DIECI Magazine

No. 1 February 2020

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Pleasing confirmation

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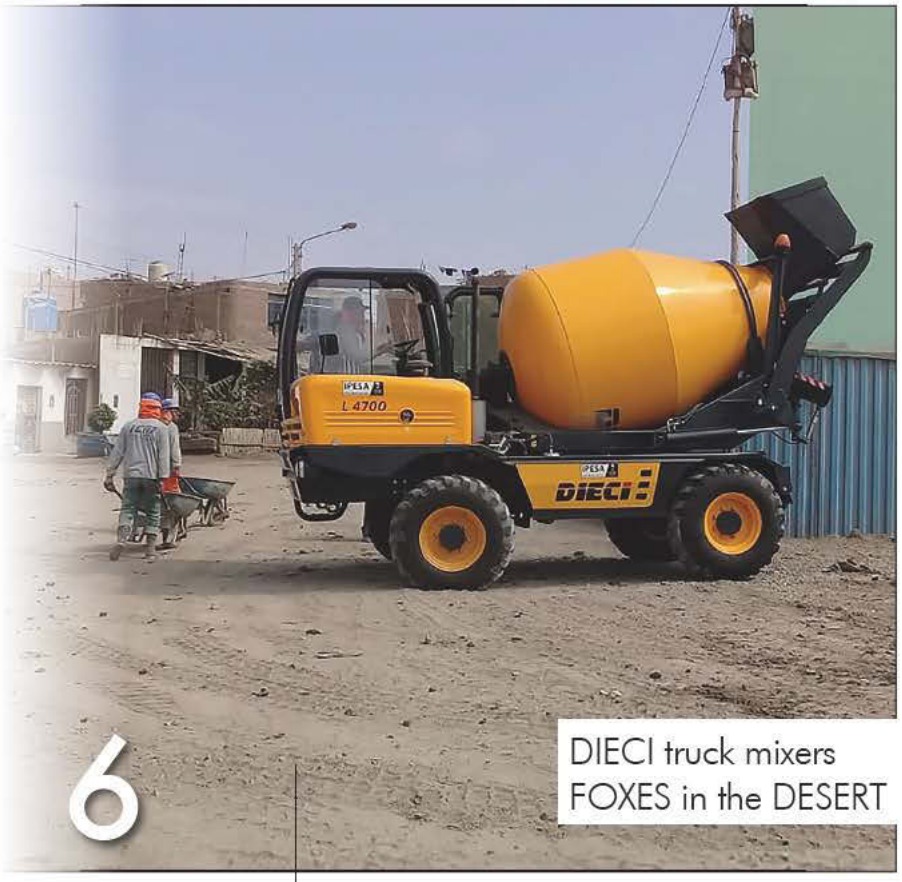
CONSIDERATIONS...

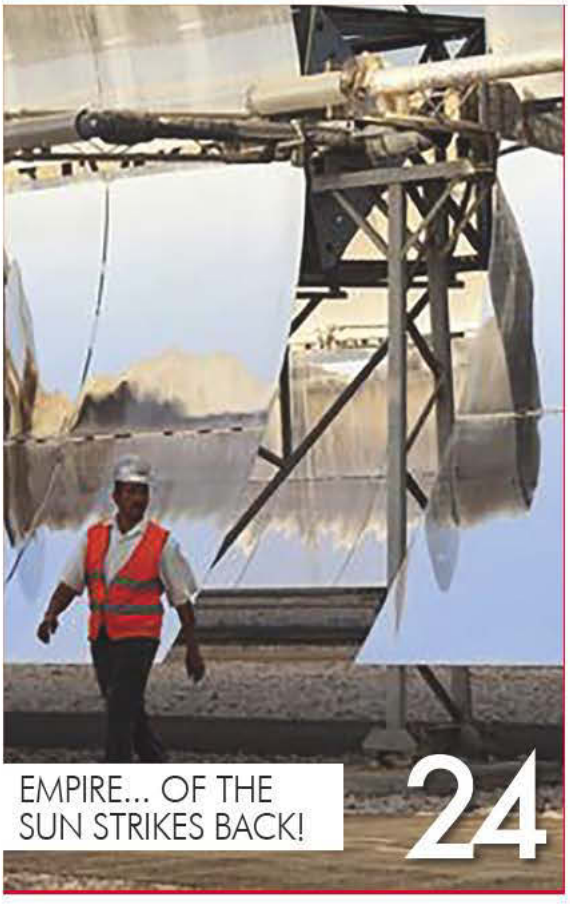
Ciro Correggi - Dieci CEO

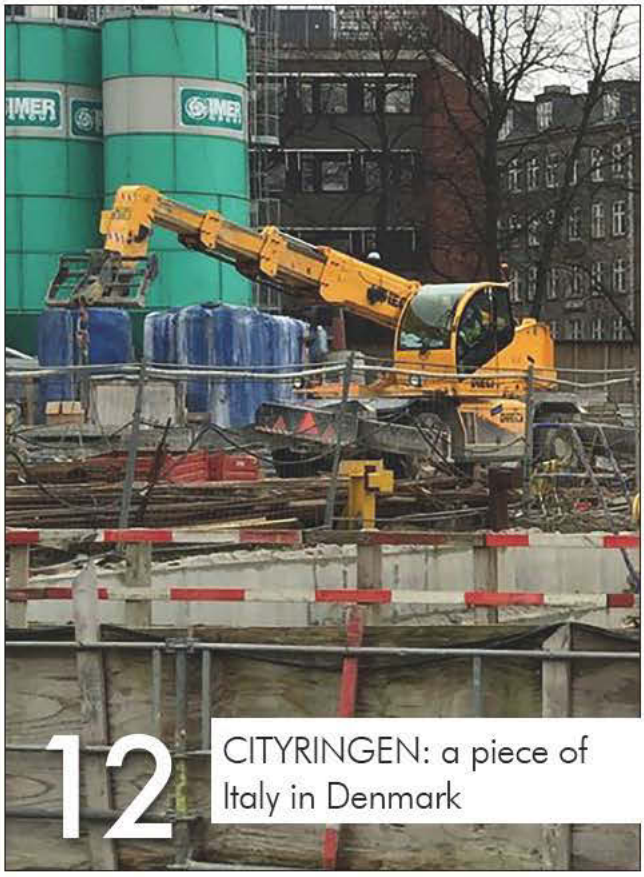
In this first Dieci Magazine of 2020, I would like to take the opportunity to send my best wishes for a Happy New Year to all those who support us, besides offering the following brief consideration: the past year yielded good results, and although financial reports are a necessary indicator of performance, this time I prefer not to dwell on figures, but rather to focus on the year just begun. A year that, despite having just started, is already full of important deadlines, with projects to be completed and others yet to start. You can satisfy your curiosity and get some idea of what's ahead by browsing through the pages of this magazine. It will certainly be a busy year, one that we intend to face with customary commitment. So I will leave you to read the articles, which I hope you find engrossing. Once again, best wishes for a Happy New Year.

