

Soilmec Journal  
Year 9  
Issue no. 1/2014

# soilmec journal

products  
technology  
network  
communication  
events

SEE YOU  
IN  
VEGAS!

Booth 9454,  
Platinum Lot



News  
Soilmec in the world  
From the site  
New SR-45 and SR-75

SOILMEC  
NORTH AMERICA  
25 YEARS  
ANNIVERSARY!





Soilmec Hydromill in action for the new Metro in Copenhagen



## colophon

Soilmec Journal – Year 9, Issue No. 1/2014

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**ON COVER**  
 Soilmec SR-80 at Wolf Creek Dam.

## contents

### 4 NEWS

*Trevi Group at the Pareto Conference*

### 6 SOILMEC IN THE WORLD

*Soilmec in North America*

### 16 FROM THE SITE

*Inclined shaft for Texas Horseshoe*

### 24 NEW PRODUCTS

*New SR-45, SR-75 and Microdrilling Rig SM-17 on display at CONEXPO*

### 29 NETWORK NEWS

### 34 CORPORATE

### 38 EVENTS



Simone Trevisani, Managing Director.

## SOILMEC, 25 YEARS IN THE "STATES"

1989! A historic year for Soilmec: the first Soilmec rig was purchased in the United States. In 2014, Soilmec North America celebrates its silver anniversary: 25 years of continuous presence in the United States. An important and significant milestone because it demonstrates the quality and professionalism of our entire organization.

This issue of the Soilmec Journal is dedicated to the entire Soilmec organization in North America: Champion Equipment Sales, American Equipment & Fabricating Corp. and Watson.

In addition to articles about our North American partners (including their history, organization, products and services), we've included a preview of our new product line of rigs built with low-emissions engines that comply with TIER 4 air quality regulations in North America. Several of the rigs will be on display at the CONEXPO Exhibition in Las Vegas in March.

This special issue also includes news and updates about Drillmec, the Trevi Group company (with a production site in Houston) that designs and manufactures equipment for the oil, gas and water research and drilling industries.

I hope you enjoy reading this special issue of the Soilmec Journal – and please accept my best wishes for a good 2014!

Simone Trevisani

## Trevi Group at the Pareto Conference

news

4



Last fall Trevi Group participated for the first time to the 20<sup>th</sup> annual edition of Pareto Securities' Oil & Offshore Conference in Oslo, Norway. Simone Trevisani, CEO of Drillmec, took part at the conference presenting the Oil & Gas division to a group of investors. Pareto Securities' conference is the most important Oil & Gas Conference in Europe with over 1,700 investors and companies participating. Trevi Group, the only Italian company invited to the event, participated to the most influential international events of its sector.



The speech of Simone Trevisani,  
CEO of Drillmec S.p.A.



Drillmec, the Trevi Group company specialized in the manufacturing of oil and water drilling rigs, will manufacture some of its highly technological oil drilling rigs HH series in Argentina.

This agreement, presented in a Meeting, is part of the initiative of the Argentinian Ministry of Industry to reduce imports from abroad. The government's plans are aimed to achieve in 5 years, a significant reduction of imports to a value of about USD 70 million per year.

news

## Trevi Group will manufacture high-tech HH rigs in Argentina

5

The Minister of Industry, Debora Giorgi, said: *"This initiative is in line with the mandate of the President of the Republic, to strengthen the local oil industry to reduce the deficit of the sector"*.

Trevi Group will start producing in Argentina of its highly technological drilling rigs for the Oil&Gas sector in 2014 and will provide for the integration of locally produced components of approximately 40%. It is estimated that the local component will rise to at least 60% in the next four years until 2018. The events, held at the Ministry of Economy, was attended by representatives of more than 15 operating companies and entrepreneurs in the field of hydrocarbons including, YPF, Petrobras, Pan American Energy (PAE) Total, San Antonio Estrella, Pluspetrol Emepa and Nabors, former users of such rigs. The oil drilling rigs that will be produced in Argentina are HH-220 Drillmec series widely used and tested in the South American regions.



The presentation of the initiative at the Argentinian Ministry of Industry.



# Soilmec In North America

On January 1, 2014, the US Environmental Protection Agency's more stringent "Tier 4 interim" emission standards went into effect for all diesel engines used in (non-road) construction equipment. Soilmec has been planning for this milestone for more than two years, and used this opportunity to completely re-vamp its product line. The latest models not only exceed the Tier 4i requirements, but also deliver more power, efficiency, and flexibility.



Soilmec world

6

## Soilmec North America

Taking North America to a whole new Tier

2014 marks yet another major milestone for **Soilmec**: 25 years of delivering equipment, service, and solutions to the North American market. Providence, Rhode Island, based **American Equipment and Fabricating (AE&F)** first brought the Soilmec equipment line into the U.S. in 1989. **Champion Equipment Sales (CES)** joined AE&F as the second North American agent in 1991. Since then, AE&F



Champion Equipment Sales, with offices in Paramount, California (shown here) and Salt Lake City, Utah, US, and Alberta, Canada, serves Soilmec customers in the Western US and Canada.



American Equipment & Fabricating in Providence, Rhode Island, US, serves Soilmec customers in the Eastern U.S.

See the latest Soilmec North America videos at [www.youtube.com/soilmecna](http://www.youtube.com/soilmecna)

(which covers the Eastern U.S.) and CES (agent for customers in the Western U.S. and Canada) have sold more than 500 Soilmec drill rigs in North America.

**Soilmec North America's** customer support begins well before rig delivery and continues for as long as the customers own their Soilmec rigs. Soilmec and its agents offer generous technical support to their customers, very strong after-sales support, and operator and mechanics training. The North American agents pride

**Soilmec world**

7

themselves on being there for their customers during both up-turns and downturns in the construction market.

### **25 Years of Solutions**

When Soilmec entered the North American market in 1989, hydraulic rotary rigs were being used already in Europe and Asia. However, most North American drilling companies were still using old-style mechanical crane-mounted attachments to drill foundations.

Introducing hydraulic rigs to the North American market took vision. Many of the benefits had to be experienced rather than seen. For example, the combination of controllable crowd and torque gave the operator unprecedented control of a drilling process that happens out-of-sight, underground. But once Soilmec customers converted, there was no going back.



Soilmec and its North American agents team provide week-long training seminars to customers and local union operators.



Mike Abruzzo, Gil Peel, and John Zito of American Equipment & Fabricating talk with Al Zabicki, Training Director of IUOE Local 825 at the week-long operator training seminar in New Jersey, U.S., which was sponsored by Soilmec.

Through continuous – and generous – technology transfer between Soilmec, Trevi, and North American customers, Soilmec has introduced many new construction technologies to the North American market, such as continuous flight auger (CFA) for drilled shafts, cased secant piles (CSP) for diaphragm walls, and other fully-cased methods of drilling. Today, using these innovative technologies, North American customers have improved productivity and gained a competitive edge in bidding and building.

### Going the Distance

Soilmec’s rig reliability and excellent after-sales support means customers can get the job done despite unforeseen conditions that might arise. From initial technical advice to rig training and expert consultation on specific project complexities, Soilmec’s factory-

## Soilmec world

8



trained technicians ensure that the equipment is working at its full potential. One example of Soilmec’s commitment to a comprehensive transfer of knowledge to drill rig operators was two one week-long seminars held in Edmonton, Alberta, Canada, in June 2012 and a similar seminar held in New Jersey, U.S., in June 2013. For each seminar, Soilmec, CES, and AE&F partnered with the local operator’s unions.

2014 marks the fifth year that Soilmec North America has brought customers together in Phoenix, Arizona, to share important technical and product information.



American Equipment & Fabricating team in Providence, Rhode Island.



Each attendee participated in a comprehensive training program composed of both classroom theory and hands-on demonstrations covering continuous flight auger (CFA), the fully-cased method using temporary conventional casing, segmental casing (with and without an oscillator), and open hole drilling. Upon course completion, each graduate received a certification. In Canada, this training certification supports and is in accordance with Canada’s regulatory requirements for heavy equipment operation. Training customers on the equipment before they go out to the field also helps the operators learn proper drilling techniques to achieve best results without damaging the machines – ultimately saving customers both time and money.



Champion Equipment Sales team in Salt Lake City, Utah.

