient. Tire technology is one way of contributing to these objectives. Innovative tire design by Trelleborg focuses on continuously respecting the soil; protecting it to maximize its yield.



Tractor used at the del Gelsomino farm in Viterbo, Italy.

NEWS



PHOTO: CONKER LIVING*

Collaborative approach

Conker Living design and engineer a range of luxury spherical outdoor office and living spaces, called The Conker. Trelleborg worked closely with them to collaborate and advise on the most suitable materials for the tool designs, ensuring the manufacturing process was fully considered and supported.

“We have an exceptional capability in tooling, with a range of precision CNC milling equipment, to be able to realize high-quality, high-precision tooling. The technical expertise of our engineers is second to none,” says Karen Thirlwell, Technical & Commercial Manager within Trelleborg.

Safe manoeuvring

Trelleborg's SafePilot CAT MAX system has been used by DanPilot, the official pilotage of the Danish state, to complete the task of manoeuvring the Maersk Interceptor, a jackup rig located in the North Sea, off the coast of Denmark.

The Maersk Interceptor is one of the world's largest and most advanced jackup drilling rigs. The manoeuvring of such assets requires a high-end, ultra-precise, and fully portable navigation and piloting system, making SafePilot CAT MAX the ideal solution.

The system can position a vessel in three dimensions. Together with Trelleborg's SafePilot software, it forms part of the SmartPort portfolio, powering the critical interface between ship and port, on land and at sea.



PHOTO: PEKELS

Furry friends

Trelleborg in Germany has donated 200 teddy bears to the German Red Cross (DRK) in Stuttgart, via the Kinderhilfe Dieckholzen help organisation. The teddy bears will be used to help comfort children that are being transported by ambulance, and all of DRK Stuttgart's ambulances now have the bears on board.



PHOTO: PIXABAY

Resistant rubber

Trelleborg introduces the unique GoldLine® Premium 38 to the mining market. This natural abrasion-resistant rubber sheeting protects mine owners' investments in mineral processing plants. GoldLine Premium 38 has a well-balanced rubber formulation to resist wear and abrasion in a range of wet abrasive mineral processing slurry applications. In addition, it demonstrates high tensile strength, resilience and elongation at break and tear strength.





Individual power

In the last year, the impossible has proven to be possible. At rocket speed Covid-19 transformed the way we live, work, travel and collaborate. The pandemic shows that change is conceivable and created a new momentum to turn things around and reach the United Nations' Sustainable Development Goals, says Marina Ponti, the leader of the UN SDG Action Campaign.

TEXT SUSANNA LINDGREN **PHOTO** HILARIUS RIESE

Marina Ponti has devoted her entire working career to making a difference. Her desire to campaign, inspire and mobilize for change moved her from Milan in Italy via the UN headquarters in New York to Bonn, Germany, where the UN SDGs Action Campaign has its office. Her mission is to inspire people and organizations from all backgrounds and every part of the world to take actions to achieve the UN's Sustainable Development Goals (SDGs).

The task received an unexpected tailwind from the threats to society created by the pandemic. It is not that Covid-19 has made people in general more aware of the 17 SDGs,

or even more aware of the urgency for change, she explains. Covid-19 has shown how far we are from having resilient, inclusive, sustainable societies that leave no one behind.

"New understanding is emerging around the inextricable links and the need for acting across entire systems," Ponti says. "This offers real hope for unlocking rapid action on daunting challenges such as pandemics, along with deep-seated inequalities and climate change, now and in the future."

Covid-19, she points out, has shown how interconnected we all are, and how threats that touch us all require global action and solidarity. "Also evident is the profound power of individuals," she says.

“We were actually doing something that was considered unthinkable only a few months earlier.”

Marina Ponti, UN SDG Action Campaign

“People who have done the right things, from wearing masks to staying at home, have collectively constrained the spread of the virus. They demonstrate how actions add up and will take us past the turning point and on to transformation.”

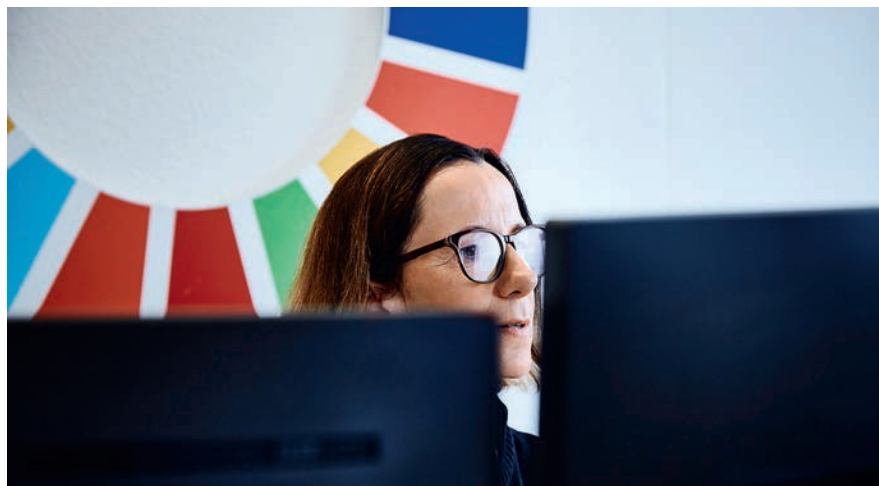
Before Covid-19, she says, everybody knew that governments and leaders in the private sector were unlikely to be prepared to make the changes or sacrifices necessary to reach the sustainability development goals by 2030. As an example, she points to the way we travel. Everyone was aware of the negative impact of emissions from air traffic. Everybody agreed that we flew too much. But too many said that it was impossible to stop traveling, and that their mission

was so important they just had to go.