Enjoy the magazine!

Dieci Magazine
FEBRUARY 2020







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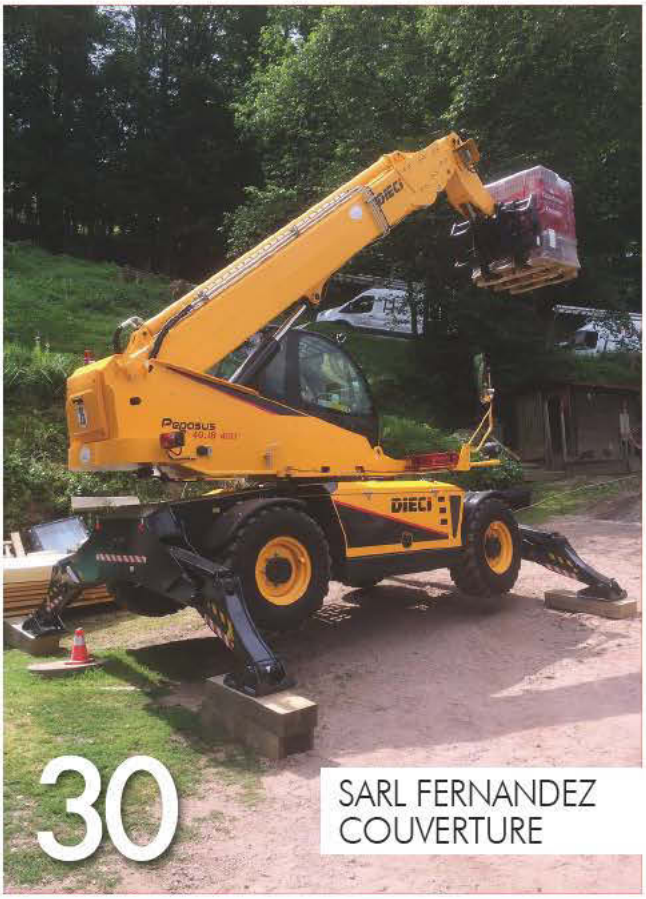

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Dieci truck mixers
FOXES in the DESERT

Imagine driving a car along a long, straight road that winds through barren savanna. Imagine watching, as you drive, the savanna gradually turning into a desert of yellow sand dunes. Now imagine leaving your car and scaling the highest dune with difficulty. Once you reach the top, with your throat dry and sweat running down your forehead, you discover a large expanse of green water on the other side of the dune, surrounded by palm trees. You could be forgiven for thinking you are in North Africa, near some Saharan oasis. But no, you have arrived in the oasis town of Huacachina, in the middle of the Sechura Desert in Peru. The country's coastal strip contains the three largest deserts in South America, namely the Sechura Desert in the north, the Coastal Desert in the centre, and the Atacama Desert to the south, on the border with Chile. It is a vast, arid region where the soil quickly absorbs the scarce rainfall. But unfortunately, due to the vagaries of El Niño—the oceanic current that influences the earth's climate—a spell of exceptionally heavy rainfall in the first few months of 2017 triggered a series

of floods and landslides across the region, resulting in very serious damage to both inhabitants and infrastructure. Among the public works worst affected by the freak weather were roads, which were not designed or built to withstand such an onslaught of water and mud and some were consequently washed away, leaving large swathes of the country isolated. Two years on, the government has embarked on a vast programme of reconstruction that involves reinforcing the communication infrastructure, especially the rural road network. Thanks to the country's growing economy (and a series of incentives and tax breaks for companies involved in the rebuilding work), dozens and dozens of sites have been opened to rebuild or strengthen vital public works such as roads, bridges, underpasses or banks damaged by floodwater. Among the equipment used on the worksites are DIECI L4700 truck mixers, vehicles that have proven themselves to be particularly useful and versatile, often having to operate in inaccessible places far from refuelling points and with limited availability of water, an ingredient necessary for producing the

"... Among the equipment used on the worksites are DIECI L4700 truck mixers, vehicles that have proven themselves to be particularly useful and versatile, often having to operate in inaccessible places far from refuelling points and with limited availability of water, an ingredient necessary for producing the large quantities of cement required on construction sites..."

large quantities of cement required on construction sites. Thanks to the 630 litres of water in their capacious water tank, the concrete mixers are able to operate for long periods without having to fill up on water. This allows them to produce up to 3500 litres of precious concrete per hour, literally laying the foundations for the regeneration of infrastructure in vast areas of Peru. In addition, the four steered wheels, reversible driver's seat and trilateral unloading dumper body enable the concrete mixers to operate without problems even on extremely bumpy ground or in restricted working spaces. Equally essential is the Self-Loading Shovel, with which it is possible to quickly prepare the mixture. Not even the long distances separating the truck mixers from some of the construction sites pose a problem. The DIECI vehicles easily and independently overcome these distances thanks to their Perkins Stage V engine and hydrostatic transmission, which allow the L4700s to easily reach up to 27 km/h on the long, dusty tracks of the Peruvian desert. According to data published by Forbes magazine, an authoritative reference for economic analysts, business volume in the construction industry is expected to grow strongly throughout South America and particularly in Peru (thanks also to the Peruvian government's incentives to encourage reconstruction), with an expected increase from USD 28 billion dollars this year to USD 36 billion by 2023. If the forecasts are accurate, then in the coming years we will have further opportunities to tell you about the sterling work being accomplished by the L-4700 truck mixers and numerous other DIECI vehicles on the long, dusty slopes of Peru's deserts.