### Solutions-based Philosophy

Soilmec North America maintains five parts facilities in North America: Alberta, California, Rhode Island, Texas, and Utah. Combined, CES and AE&F have over US\$5 million worth of spare parts on-hand that are accessible to customers

Soilmec world



John Wilson.

throughout the U.S. and Canada.

For unique project requirements, both CES and AE&F provide detailed engineering design and equipment fabrication. Whatever the need, Soilmec’s highly-skilled technical staff assist customers in planning out their projects to ensure that the customer has the right equipment for the job.



Federico Pagliacci, Soilmec Vice President of Development and Vincent Jue, Soilmec North America Vice President, discussing strategies for providing the best equipment and technical support to Soilmec customers.



Over US\$5 million worth of spare parts stand at the ready to support Soilmec's North American customers.

Often, this means working hand-in-hand with customers to strategize innovative construction solutions for their projects, even at the pre-bid phase, to determine the most advantageous and competitive approach. From troubleshooting on location at a client's jobsite to resourcing tools and parts quickly to avoid project delays, Soilmec's agents help customers minimize jobsite down-time, generate higher productivity, and achieve more profitable projects.

As for the new Tier 4i models, Trevi, sister company to Soilmec, has tested these engines worldwide. A continuous exchange of information between the job site and

## Soilmec world

10

the factory ensures that the development of technology drives the development of equipment.

All combined, Soilmec is providing world-class innovation, excellent after-sales support, outstanding technical support, and essential training. With its latest line of rigs, Soilmec is poised to take North America to a whole new tier.

Soilmec North America has a full fleet of microdrilling rigs for rent.



# From the first Soilmec rig sold in the U.S. ... to the 100<sup>th</sup>!



In October 1990, Hub Foundations took delivery of the first Soilmec rig sold in North America. Standing in front of the R-10 is Jim Maxwell, owner of Hub Foundations, his mother, Fran, and Giovanni Sirri of Soilmec.



Workers christen Hub Foundation's new R-622 in May, 1992.



Jim Maxwell, owner of Hub Foundations, in front of one of the 15 Soilmec rigs in Hub's fleet, August 2011.



The 100<sup>th</sup> Soilmec rig sold in the U.S. was Hub Foundation's R-930, shown on the right, drilling foundations for a new Washington DC Marriott.

*Many thanks to Hub Foundations for providing these photos.*

# Soilmec In North America

The history of **Watson** Incorporated goes back to 1923 when Verne Watson rigged up a single wood-rimmed flatbed truck and started Fort Worth House Moving Company in his home town of Fort Worth, Texas. From these humble beginnings, his business quickly grew to include larger structures and industrial machinery.

by Doug Watson

In the mid 40's, Verne adapted some of the lift cranes to the purpose of drilling shafts and expanded the company's drilled shaft operations. By the mid 1950's the company was known as Watson Foundation Company and had operations in Denver and Atlanta as well as Fort Worth.



Soilmec world

## Watson, a successful story

Watson story dates back 90 years, starting from its foundation to its integration in the Trevi Group

12

By the early 1960's, Verne and his son Jack began to see increasing demand by other drilling contractors for the drill rigs Watson was designing and building for themselves. Watson Manufacturing Company was established to meet this demand and made its first sale of a 5,000 crane attachment in 1965 to Peter Lind Ltd., located in the UK.

Between 1965 and 1973, the Watson's migrated out of drilled shaft contracting and devoted all resources to Watson Incorporated, a company solely focused on the design, manufacture, and sale of foundation drilling equipment for the up and coming drilled shaft industry. Verne and Jack Watson continued to be instrumental in pioneering and gaining acceptance of the use of drilled shaft foundations for

many years to come, including Jack's service as a founding member and the first President of the Association of Drilled Shaft Contractors (ADSC). Since the 1970's, the Company has emerged as an industry leader in foundation drilling rigs. During that time, the 3rd and 4th generation of Watson's joined the company fostering the evolution of the company into the modern era of business, manufacturing and technology. Bringing with them

An old photo dating back to the early Watson years, when the company was still in house moving business.



Mr. Verne Watson, founder of Watson.

Jack Watson (Doug's grandfather and David's father) on the truck of the house moving business company.



For more historical photos please visit [www.watsonusa.com](http://www.watsonusa.com)

their business and mechanical engineering backgrounds, David Watson and his son Doug are driving the company to deliver a wide range of increasingly dependable and productive drill rigs, while maintaining the critical focus on strong customer relationships and exceptional customer support that have helped to define the company.

### Recent years and Trevi Group

Foundation contracting is a challenging business no matter where you are in the world, but finding prosperity in the shallow rock of North America has always required the



Above, from left to right: the Watson factory built in 1965; the original Watson logo; the current Watson Assembly plant; the current Watson logo.

toughest rigs and resourceful people. The lessons learned from Watson's 90 years in this market have shaped the two key success factors of our company today: A genuine dedication to the success of our customers and a time tested line of reliable and productive drill rigs.

Watson's business model of manufacturing simple, tough machines that are built-to-order and supported directly from the factory has given Watson its competitive advantage and forged strong loyalty in our customers. Ironically, the same advantages that have built the company are now proving to be an obstacle to growth. Globalization over the last 20 years has brought a new set of challenges that demand businesses to evolve or step aside.

Steam powered drilling rig in one of the first jobsites.



1940's



1960's

One of Watson's crane attachments.



Doug joins father David and grandfather Jack in 2002.

In 2009, Watson joined the Group having just achieved the highest turnover to date of 62 rigs. Unfortunately, we did not have a chance to top it in 2009 as the “Great Recession” quickly changed our focus from achieving sustainable growth to sustaining our existence. However, this adversity became an opportunity as the slow down gave us time to refine our business model and build the teams needed to surpass our record of 62 but with better quality and lower costs.

Thirty years ago, Watson and Soilmec were surprisingly similar companies, but the aligned efforts of the people behind Trevi have propelled the family owned business to the diverse group of global companies it is today. The lessons learned from Trevi’s remarkable growth, the technological development and process refinement over the last two decades are now a valuable asset to Watson.

Watson’s growth strategy balances elements from both Soilmec and Watson: Build-to-Stock and assemble-to-order

while retaining the right amount of in-house manufacturing to allow for customization of our rigs. The critical goal of reducing leadtimes has led to increasingly modular designs, sub-contracting where beneficial, better forecasting, and new supply chain systems geared towards a pull system. This will provide Watson the right combination of flexibility and availability that is still crucial in today’s equipment market.

## Soilmec world

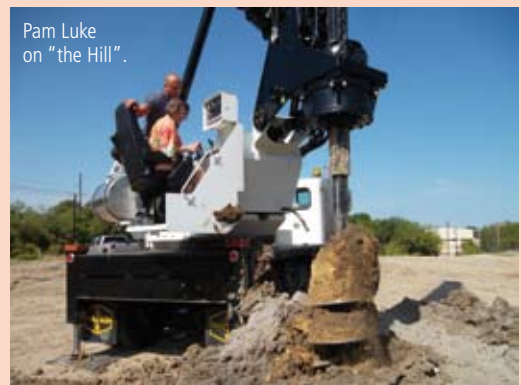
14

The addition of Watson to the Trevi Group is a great example of the types of opportunities created when diverse collections of companies and cultures work together to help each other. Maintaining the distinction of the Watson brand, the culture and market strategies while simultaneously leveraging cost and process improvements allows the Group to appeal to a broader customer base and ultimately gain more market share.

## The Hill of Quality

Behind the Watson building there is a big field, which employees friendly call “the hill”. This area is used to test all of the rigs before final delivery. Johnny Richmond, Quality Inspector, has been with Watson for 20 years. He performs the rig tests in order to ensure the delivery of a quality rig. *“At Watson, we believe that the quality of our rigs is guaranteed by an accurate assembling and thorough test. When I test, I am not afraid to be rough when operating the rigs because that’s how they are used out on the jobsite. If the machine passes my test, I’m confident that it isn’t going to have any problem out in the field!”* explains Johnny.