“Then all of a sudden we all stopped traveling,” she says. “We realized that this was possible, and that it was conceivable to redesign our whole society and rethink how we educate, work, invest and move. We were actually doing something that was considered unthinkable only a few months earlier.”

There is, of course, a risk that if we don’t grab the opportunity many things will go back to the old normal, she says. The pervasive message is that we are at a turning point for people and the planet, transformative change is possible, and every individual action can unleash tremendous power for good.

“The strategy of the UN SDG campaign leans on three pillars:



to mobilize, inspire and connect people to be the change, and to encourage SDG action by everyone everywhere,” Ponti says.

For the private sector, that strategy is to invite companies to take part in initiatives that can help them make a shift and to spotlight those companies that really make a difference.

“Not the ones just investing in a corporate social responsibility strategy,” she says. “We put the limelight on companies that are ready to question how many women they have in director positions, for instance, or have real



Above: Marina Ponti at the UN SDG Action Campaign office in Bonn, Germany.

transparency in their supply chain. We also want to inspire by showcasing companies that get a return from making truly sustainable choices.”

Asked for an example, she mentions the clothing company Patagonia, which encouraged customers in a recent campaign not to buy new, but to reuse what they already have.

“Companies aware of the fact that sustainable values are changing society are being rewarded,” she says. “The younger generation is much more careful and sensitive in their

vision of the future and use sustainability as a factor when purchasing clothes, food or means of transport.” She points out that other less agile sectors are following.

Rome-based ENI, one of the world’s largest oil companies, has declared its transformation from oil to renewable energy production.

“This changeover cannot be done overnight, but the company is very serious and has given itself 15 years to move from fossil to renewable energy,” she says. Assessing the impact of the UN SDG Action Campaign’s work is challenging.

Marina Ponti

Lives: Bonn, Germany

Education: Born and raised in Milan, Italy. Master’s degree in political science, University of Milan. Additional studies at University of California Santa Barbara in the US and INSEAD, Fontainebleau, France.

Work and career: Italian NGO Mani Tese, UN in New York with UN Millennium Development Goals, UN European campaign office in Rome, then back to UN New York to work for UNICEF. From 2018 head of UN SDG Action Campaign.

Family: Two children, 11 and 13. Husband, lawyer working for the UN designing policies. “We take turns. One time we move because of my work, and the next time because of his.”

Interests: “I love skiing, traveling for pleasure and reading lots of books not related to my job.”

Hidden talents: “I am one of the very few people left writing letters by hand, and I like to send them in a stamped envelope.”

What drives you: “The vision of leadership. I am only able to perform at my best when I believe in what I do and need to be inspired by the potential in achieving things. I am also driven by the commitment and passion of my team.”

“No one can any longer say that individual actions make no difference.”

Marina Ponti, UN SDG Action Campaign

The campaign can obviously measure the number of participants at each event, which can involve up to half a million people who watch and comment across the globe.

“But change is difficult to measure,” Ponti says. “We are very humble and say that we contribute to creating an environment where leaders who do the right thing know and feel that they have support.”

Returning to her initial thoughts about the impact of the pandemic, she says, “No one can any longer say that individual actions make no difference. As we saw when facing the pandemic, the only strategy to reduce the spread of the virus was to keep a distance, wear a mask and wash hands, which are individual actions. Somehow this demonstrates how individual actions can lead to transformative change.” ■

For more information:

<https://www.sdgactioncampaign.org>



Why Marina Ponti says change is on the way

Fortunately, we see more and more companies realizing that we are at a turning point for people and the planet, leading to vast changes in their business operations.

The number of leading companies joining the 1.5° Pledge, striving to be net zero carbon by 2040, doubled in the previous year to 1,101 businesses. New joiners include Facebook and Ford. Another example: large-scale employee volunteer programs

introduced by various multinational companies, including Unilever, PricewaterhouseCoopers and Sony Pictures. In addition to long-established companies changing their policies, we see a large entrepreneurial movement that is starting businesses with sustainability at the core of their vision and business model. For instance, the German start-up Tomorrow is the first European player linking the two issues of mobile banking and sustainable finance.



FORMING A NEW NICHE

Developing a high-performance plasterboard forming belt for the gypsum industry took Trelleborg several years, but the effort paid off almost immediately.

TEXT CLAUDIA B. FLISI **PHOTO** TRELLEBORG





Trelleborg's manufacturing facility in Slovenia is beautifully located in Kranj and celebrates 101 years of business in 2021.