DIECI
L 4700
IPESA
DIECI
Perú


DIECI

CITYRINGEN

A piece of Italy in Denmark!!

The new Cityringen M3 Metro line in Copenhagen, Denmark entered operation in 29 September last year. Before even being built, this trailblazing project had been described as the most advanced public mobility system in Europe: 17 new metro stations, 4 large ventilation shafts and 37 km of parallel tunnels, which the fully automated trains take just 24 minutes to traverse, and the capacity to transport over 240,000 people 24 hours a day, 7 days a week. The project is part of a drive to drastically cut CO2 emissions in Denmark's capital, making it the world's first carbon-neutral city by 2025.

Most importantly, Cityringen is completely Italian-made: Italy's President Sergio Mattarella even made an official visit to its Control Centre on 8 October last year. The infrastructures (tunnels and stations) were built by Salini-Impregilo; the track was built by Generale Costruzioni Ferroviarie (GCF); and the driverless trains and Control Centre are produced and managed by Hitachi Rail

(Ansaldo) on behalf of Metroselskabet (The Copenhagen Metro). Last but not least, working in the depths of the city's metro tunnels and wells, our very own Italian technology also contributed to the project's completion in the record time of just seven years — numerous DIECI construction vehicles, which worked on different sections of the line, based on their technical features and the needs of the job.

They included Pegasus telehandlers which, due to their lifting capacities, were mainly used to build underground stations, as well as ventilation wells. These are large cavities over 30 metres deep through which construction materials, machinery and equipment needed to be lowered or raised to great heights many times a day, no matter how heavy or bulky. Just as they did on other projects, the Pegasus vehicles also provided effective support to the large tunnel-boring machines (TBMs), which are capable of excavating very long, large diameter-tunnels in rapid time. However, TBMs require continuous and thorough maintenance, including commissioning, refuelling and replacement of critical parts, a task in which Pegasus telehandlers had already proven themselves capable in other major public works, such