May Lan Pope, Quality Assurance, came up with the idea and organized this rare opportunity for employees operate a Watson rig. The Quality Team understood the importance for employees to learn more about how the rigs actually work. Several women from various departments took advantage of this opportunity. Watson employee Pam Luke, Inside Sales, operated Watson 1100 truck model. *“This great opportunity closed the circle from watching the day to day operations and manufacturing of the rig to actually sitting in the seat and drilling a hole. It gave me more insight on how powerful these rigs really are. It makes me proud to work for Watson.”*



## COLLABORATION WATSON-SOILMEC SR30 with Short Mast made in USA

**Bob McKinley,**  
Operations Director  
at Watson Inc.



"Watson and Soilmec North America recently had their first opportunity to work together to deliver a joint solution to the market, a short-mast SR30. The Watson 'Excadrill' excavator attachment was selected to be integrated onto the SR-30 base using the existing SR30 kinematics and controls. Very few changes were required to accommodate the Excadrill. Upon completion of the attachment in 2012, a longmast SR-30 was 'borrowed' to complete the prototype assembly and commence testing at Watson's facility in Texas. The installation proved to be quite simple, the issues were quickly resolved and the rig performed as designed. After testing, the SR-30 was reassembled and shipped to a customer. This fast paced testing process was completed in two weeks with the combined efforts of American Equipment technicians, Watson engineering and assembly personnel and the Soilmec Technical department. The dedicated SR30 base arrived in the spring of 2013 and the Excadrill was installed, tested and prepared for touch-up and shipment. This collaborative effort offered several lessons on how to best leverage the strengths of our product lines in the future. Like any project, communication throughout the process, a clear understanding of the customer requirements and design tradeoffs involved and the teamwork and resourcefulness of the people are the crucial elements to achieving success."

**Mauro Palumbo,**  
Planning Manager  
of Foreign Operations at  
Soilmec.



"I have been working for a long time with the management of Watson, and we share together projects and strategies for the future. I've met people fond of the brand and their products, but at the same time ready to discuss with me how to solve their problems. I am grateful and honored to be able to help solve some of the challenges Watson faces and to use all the Soilmec experience to help them in this. I see this as the key to increase the Watson market in the actual U.S. and, I hope, all over the world in the future."

**Fulvio Raffa,**  
Foreign Operations  
at Watson Inc.



"My function in Watson is to coordinate and develop joint projects with Soilmec, identifying strategic areas for the Group. The assembly of Soilmec machines in Watson is perhaps the most ambitious project because to be successful it's necessary to reorganize production and supply. After a long period of study we see the first results precisely in supply area, thanks to the introduction of global suppliers. Thanks to the increasing mutual trust and cooperation, the involvement of the headquarters and the support from Mauro Palumbo, now we can work towards a common goal, exploiting the synergy of the Group companies."

SR-30 with Watson  
short mast.



Soilmec world

15



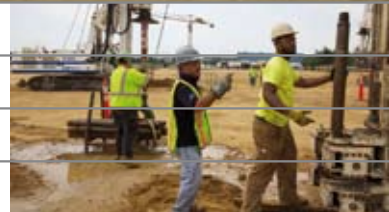


training

16

## Soilmec North America hosts Drilling Rig Operator Training Course

Soilmec has a long history of providing first-class training to personnel who manage, operate, and maintain Soilmec equipment. In July, 2013, Soilmec North America hosted a week-long operator training course for members of the International Union of Operating Engineers (IUOE) Local #825 (New Jersey) and IUOE Local #542 (Eastern Pennsylvania and Delaware). The week-long seminar included demos and hands-on field practice. It gave trainees the opportunity to hone their skills using Soilmec rigs for microdrilling and large-diameter piling with casing or slurry.



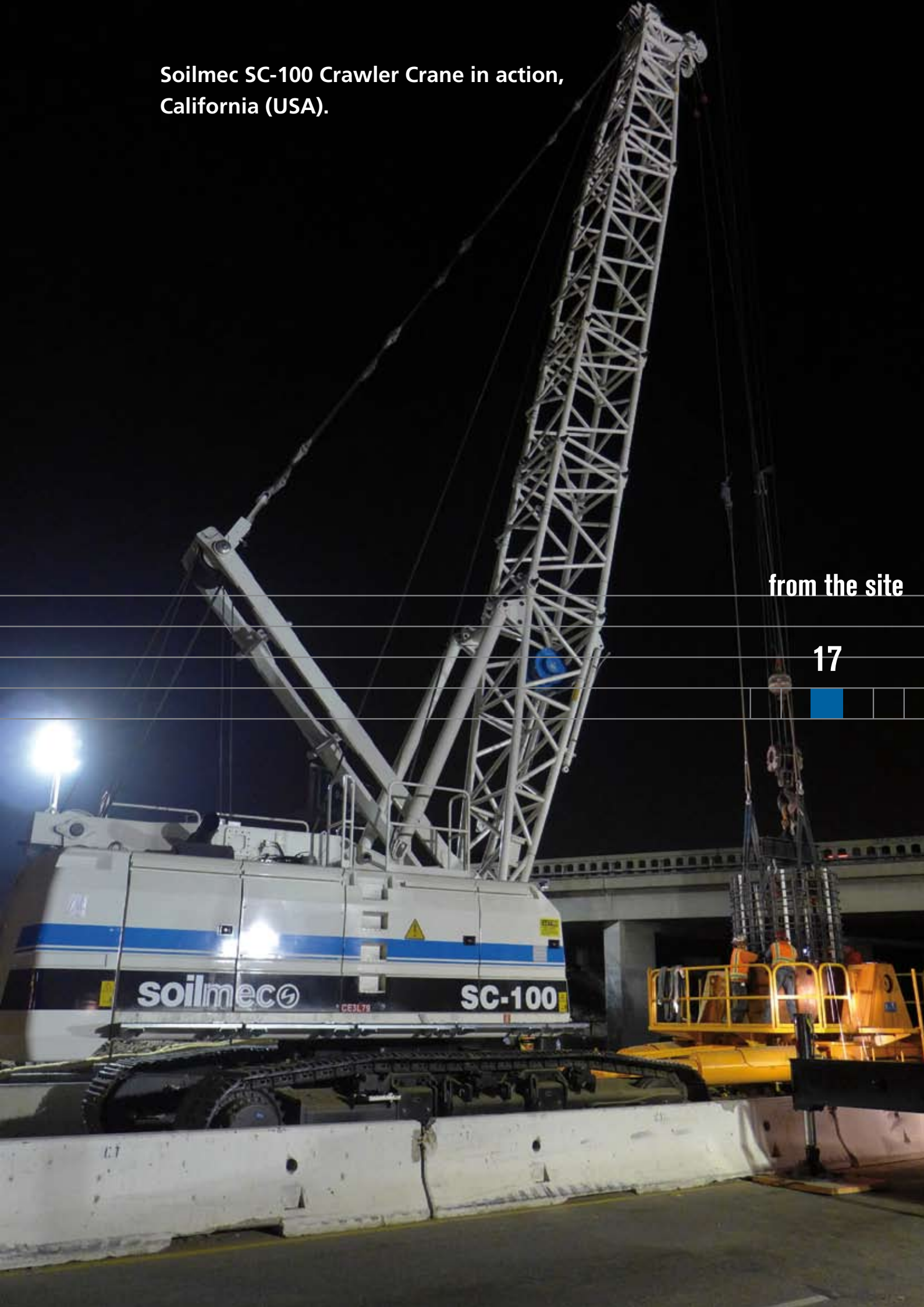
Besides on site training activities Soilmec North America carries out an intensive program of seminars and technical meetings.



Students receiving hands-on training on SM-14, R-625 and SR-30.