In 2011, Trelleborg's manufacturing facility in Slovenia faced a difficult situation.

The company had a reputation for its Chevron conveyor belts used in industrial applications, but its main market was hit hard by the 2008 global recession.

Management decided to develop new niche markets, offering products in sectors where there was a need for high-quality innovative solutions. The construction industry was one such market and forming belts for plasterboard, or wallboard, became a logical target. "We thought they could benefit from our extensive knowledge of the rubber conveyor belt business," explains Rok Jamscek, Sales Manager for conveyor belts at Trelleborg Industrial Solutions.

At the time, the facility had 91 years of experience in rubber manufacturing and was familiar with wallboard forming belts as an application. However, it understood

that forming belts presented challenges that had dissuaded many competitors.

"Plasterboard is made to strict industry specifications focused on avoiding defects," says Milan Petkovic, Head of Research and Development in Slovenia.

"The belt must be perfect, and it must stand up to 24-hour production."

The first belt that Trelleborg installed in 2014 is still running and achieving its original standards of plasterboard quality. In 2015, the first full year of sales, the facility elicited enthusiastic market feedback. Since then, Trelleborg has eightfold its sales of high performance forming belts to the United States, its main market, Canada, Europe, Central America, and Russia.

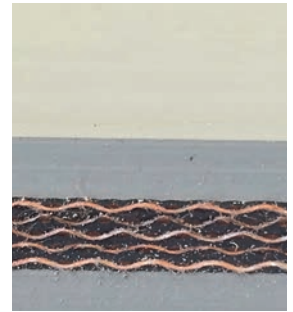
Building on its technical knowledge and market success, the business then turned to the development of a wear-resistant forming

How is plasterboard or gypsum board formed?

Plasterboard (also called sheetrock, drywall, wallboard, or gypsum board) plays an important role in the construction industry. The plasterboard is made by crushing gypsum and then adding water and additives. This mixture is transported along a long conveyor, called a forming belt, between two layers of heavyweight paper. The paper is chemically bonded to the core and then cut to predetermined specifications and dried.

Gypsum industry standards for high-quality plasterboard call for a belt with superb surface quality, uniform thickness across its entire width, precise splicing, straight tracking, and a low friction coefficient.

Below: Plasterboard is made by crushing gypsum and then adding water and additives. The mixture is transported along a long conveyor, called a forming belt.



Four advantages

There are four compelling reasons to switch to Trelleborg's solution:

- **Belt calibration.** “We added this step, something no one else does, because we knew that plasterboard is made to strict industry specifications and producers are focused on avoiding defects,” says Petkovic. “Standards must be met, so the belt must be perfect.”
- **Wax-free natural rubber.** Traditionally belts use wax to protect the rubber from the negative effects of temperature, light, and aging, but the wax accumulates on drums and pulleys, and the production line must stop periodically for cleaning. Trelleborg's rubber has a special chemical compound in lieu of wax, negating downtime.
- **Laser inspection.** In 2016, Trelleborg introduced a laser inspection system to examine the thickness of the plasterboard. Display of defects is in real time, saving the final client costs and aggravation.
- **Full-service package.** Trelleborg offers a full package including forming belt equipment, installation and splicing, as well as after-sales support. Trelleborg is the only maker of rubber forming belts to offer such a complete service in the European market.

“The Wear-Resistant belt is twice as resistant to abrasion as our standard belt.”

Rok Jamscek, Trelleborg

belt for use in the production of glass mat wallboards. Glass mat wallboards are an alternative to standard plaster wallboard. The glass fiber in the liner makes them stronger and more moisture and fire-resistant than conventional wallboard, but this fiber is more abrasive than plaster and wears down forming belts.

Between 2015 and 2017, R&D developed a unique rubber compound to handle the extra abrasion, using special raw materials to improve belt performance. The launch of the Sava High Performance Wear-Resistant (WR) Plasterboard forming belt was in 2019, and customers were delighted. The WR belt is “twice as resistant to abrasion as our standard belt, which itself is a leader in its field,”

Petkovic, points out. The effective lifetime of a forming belt depends not only on its material composition but also on its use and maintenance. However, on average, a WR belt lasts twice as long as a regular belt, Jamscek confirms.

As the trend toward glass fiberboard is growing, production is increasing and the WR has become more important. The niche market born of necessity in 2011 is growing year-on-year in sales and customer satisfaction. In 2018, Petkovic recalls, a Canadian client described the Trelleborg product as “a supreme belt. No other producer can produce this level of quality.” ■

For more information:
rok.jamscek@trelleborg.com

Protecting the essential

OPERATIONS

COMPLIANCE



SOCIAL
ENGAGEMENT



PROTECTING THE ESSENTIAL

Protecting the essential is about minimizing our negative impacts and maximizing our positive impacts, making sustainable changes vital for the planet and for society. Our focus areas stretch from the environment to health and safety; from compliance to ethical relations with all our stakeholders and society as a whole. While considering the big picture, we also need to focus on areas where we can make a genuine difference.