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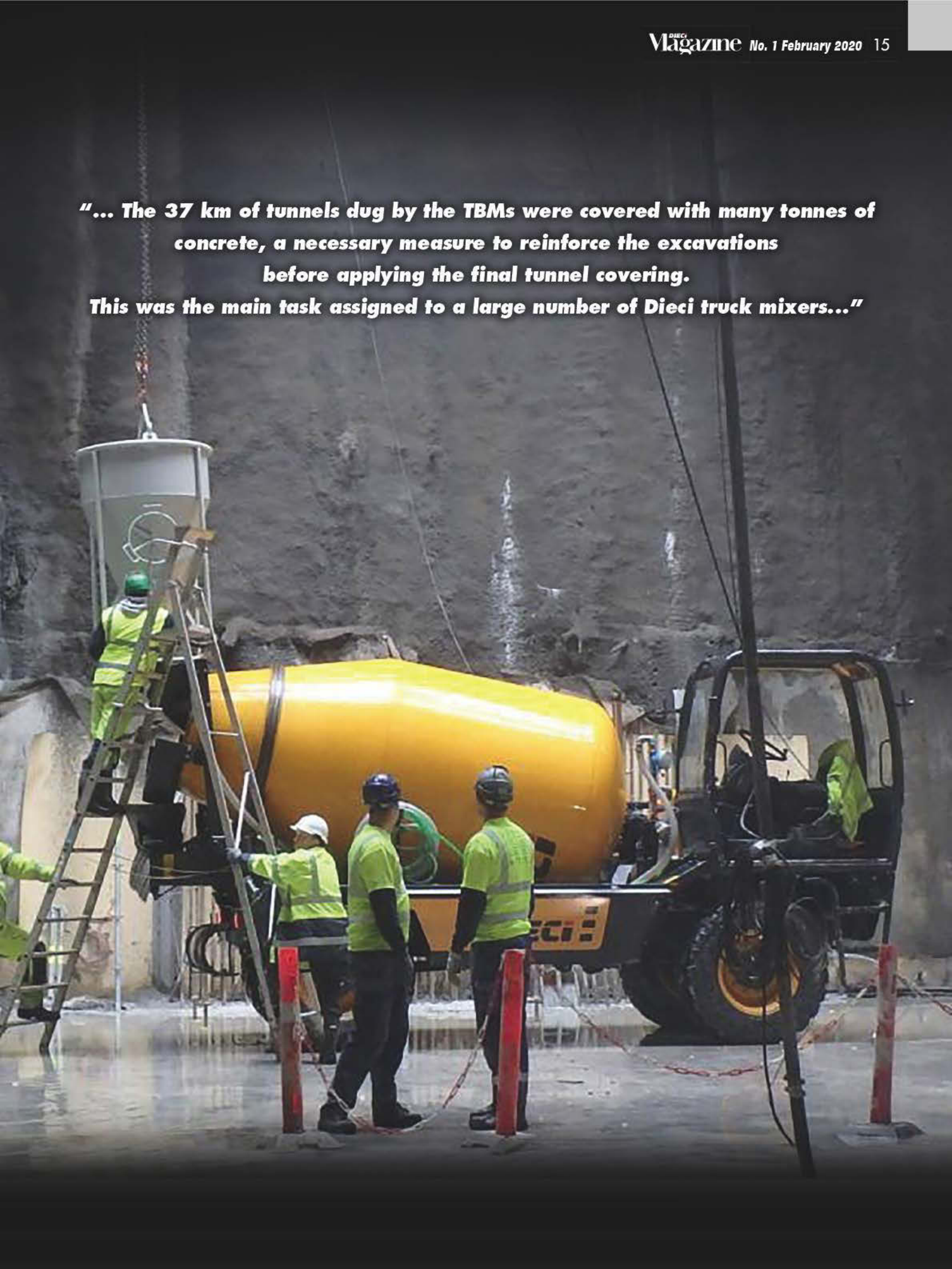
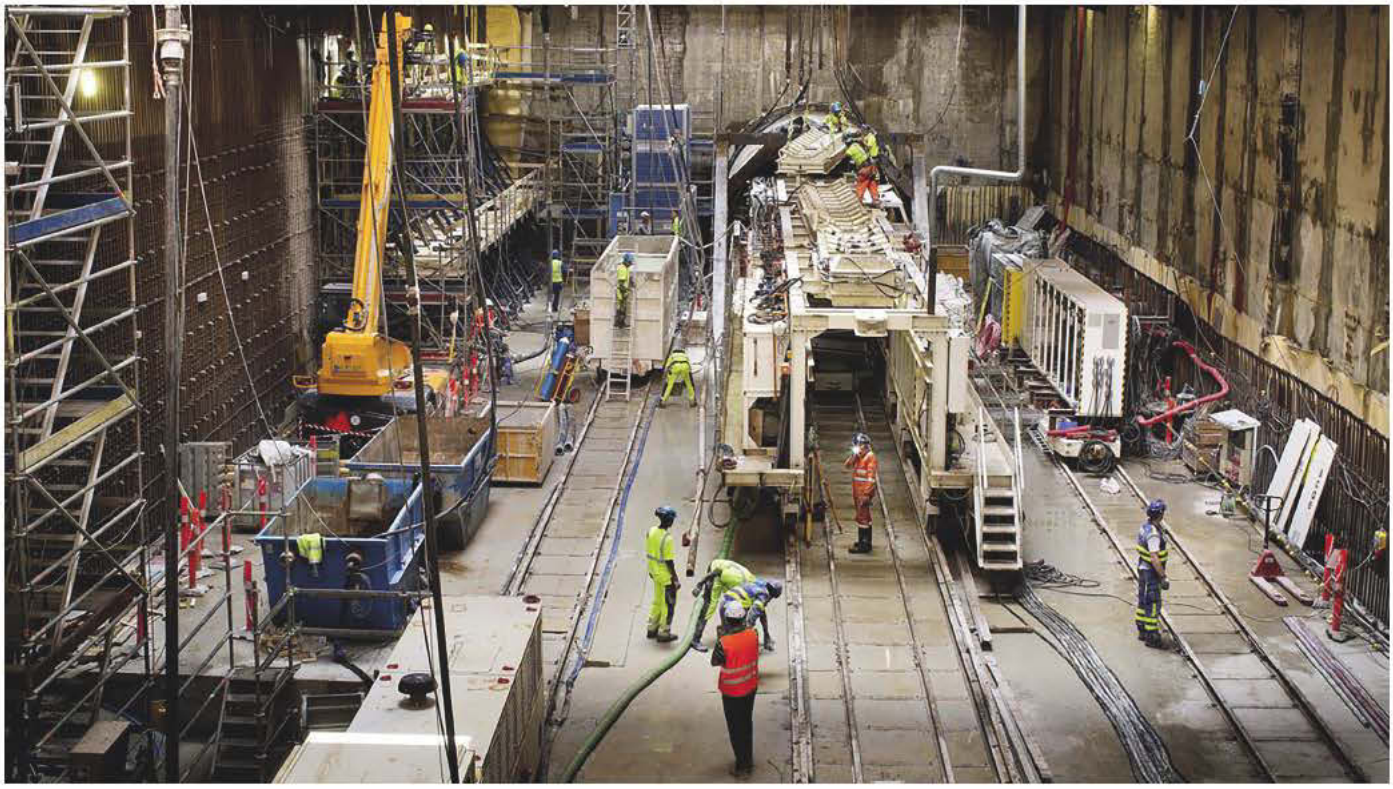
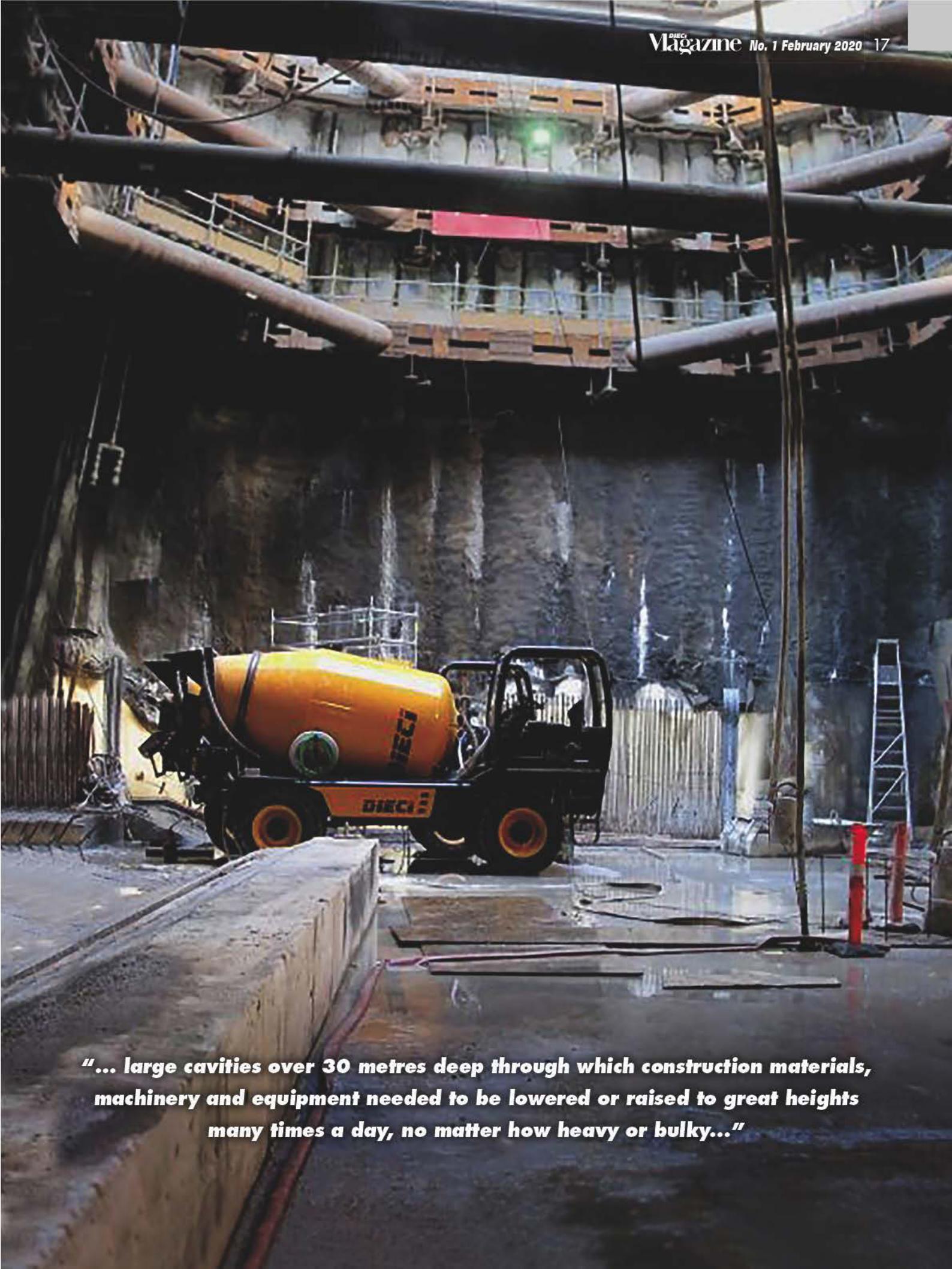