Soilmec SC-100 Crawler Crane in action,  
California (USA).



from the site



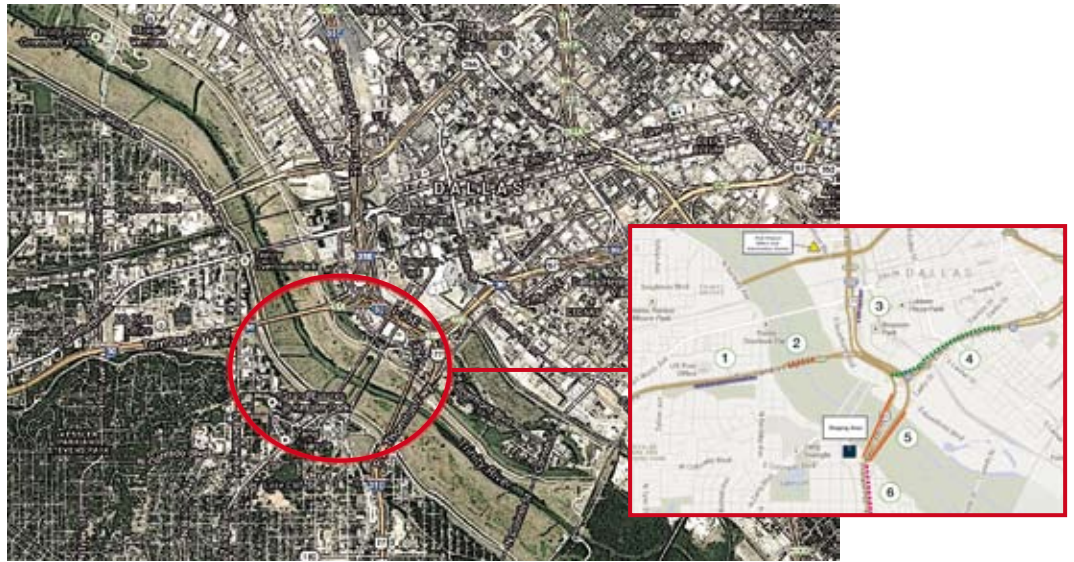
from the site

18

One SR-65 was involved in the foundation works for the Horseshoe bridge in Dallas

# Inclined shaft for Texas Horseshoe

Geographical inserting of the new bridge in the urban area of Dallas.



The Dallas new bridge construction project, developed by the Texas Department of Transportation (TxDOT), is dubbed the "Horseshoe" due to its U-shaped configuration around the city central downtown. The project target is to improving mobility along the Highway Interstate HI-30 and HI-35E near downtown Dallas' Central Business District in a safe, efficient, reliable, and environmentally sensitive manner. The complete project area ranks among the 17 most congested roadways in Texas and construction improvements include the expansion, repaving and

from the site



Project rendering.



from the site

20

addition of several new bridges and roadways along interstates 30 and 35E, and the construction of the new cable-stayed bridge deputy to vehicular, pedestrian and bicycle traffic, connected to the arch and the center of the roadbed over I-30, designed by Santiago Calatrava, to cross Trinity River. Santiago Calatrava is a world renowned architect, engineer and visual artist who have designed a wide range of projects including stadiums, transportation hubs, museums and more that 42 bridges around the world, that set new standards for both iconic architecture and unparalleled functional efficiency.

One Soilmec hydraulic drilling rig SR-65 was involved in the foundation works for the Horseshoe Bridge. The project consists in 64 drilled shafts up to 21 meter depth and cased between 16 and 19 m deep. The challenge is regarding the particular design concept of these shafts in fact 16 piles are vertical piles and 48 piles battered on 20 degrees angle. To perform the 1300 mm diameter piles the SR-65 has been equipped with a casing oscillator mechanically and hydraulically attached at rig base machine, linked a rigid support built ad hoc to be able to keep the casing oscillator on the correct inclination while drilling. The geotechnical setting of Dallas job site is characterized by silt and silty clay to depth of about 12 to 15 meters, then around 2 to 3 meters, gravel with cobbles and flowing water, followed by midly weathered limestone to bottom of pile.

Operations in the job site of Horseshoe Project consisted of driving the casing with rotary to 6 meters or until soil plug forms and cleaning out to within 600 mm of bottom of casing. First of all, it was necessary to oscillate casing with casing oscillator until

Aerial view of the works for the new bridge.



slowed by soil plug and then to clean with auger. An additional pull-down assisted by rotary was inserted during oscillation until gravel layer and after it was made clean with excavating bucket until casing seats in limestone; moreover, a cleanout bucket was used to remove water. Secondly, it was advanced the rock auger beyond bottom of casing (approximately 3 meters) and installed the cage with service crane full depth. The cage was equipped with a large plate washer at bottom to hold it down during casing extraction. After the insertion of cage, self consolidating concrete (SCC) was pumped through the center of the cage, maintaining 6 meters head alternating with casing segment extraction by the oscillator and rig; no oscillation was required after the first meter of casing was pulled.

despite the complexity of the project and the nature of Trinity River that is prone to "Flash Flooding" (so more than 1 day of rain implied the closure of the job site for about 3 days longer than the rain), the SR-65 production was really good and in regular conditions, 3 to 5 piles was completed per 50+/- hour week.

from the site



Detail of piles.



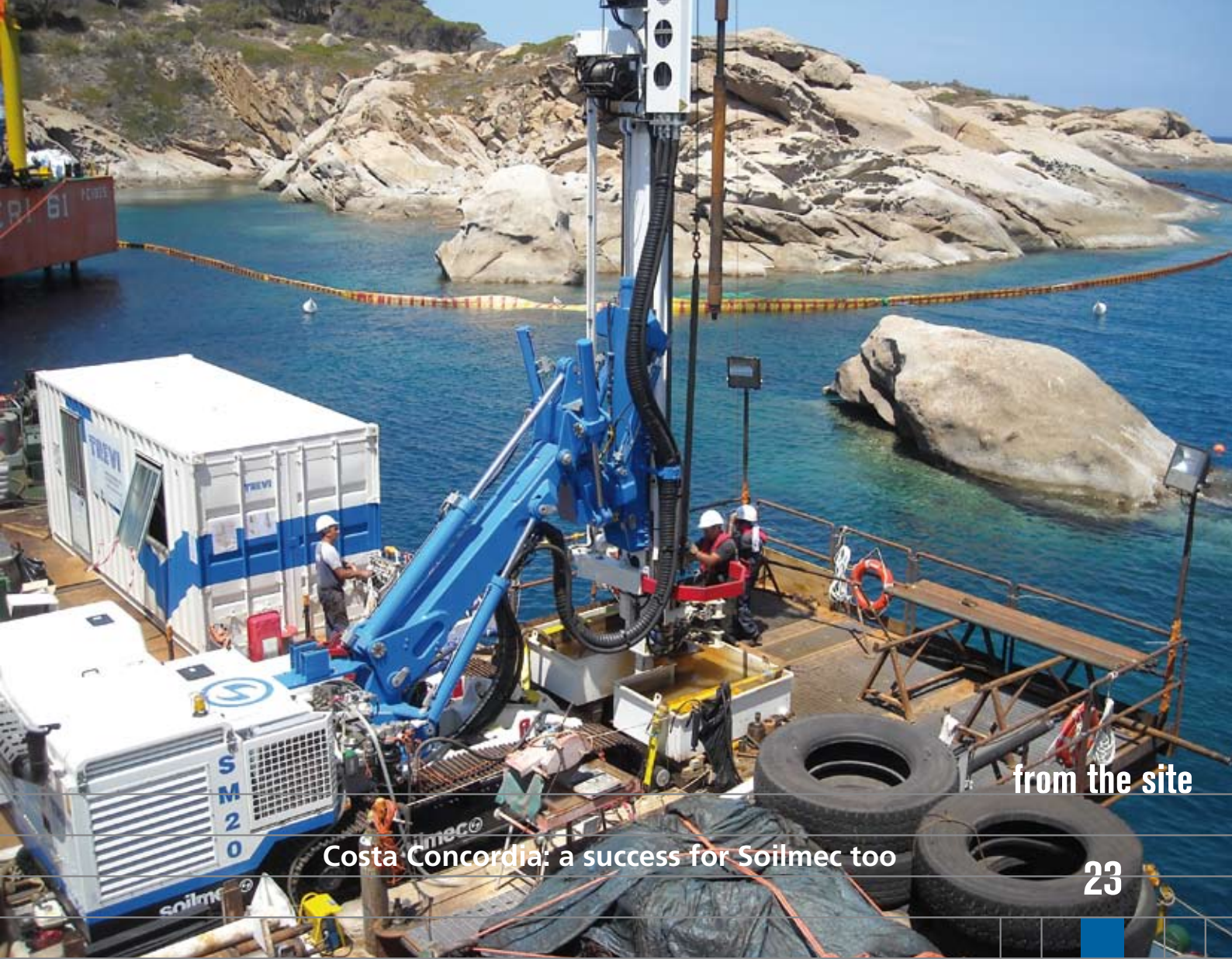
from the site

22

## XXII Olympic Winter Games Sochi 2014

The Soilmec ST-120 positioners played a key role in the construction of the new Sochi bypass