as the new Milan Metro lines and the Brenner Tunnel. The 37 km of tunnels dug by the TBMs were covered with many tonnes of concrete, a necessary measure to reinforce the excavations before applying the final tunnel covering. This was the main task assigned to a large number of Dieci truck mixers, predominantly the F7000 model, which is compact enough to easily traverse the 6-metre wide metro tunnels, and capable of producing and transporting 5 m3 concrete blocks to the work area. The confined work environment and need to produce concrete onsite were no problem for the Pegasus mixers, thanks to their 850 L water tank capacity, reversible driving position and self-loading shovel. During the Italian President's visit, Cityringen was described as "a construction capable of improving the lives of millions of people", and we are proud that DIECI vehicles played a small part in its completion.





"... large cavities over 30 metres deep through which construction materials, machinery and equipment needed to be lowered or raised to great heights many times a day, no matter how heavy or bulky..."

Agritechnica 2019

Pleasing confirmation

In this latest issue, we once again find ourselves looking back over one of the biggest international exhibitions in the agricultural mechanisation sector: we are obviously talking about Agritechnica.

Every two years, this trade fair attracts visitors and exhibitors in their droves, thanks to the all-round high quality of this event: in terms of the organisation, the professionalism of the speakers at the numerous conferences, the topics covered, and not least, the professionalism and quality of the exhibitors and their exhibited products. Visitors to Agritechnica are mathematically certain of seeing the very best the sector has to offer. Admittedly there was a small, almost imperceptible drop in attendance and appreciation (hi-

ghlighted by the organisers in their Survey Report, published after the event ended), but we believe this should be interpreted in a positive light: despite all the uncertainties of the international economy, which still weigh heavily on markets and agricultural production, this year's turnout provided pleasing confirmation that Agritechnica remains a reference point for tens of thousands of operators in the sector. They include DIECI, which attended the Hanover fair with two innovative new additions to its Agricultural Range: the standard model of the new Mini Agri 20.4 Smart, and the new Agri Max 50.8 PowerX2 (which was previewed). The Agri Max 50.8 PowerX2 notably features the new HVT1 transmission, which is the culmination of many years of intensive technical cooperation between DIECI and Dana Rexroth; a vehicle that delivers not only a considerable increase in performance and driving comfort, but also a drastic reduction in fuel consumption and emissions. The new Mini Agri 20.4 Smart is the most compact model in the Agricultural Range, but nevertheless offers the same agility, comfort and roomy cabin as other DIECI vehicles. To get the lowdown from someone who was there, we spoke to none other than Ciro Correggi (DIECI CEO), who attended the event from the first to the last day. Mr Correggi said:

"From my point of view, I didn't see a drop in attendance. On the contrary, our stand was constantly crowded: after all, when you have been attending

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exhibitions for a long time, you get to know pretty much everyone, and end up meeting them again at subsequent editions. That's also the case at Agritechnica. But besides seeing many familiar faces, I also noticed a considerable influx of new visitors coming mainly from Eastern and Northern Europe. It confirms the very dynamic trend in these markets, where operators are in the process of modernising their machinery assets, and the public are particularly interested in the quality and reliability of the vehicles. Besides exhibiting our existing agricultural vehicles at the fair, we also brought along the first standard model of the Mini Agri 20.4 Smart, and previewed the new Agrimax 50.8 PowerX2. As we expected, both were a considerable success, not least because they are two truly innovative vehicles, but also because they fully meet the demand for vehicles that are reliable, easy to use, and at the same time capable of high performance despite low emissions, fuel consumption and maintenance. We envisage making the first deliveries of the Mini Agri as early as the middle of this year (around late May or early June). As for the Agri Max, it will take a little more time: just like the rest of our products, we want to be sure that the vehicle we are releasing is in perfect condition and completely free from glitches of any nature; hence why we want to finish performing the usual cycle of tests, trials and inspections first. In that respect, this year is set to be a busy year for us: on 1 January the European TIER 5 emissions regulation entered into force, and we are already working to update the engines in all our models to comply with the new regulation. To conclude, I can only confirm my first impression, which is that the exhibition was undoubtedly a success for us. Agritechnica has once again proven itself to be one of the sector's main events, and I can confirm, right now, that we will definitely be returning to Hanover in 2021."

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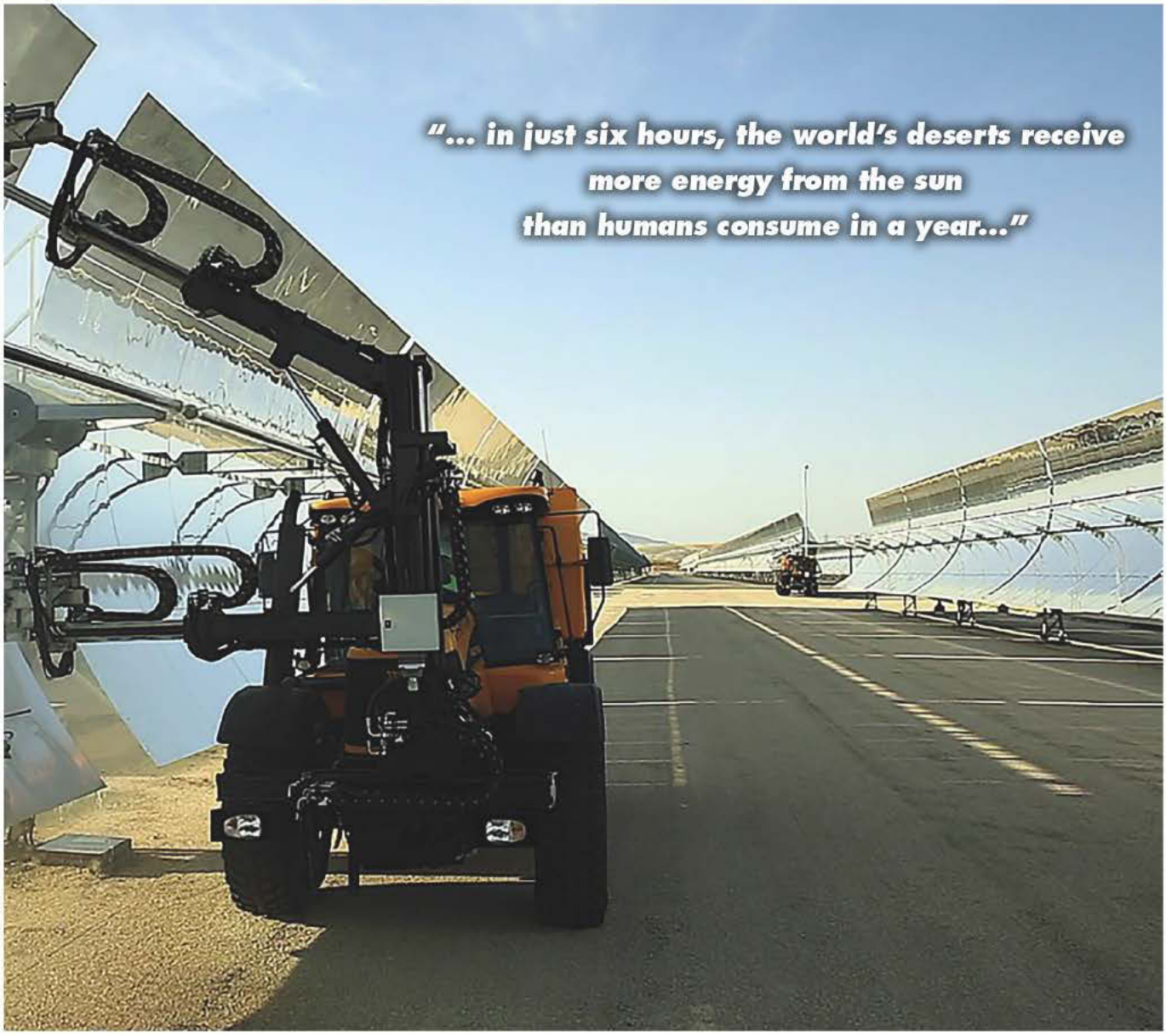
THE EMPIRE... of the SUN STRIKES BACK!

"... They look like spaceships. They can be recognised from afar, due to the high tower that stands out clearly through the clean air, and the intense light of the rays that seem to emanate from the structures, which are clearly perceptible even in broad daylight...."

They look like spaceships. They can be recognised from afar, due to the high tower that stands out clearly through the clean air, and the intense light of the rays that seem to emanate from the structures, which are clearly perceptible even in broad daylight. They have names like Xina Solar, Crescent, PS20, Gemasolar, Noor and Themis, names that sound as if they are straight out of a sci-fi film or an Isaac Asimov novel. But they really do have a genuine connection with the future, both ours and that of our planet, because they are the names of new solar power plants that use CSP (Concentrated Solar Power) technology. Conventional photovoltaic cells operate based on the principle of the photoelectric effect: when sunlight strikes the silicon in the cell, energy is released. Part of this energy is transformed into an electrical pulse that is conveyed to accumulators or fed into the grid. However, photovoltaic cells have significant limitations: part of the energy the produce is inevitably lost. Furthermore, they can only operate when there is sunlight, so no energy can be produced at night or when