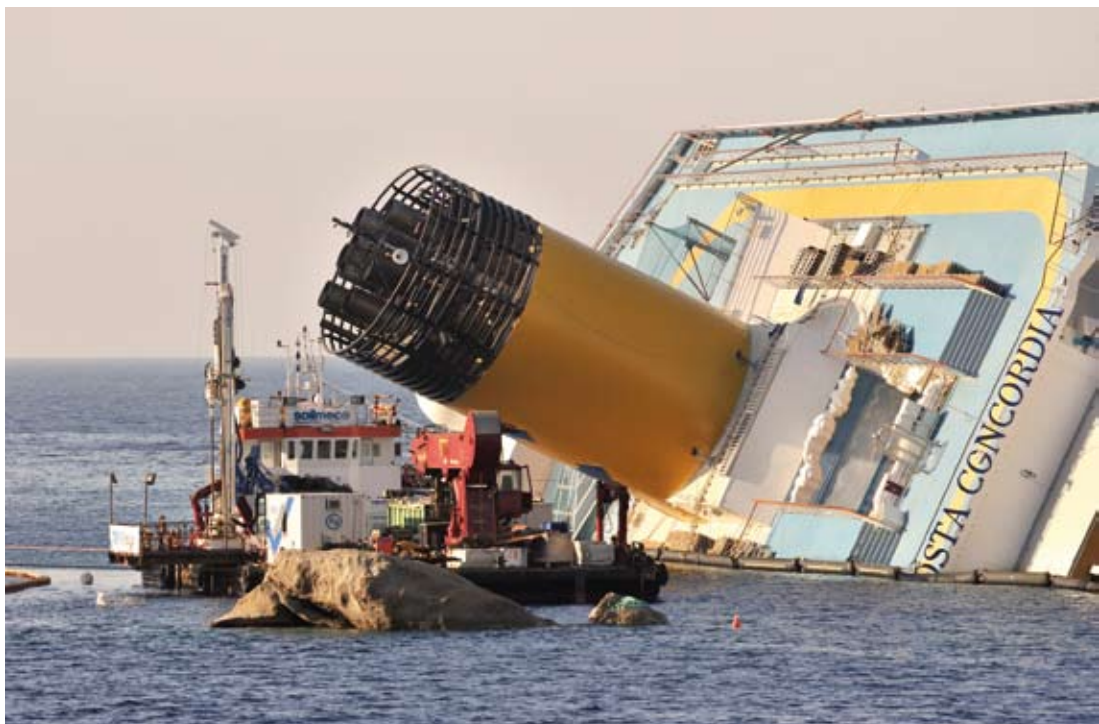
Soilmec, part of the Trevi Group, the world's leading reference in designing, manufacturing and selling of foundations and drilling equipment and systems, has sold to Transstroy a package of special equipment including 4 dual-arm ST-120 drilling rigs (commonly called "positioners") for consolidation works in the gallery for the new T8 tunnel construction in Sochi. Transstroy is the Russian company in charge of T8 tunnel construction, the longest and most difficult of the new Sochi bypass. This important work successfully carried out is part of the infrastructure development plan for the Winter Olympics and has involved the construction of a 3 km twin-tube tunnel featuring 2/3 lanes in each direction. The design has been carried out by Rocksoil Spa from Milan according to ADECO - RS principles, and is the first application of this Italian designing concept in Russia successfully completed, as the tunnels were built on schedule.



Costa Concordia: a success for Soilmec too

23

The rotation ("parbuckling") of Costa Concordia cruiser, sunk off the coast of Tuscany, have been carried out successfully. Soilmec, with **SM 21** and **SM 20**, gave this successful project an essential contribution.



# New SR-45, SR-75 and Microdrilling rigs on display at CONEXPO

Soilmec will showcase three new drill rigs equipped with Tier 4 engines at CONEXPO in Las Vegas, Nevada (March 8 - 4, 2014). Models include the new SR-45 and SR-75 drilling rigs for large diameter piles, and the new SM-17 for microdrilling and anchoring.

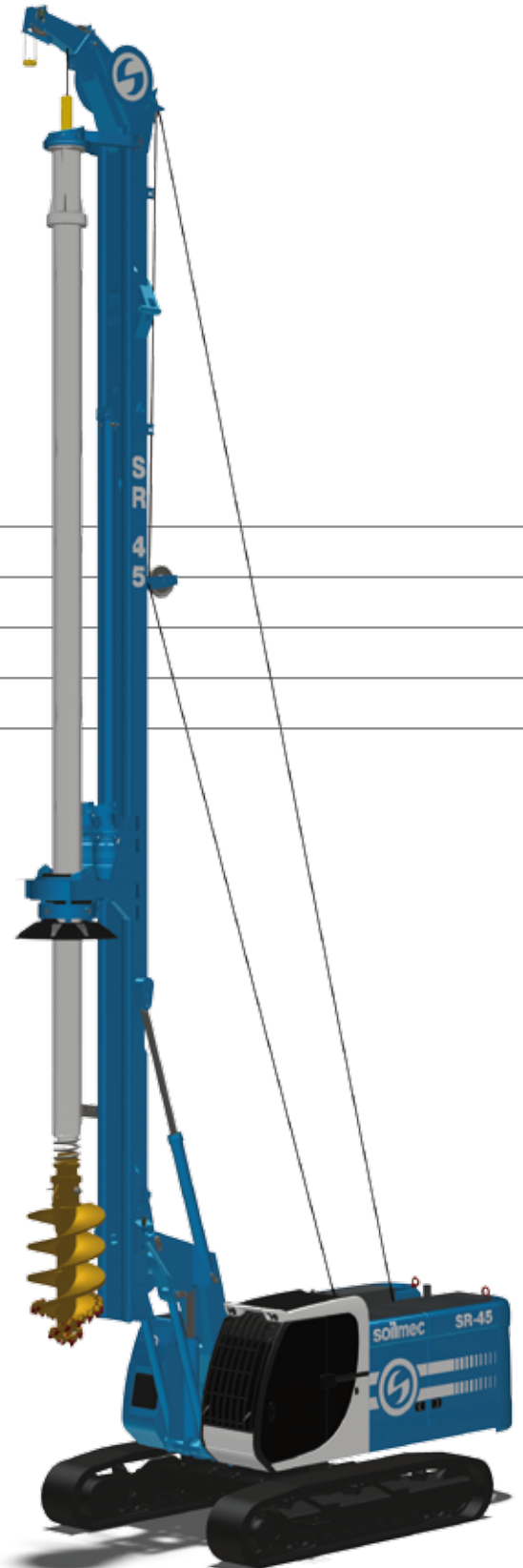
## Soilmec's new SR drilling rigs

The latest models not only exceed Tier 4 emissions requirements, but also deliver more power, efficiency and flexibility.

new products

24

## New SR-45 drilling rig



## SR-45

### HYDRAULIC DRILLING RIG

Operating weight (c/w 4x9 kelly bar)	42000 kg / 92593 lb
Max drilling diameter (tool below mast)	1500 (2500) mm / 59,06 (78.74) in
Max pile depth - locking kelly (c/w non self mounting 4x14 kelly bar)	47,5 (50,5) m / 156 (166) ft
Max pile depth - friction kelly (c/w non self mounting 4x14 kelly bar)	58,5 (65) m / 192 (213) ft
Max torque (theoretical, restricted, intermittent)	185 kNm / 136406 lbf*ft
Rated torque (theoretical)	161 kNm / 118710 lbf*ft
Engine	Cummins QSB6.7
Rated output ISO 3046-1	201 kW @ 2000 rpm / 269 HP @ 2000 rpm
Engine conforms to exhaust emission standard	EU stage III B, US EPA Tier 4
Cylinder crowd system force pull (down/up)	4140/207 kN / 31500/46500 lbf
Main winch line pull (1 <sup>st</sup> layer)	165 kN / 37100 lbf
Undercarriage	variable gauge, telescoping sides frames
Overall width of crawlers (retracted/extended)	2550/3750 mm / 100/147 in