clouds are blocking the sun. This problem is circumvented with CSP technology, which generates solar power not by using sunlight, but by using the heat generated by the sun. Parabolic reflectors concentrate sunlight onto a single point that reaches a temperature of over 400°C, enough to melt a mixture of salts. The melted mixture can retain the accumulated heat over time, keeping it at a high temperature for over 12 hours. The heat stored in the mixture is used to produce steam 24 hours a day, which in turn drives turbines to generate electricity around the clock. CSP plants are a fundamental part of the DESERTEC programme, an ambitious and futuristic project conceived in 1986 after the Chernobyl accident, which highlighted the need to find alternative energy sources to nuclear power and oil. Based on the premise that in just six hours, the world's deserts receive more energy from the sun than humans consume in a year, the DESERTEC network of CSP plants, once completed, could supply clean and unlimited energy to the whole of Europe and North Africa forever. Countries in North Africa and the Middle East (especially oil-producing countries) seem to be taking the lead in this solar energy revolution—both because they are aware that fossil fuel resources are dwindling, and because of their advantageous geographical position near the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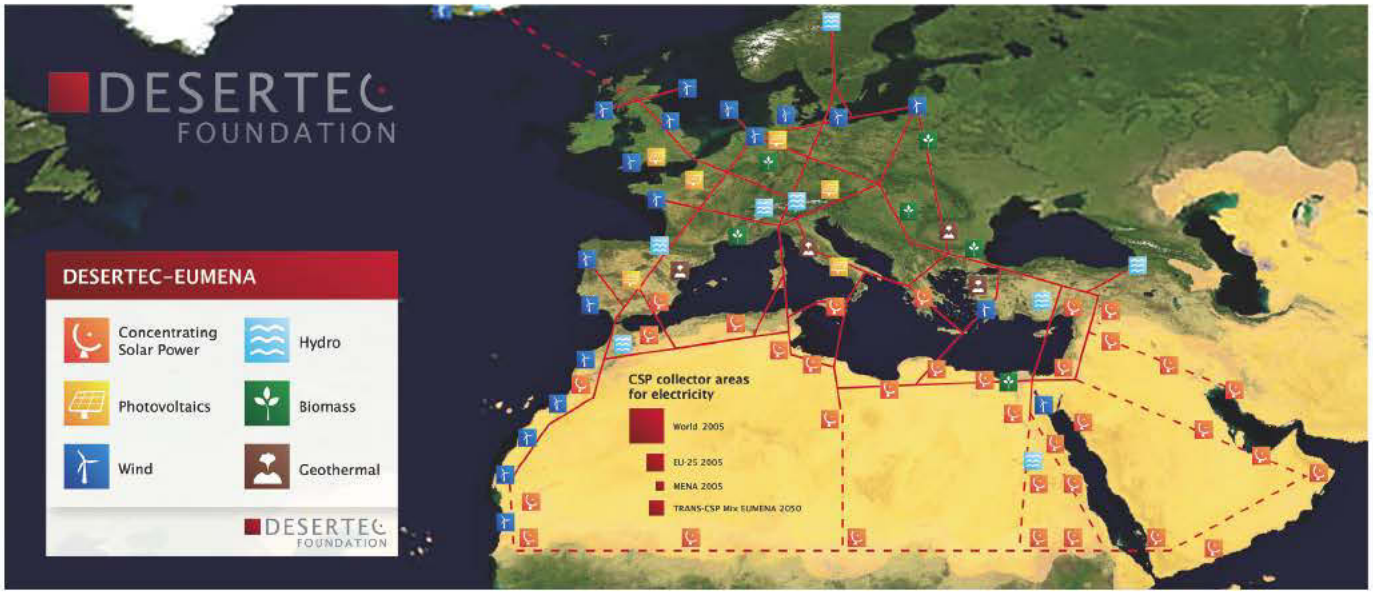
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equator—by recently embarking on a massive programme to build new and advanced solar power plants. At one such new plant in the Middle East, one of our Hercules 190.10 telehandlers is being used to install hundreds of large parabolic reflectors. Each reflector is a bulky yet delicate mirror packed with advanced technology, weighing 5 tonnes and measuring over 4 metres long, which can automatically follow the course of the sun throughout the daytime, so that the solar rays are always directed on the focal point. Weight is no problem for a vehicle like Hercules, which is capable of easily lifting up to 19,000 kg, but to install such a large number of reflectors, we needed to create a dedicated accessory in the form of a hydraulic gripper, to grasp the reflector unit and position it correctly and undamaged onto the supports. This mission was accomplished with flying colours thanks to the synergy between Faresek (the Spanish company that produces the gripper) and the DIECI Technical Research and Development Office, which develops and tests the most suitable solutions to meet customer needs. DIECI's commitment to research has also led to external partnerships with major innovation leaders such as Bosch Rexroth (for transmissions) and Dana (for axles), which have spawned some of DIECI's top-selling models. Successfully interfacing a vehicle and a new accessory is an extremely complex operation that involves taking into account numerous factors such as dimensions, weights, centres of gravity, load points, electrical systems, voltages, hydraulic systems, pump flow rate, safety limits and much more besides. In order to optimise such an intricate combination of equipment, the Research and Development Technical Office was required to analyse all the aforementioned factors, creating new management software so that the accessory could be remotely controlled, and new load diagrams specifically for the reflectors to be installed.

The result can be seen in these images, evidence of an undertaking that involves not just 140 of our models, but also the expertise of our Technical Office, which responds to every particular application need with customised, cutting-edge solutions.

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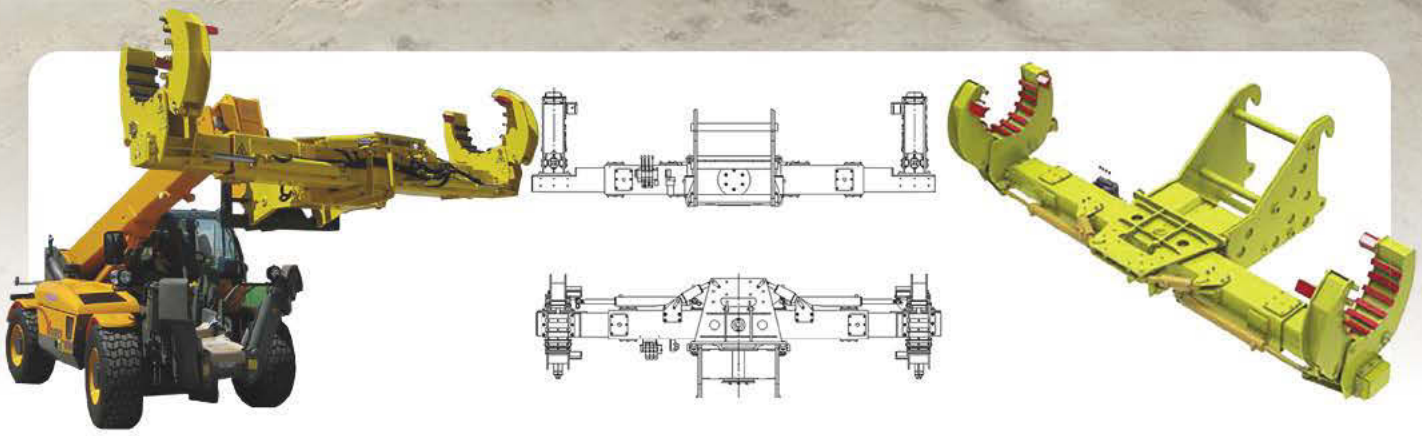