# SR-75

## HYDRAULIC DRILLING RIG

Operating weight (approx.)	75000 kg / 165345 lb
Max drilling diameter (tool below mast)	1750 (2500) mm / 68,90 (98.43) in
Max pile depth - locking kelly	62 m / 203,4 ft
Max pile depth - friction kelly	77 m / 252,6 ft
Max torque (theoretical, restricted, intermittent)	293,0 kNm / 216038 lbf*ft
Rated torque (theoretical)	251,0 kNm / 185070 lbf*ft
Engine	CAT C13
Rated output ISO 3046-1	328 kW @ 1800 rpm / 440 HP @ 1800 rpm
Engine conforms to exhaust emission standard	EU stage III B, US EPA Tier 4
Winch crowd system force pull (down/up)	408/408 kN / 91720/91720 lbf
Main winch line pull (1 <sup>st</sup> layer)	246 kN / 55300 lbf
Undercarriage	variable gauge, telescoping sides frames
Overall width of crawlers (retracted/extended)	2830/4330 mm / 111,4/170,5 in

**soilmec**  
Drilling and Foundation Equipment

new products

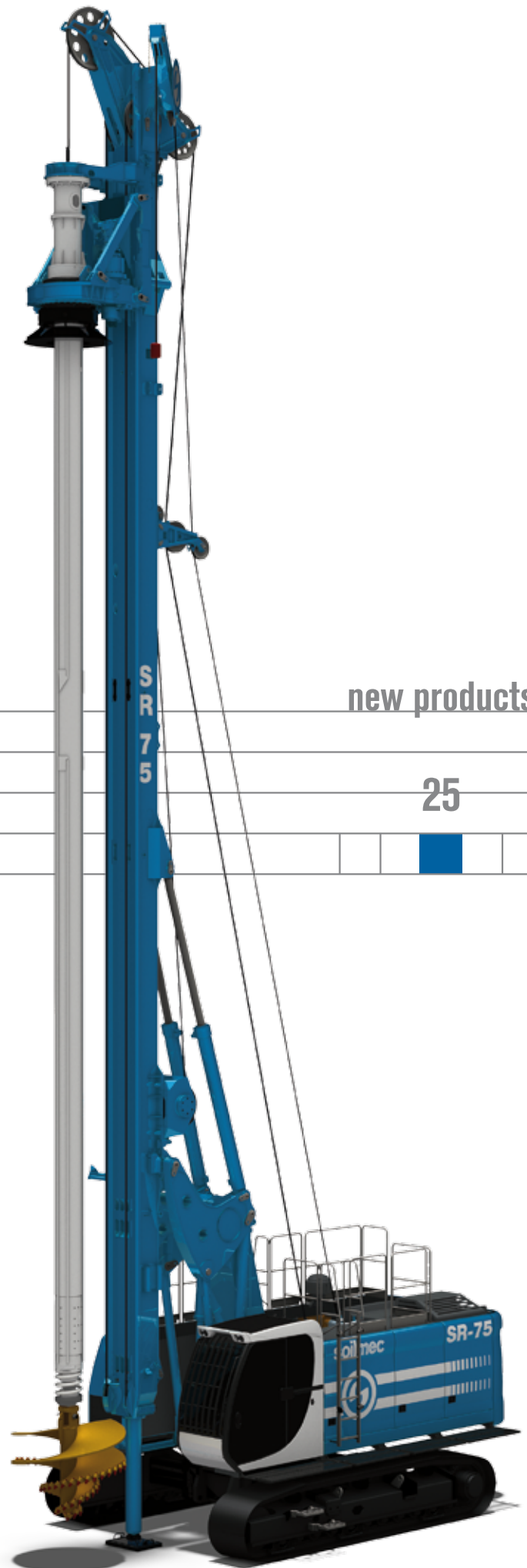
## New SR-75 drilling rig

25

The SR-45 and SR-75 drilling rigs are designed for large diameter drilling of cased or uncased bored piles, continuous flight auger piles, cased augered piles, displacement piles, and Turbojet® piles.

The SR-45 drilling rig can be equipped on-demand with a rat-hole kit that enables drilling up to 61.5 m (200 ft) depth (5x13.5 kelly bar) with a crowd cylinder system.

With a low-headroom mast, the SR-75 drilling rig is also suitable for low headroom applications.





# SM-17

## HYDRAULIC MICRODRILLING RIG

Operating weight (approx.)	17 - 18 ton kg / 37478 - 39600 lbs
Diesel engine make and model	DEUTZ TCD 6.1 Tier 4
Power rating	160 kW @ 2000 / 214 HP @ 2000
Main pumps: variable axial pumps	214 + 214 l/min / 56,5 + 56,5 US gal/min
Kinematic mechanism	Articulated
Hoist & Feed system	Cylinder
Maximum hoist pull/feed force	100 / 50 kN / 22481 / 11240 lbf
Feed stroke	4800 mm / 189,0 in
Clamping range	up to 60 - 415 / up to 2,4 - 16,3 in
Extractor device	400 mm / 150 kN / 15,7 in / 33720 lbf
Transport width	2500 mm / 98,4 in
Transport weight	17 - 18 ton kg / 37478 - 39600 lbs



## New SM-17 microdrilling rig

### Soilmec's new microdrilling rig

The SM-17 is a multipurpose drill rig engineered to build micropiles, tie-backs, anchors, jet grouting and mini-piles. Rig versatility is enhanced by the range of flexibility in the rotary heads, clamp, and joint breakers, and modular masts with variable rotary head travel. New high-strength steel masts support 5<sup>th</sup> generation moving rotaries for multipurpose use.



# Solution provider

CAP (Cased Augered Piles) technology



SR-100 CAP

Read this QR code with your smartphone.

<http://goo.gl/2wKb9X>

**soilmec**<sup>®</sup>  
Drilling and Foundation Equipment

[soilmec.com](http://soilmec.com)



## A "giant" Drillmec 3000 HP equipment is currently under construction in Kuwait

The new 3000 HP equipment commissioned by Weatherford Drilling International (WDI), one of the largest ever built by Drillmec, is currently in the commissioning phase in Kuwait.

The rig was built and assembled in Piacenza and delivered to the customer at the end of 2013.

Some information about the new 3000 HP equipment:

- The mast has a capacity of 1000 tons;
- the probe height is 45 ft (approx. 613,6 m), being 40 ft (12 mt) the maximum until today;
- the distance of mast supports from the probe has been increased from 30 ft (approx. 9 m) to 40 ft (12 m);
- the mast is lifted/lowered with the top drive mounted inside (see photo);
- the initial pull force during the lifting phase is 400 tons.





## Drillmec strengthens its presence in Indonesia

Indonesia is one of the most active and fast developing countries. 250 million people live there and the annual growth is over 5%. Despite the fact Drillmec already has a significant number of client and equipment over there since 2010, the 2013 has made the difference. A key agreement was sealed in April. The new drilling contractor PT Geo Drilling choose our company as manufacturer for CBM (Coal Bed Methane) drilling rig. Drillmec signed a contract in April 2013 to supply 3 HH-75 drilling rigs and three more were ordered in late August.

As a matter of fact, in February 2014 three rigs are being commissioned in Sumatera island while the three new units are being assembled in Piacenza factory.

Drillmec provided not only the rig but also ancillary equipment such as mud pumps, trucks, casing tool, sensors and a number of services for example training, extended commissioning, data management system.

The rigs were especially designed according to the country requirements and customer needs. HH-75 is a robust and fast moving and light drilling rig for CBM wells up to 2,000 m. Many units were built in the past and really appreciated by other customers worldwide.

We are confident Indonesia will be an excellent opportunity for Drillmec in the next few months. Indeed the parent company of Geo Drilling called Sugico decided to cooperate with Drillmec also for future projects.



# The first MR-8000 rig in Kenya



network news

30

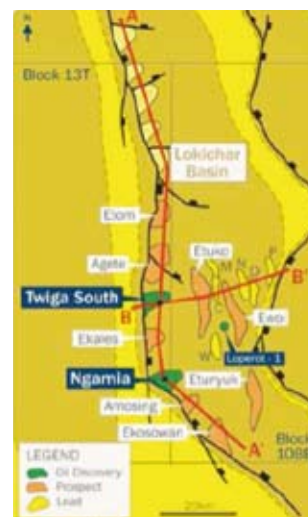
The MR-8000 mobile rig ready to start.

Turkana is one of the most interesting area of Kenya Republic. It is located by the namesake lake, about 550 km from Nairobi and 200 km from Kericho district which is famous for its own tea exported all over the world. In this geographical contest and in the nearby Lockichar basin, one of the Drillmec's rig, the MR8000 model has begun drilling.

MDAL (Marriott Drilling Africa Ltd.) the subsidiary of The British Company PR-Marriott is the drilling contractor who has signed a three-year exploration contract in the Lokichar basin and which has bought a 1,000 HP rig from Drillmec.

Drillmec has supplied a MR-8000 rig which is one of the most popular model of Drillmec's range, it has been engineered according to API and EU regulations and can work in ambient temperature up to 50°C. Its maximum hook load capacity is 200 mton and it can work with DP range II in double configuration; moreover this project has also included a complete package with two 9T1000 mud pumps and a 1330 bbl mud system suitable for Europe application as well. The main feature of this rig, according to the Anglo-Irish oil company Tullow Oil requirements, consists of its capability to have an iron roughneck installed instead of the usual power tong. Drillmec has been able to meet all the customers and the Oil Company needs, working full time and together with all the holders of the project. Furthermore, some major components, such as the Hydraulic HTD-250C top drive has been tested in detail in accordance to the Drop Object regulations (i.e. the prevention of falling object from high position). The top drive assembly has been made by Nord-Lock washers, fully used in on-shore and off-shore drilling field. This MR-8000 rig has been engineered 100% in conformity to customer needs showing that a standard rig could be customized and tailored for any kind of application.

Tullow Oil has recently announced that the first exploration well (Etuko-1) has reported a significant productivity evaluation, quantified as approximately 231 million barrels of oil. At the moment two out of three exploration wells have been successfully tested. The Marriot Drilling Company has positively commented the first results by saying the exploratory studies of the Etuko-1 well have been higher than the expectation. The presence of British companies together with current results allow Kenya to increase the production and the exportation of crude oil soon.



Map of Lokichar basin (Kenya).

On mid-September, the Saipem Rig 5970 spud and started drilling operation in the Dahrhan area, Kingdom of Saudi Arabia. This rig is part of the three package supply done by Drillmec S.p.A for the Saipem new contract with Aramco.

*"The state-owned company, known as Saudi Aramco, will use a record 170 rigs by the end of 2013, according to estimates from Schlumberger Ltd. (SLB) and Halliburton Co. (HAL) That exceeds the total number forecast by the oil-service companies earlier this year"* says Wael Mahdi, Bloomberg.

Currently, the Italian drilling contractor Saipem, the leading drilling contractor in the country, have always brought considerable technologies and modern solution to enhance safety, increase efficiency and reduce costs which emphasized the Italian presence in the Kingdom. Saipem's plans are evolving to continue the contribution to realize Aramco's plans by increasing its fleet in Saudi Arabia. As a matter of fact, Saipem has just spud three 2,000 HP land rigs designed, manufactured and fully delivered by Drillmec as a major Saipem's rig supplier and partner in R&D. Drillmec has already built several rigs for Saudi Arabia that sum-up now to six packages. In addition to the design, procurement and manufacturing, Drillmec has also managed the project's expediting making the supply tailor-made according to the Aramco's requirement for the entire project's aspects. The main challenge is this project was the lead time that was set to four months a milestone for the project's success. Thanks to its experience in the field and close market follow-up, Drillmec was able to set-up an established strategy that optimized its human and material resources to meet the project's time and budget.



Drillmec rig on its first well in Dharan (KSA).

Mud system and Power System.



## Saipem rig started drilling

## Drillmec awarded at the "Africa Oil&Gas Summit 2013"



Drillmec has attended to the Africa Oil&Gas Summit in Cape Town for the first year. It was a two days exhibition that included the Southern Africa and the West Cost Africa Oil&Gas strategic conference and the Africa Oil&Gas Awards 2013 as well.

Drillmec, during the exhibition has shown all his product range to his attendance, including rigs specifically designed for CBM and shale gas

drilling which have been approved and selected by some of the world's most influential exploration companies.

The event concended with the Africa Oil&Gas Awards Ceremony, during which Drillmec's received the "Innovation of the year" award for his hydraulic rigs of the HH series.



News from Singapore about corporate organization and production. Regarding the first point, Soilmec is proud to announce the birth of Soilmec Singapore. Speaking about production, instead, the picture shows a brand new SR-100 on the Singapore factory yard.



## Soilmec at SITP exhibition

Soilmec attended SITP fair, which took place last November in Algiers (Algeria). SITP is the most important construction exhibition in Algeria, country that has been showing a stable GDP (gross domestic product) for several years. The government's economic promotion for the period 2010-2014 includes an investment of approx. 30 billion US\$ for infrastructure development projects. Further infrastructure projects involve construction and modernization of airports and harbors, reconstruction of 14,000 km roads and construction of the Trans-Sahara highway (Algiers-Lagos). Trevi Group has been present for many years in Algeria and operates through Trevi Algerie, Soilmec Algerie and a Drillmec dealer.







As an international leader in design, manufacture and distribution of equipment for the ground engineering industry, Soilmec (Trevi Group), entered into partnership with DLL China back in Oct 2010. In recognition of this partnership, Guiliano Ghiradelli, Managing Director Soilmec received the special Best Performing Country 2013 Award from DLL China. *"We wish to express our gratitude to Mr. Ghiradelli and Soilmec, for their continued co-operations with DLL,"* commented Winston Xu, Country Manager. *"We have developed a strong partnership with mutual respect, a relationship that truly reflects our successes together!"*. *"DLL has been an important partner for Soilmec,"* said Guiliano Ghiradelli. *"I accept these awards on behalf of Soilmec with much gratitude, and look forward to our continued future together."* The cooperation between the Trevi Group and DLL started in 2006 in France and Italy. In 2009, the first discussions on expansion took place resulting in agreements being signed in China, Brazil and most importantly global VPA in December 2011.

## DLL China's continued partnership with Soilmec

## 1<sup>st</sup> Drillmec HH-75 rig starts operations in Indonesia

PT Coal Gas Solutions (CGS) was established in Jakarta in 2010 to provide a range of services to the emerging Coal Bed Methane (CBM) industry in Indonesia and since then has become a subsidiary of PT Timas Suplindo, a leading EPCI contractor in Indonesia's oil & gas sector. CGS specializes in the provision of onshore drilling and construction services and the company is bringing a new approach to land drilling in Indonesia in the form of a highly mobile, modular, automated, hydraulic super single drilling rig as the Drillmec HH-75. This is the first rig of its kind in Indonesia and should pave the way for many more to follow once its benefits have been demonstrated and understood. CGS has selected the HH-75 to enable them to provide clients in Indonesia with improved overall drilling performance including speed, reliability, safety and cost efficiency, particularly in the CBM sector where the drilling of multiple shallow wells quickly and cost efficiently is a key to success. CGS is currently preparing to mobilise the HH-75 for its first project, a one year drilling program for Vico (a BP & ENI partnership) in East Kalimantan. To support CGS during the start-up period Petreven, Drillmec's sister company of Trevi Group, has entered into an agreement with CGS to provide technical support and rig supervision as required.



## Canada, Soilmec on cover twice

A Soilmec SR-100 in action in the centre of Copenhagen for the Metroringen City Project earned itself a place on the front cover of the June 2013 issue of "PIC – Piling Industry Canada" (above).