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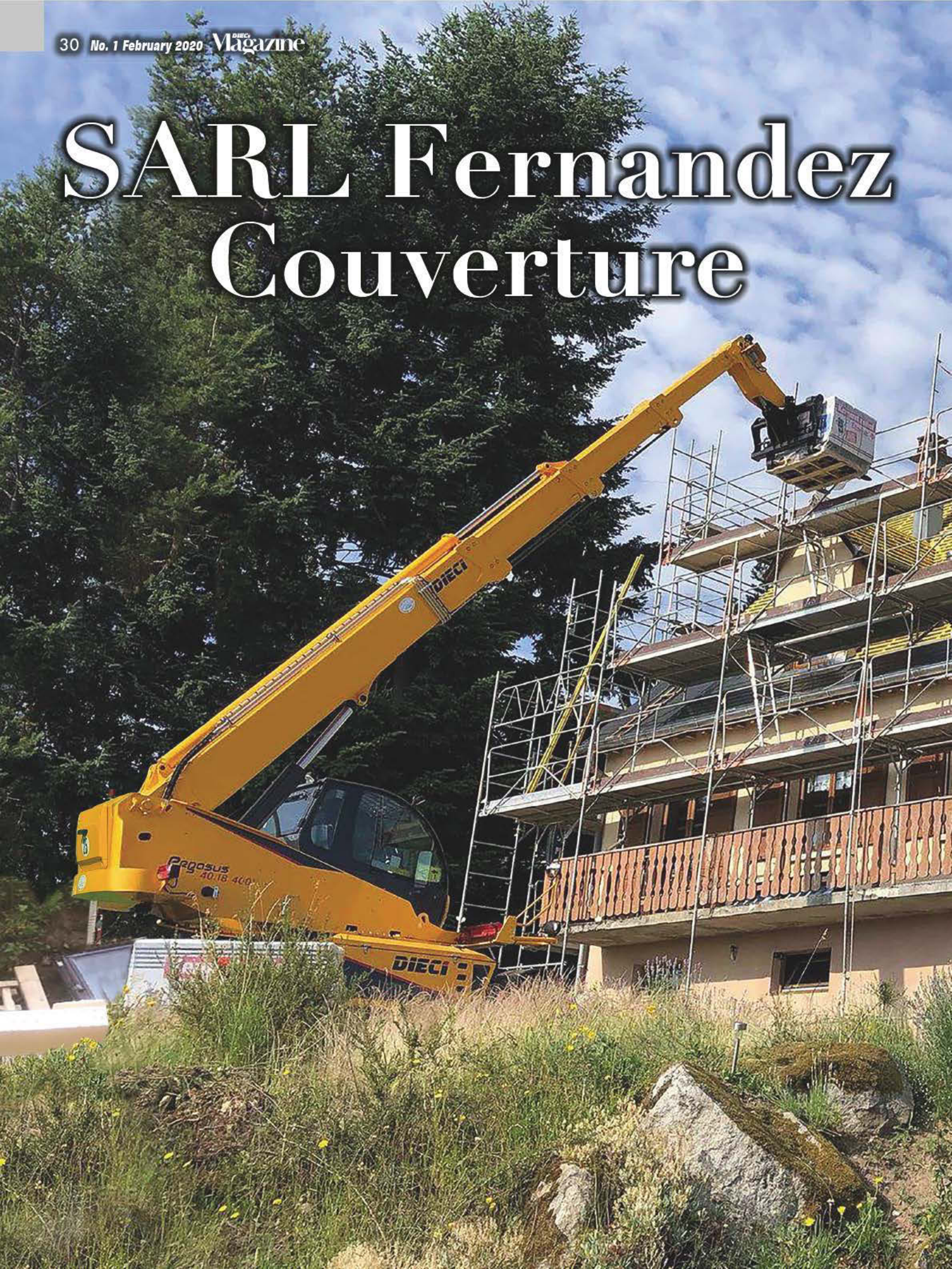

"... Reroofing a house, insulating an attic or even repairing a gutter is no easy task due to the steep inclines and high elevation, as well as the weight of the materials to be lifted or lowered to the ground...."

There are some situations in which it would be useful to have a telehandler, there are other situations in which it would be preferable to have one, and there are still other situations in which you really cannot do without one, as is the case with roofing company SARL FERNANDEZ.

SARL FERNANDEZ is based in Labaroche, Alsace, the smallest of France's administrative regions, in the heart of the Vosges and a stone's throw from the Franco-German border. Here, as in all borderlands, the customs and traditions of the two neighbouring countries come together and intermingle, and in some parts one or the other culture predominates. This is apparent in the local cuisine or dialect, and in this case, it is particularly apparent when it comes to the building industry: characteristic of this area (and of the whole of central

Europe) are the ubiquitous multi-storey timber frame houses, with their impressive exposed wooden beams that create interesting geometric patterns on the facades. But even more interesting for us (and for SARL FERNANDEZ) are the typical sloping roofs, which have steep inclines and sharp angles, and which are often covered with slate slabs rather than tiles. Reroofing a house, insulating an attic or even repairing a gutter is no easy task due to the steep inclines and high elevation, as well as the weight of the materials to be lifted or lowered to the ground. Hence why SARL FERNANDEZ has equipped itself with a Pegasus 40-18 400°. Living in the Vosges mountain range means not only clean air and beautiful landscapes, but also narrow, winding roads, sloping terrain and

PAPIERS-CARTONS
POTTINGER

houses that are often positioned close together, resulting in limited space for manoeuvring and working: the Pegasus easily overcomes these challenges thanks to its four steered wheels, 98 hp Kubota Stage IIIB/Tier4 engine and 400° rotating turret. Not even raising a 300 kg skylight, a pallet of oak beams or expensive and heavy slate tiles up three floors will be a problem anymore, thanks to the Dieci vehicle's 18 m lifting height and 4000 kg maximum load capacity. The sloping ground will no longer be an insurmountable challenge, thanks to the auto-levelling stabilisers, and installing new gutters on the eaves of very steep Alsatian-style roofs will now be much easier, thanks to the large man basket and extensive series of accessories, including baskets for aggregates, extendable baskets, forks, grippers and winches. And finally, the frigid Alsatian winter will no longer be an inconvenience: even when the temperature drops as low as -20°C and it's snowing or icy outside, in-cab comfort is assured by the enhanced heating system.

In fact there's no doubt about it, SARL FERNANDEZ really couldn't do without their Pegasus...

YOUR PHOTOGRAPHS

This space is dedicated to sharing photographs kindly sent to us by readers. Please send pictures of your vehicles, including your name and country.

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