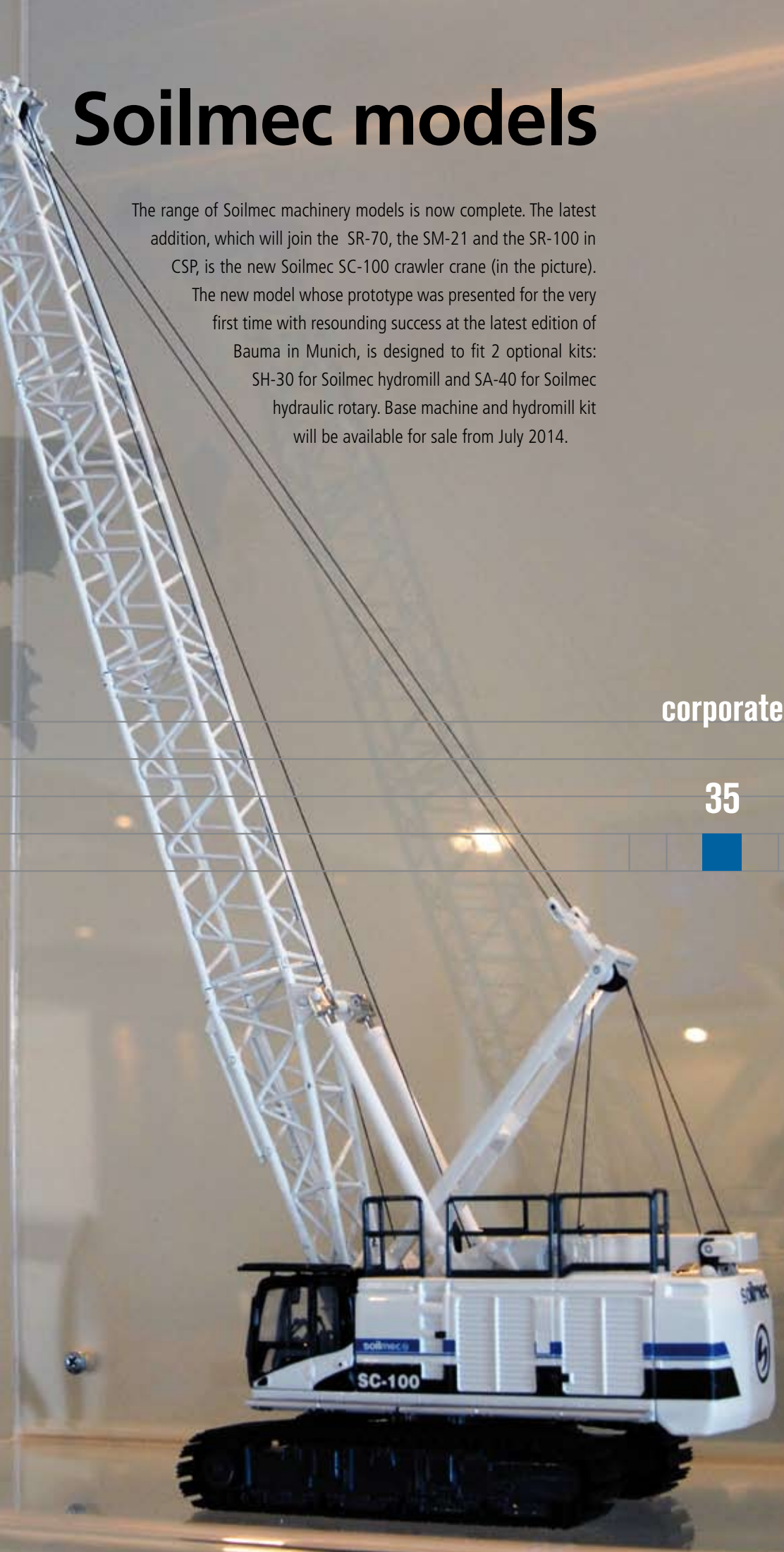


The second one, the magazine "Piling Canada" celebrated with a SR-100 on cover 15 years of presence in the country of Soilmec, in December 2013.

# Soilmec models

The range of Soilmec machinery models is now complete. The latest addition, which will join the SR-70, the SM-21 and the SR-100 in CSP, is the new Soilmec SC-100 crawler crane (in the picture).

The new model whose prototype was presented for the very first time with resounding success at the latest edition of Bauma in Munich, is designed to fit 2 optional kits: SH-30 for Soilmec hydromill and SA-40 for Soilmec hydraulic rotary. Base machine and hydromill kit will be available for sale from July 2014.



corporate

35

# Soilmec and Drillmec in action at...



Cage positioning with **Soilmec SC-100** in **Copenhagen**, Denmark



**Soilmec drilling rigs** at work near **London** Airport, UK

click on site

36



**Soilmec SR-40** at work in **Prague**, Czech Republic



**Drillmec HH-220** in "Vaca Muerta" oil fields, **Argentina**



**Drillmec H-103** and **H-105** equipment for drilling operations in Santa Cruz Nord, **Argentina**

Soilmec SR-60 drilling rig  
at work in **Cologne**,  
Germany



Soilmec SM-8G  
multifunctional drilling machine  
in a pile field in **Russia**



Soilmec ST-20 positioner for tunnel  
consolidation in action in **China**



[click on site](#)

37



Soilmec SC-120 with rotary  
RT3-ST for the new bridge  
in **Ivory Coast**



Dynamic compaction with  
Soilmec SC-120 in Damman,  
**Saudi Arabia**





# The world's leading event for the offshore industry

events

38

## OTC - Offshore Technology Conference Houston (Texas, USA)

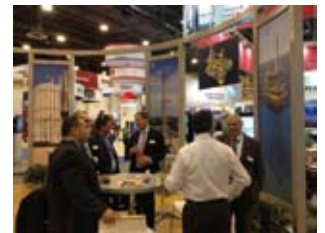
May 5-8, 2014

OTC 2014, held 5-8 May 2014 at Reliant Center Park in Houston, Texas (USA), is the offshore oil and gas industry's foremost event for the development of hydrocarbon resources in the areas of drilling, environmental protection, exploration, production development, innovation and technology.

Attendance at the last edition conference, in May 2013, reached a 30-year high of 104,800, the second highest in show history and up 17% from 2012. The 2013 sold-out exhibition was the largest in show history at 652,185 ft<sup>2</sup>, up from 641,350 ft<sup>2</sup> in 2012. The event had 2,728 companies representing 40 countries, including 244 new exhibitors.

The Offshore Technology Conference and exhibition was founded in 1969 and consistently attracts visitors and exhibitors from around the world each year. The Offshore Technology Conference's daily technical programme of presentations and the innovative breakfast and lunch sessions provide a dynamic forum for discussing the technical challenges facing the offshore oil and gas industry.

Areas of Interest for OTC 2014 are: Exploration and Production; Field Development Concepts; Floater and Mooring Systems; Geotechnical Sampling and Survey; Marine Geoscience and Geohazards; Materials Technology; Ocean Engineering Resources; Offshore Pipelines; Riser Systems; Subsea Production and Processing Systems.



In the pictures, Drillmec stand at last OTC 2013 edition.

## **CONEXPO-CON/AGG** **March 4-8, 2014** **Las Vegas (Texas, USA)**



Held every three years, the forthcoming CONEXPO-CON/AGG is set for March 4-8, 2014 at the Las Vegas Convention Center, Las Vegas, Nevada (USA). CONEXPO is recognized as a gathering place for the worldwide construction and construction materials industries, and hundreds of industry meetings, including annual conventions of industry associations, are held in conjunction with the show. CONEXPO attracts persons involved in all segments of the construction, aggregates and ready mixed concrete industries, including contractors, materials producers, and government and institutional sector officials.

## **SAMOTER** **May 8-11, 2014** **Verona (Italy)**



Samoter – in Verona, Italy, from 8<sup>th</sup> to 11<sup>th</sup> May 2014 –, is the main Italian event (supported by CECE - Committee for European Construction Equipment) dedicated to earth moving, site and construction machinery and equipment industry, and brings together the most important world producers and operators in the construction market. Samoter creates business opportunities by promoting meetings between supply and demand and encourages decisions and collaborations with institutions, category associations and companies.

## **CONCRETE SHOW** **August 27-29, 2014** **São Paulo (Brazil)**



Concrete Show is the leading exhibition and conference on concrete technology in Latin America. Concrete Show South America is an international meeting point of business and technology, exclusive for concrete supply chain and its users. The trade show will be attended by thousands of construction professionals from all over the world gathering in Sao Paulo to do business. This year Concrete Show South America promises to bring you an even larger and better show with the best and new technologies in machineries, equipments, commercial construction products, services and constructive systems from leading industry suppliers.

events

39



# Solution provider

New Soilmec hydromill reaches 150 and 250 meter deep

New HYDROMILL technology for diaphragm walls



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