



INTERMAT

**INNOVATION
AWARDS 2018**

BUILDING TOMORROW, TODAY

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Chaired by





INNOVATION
AWARDS 2018

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Edito



INTERMAT 2018, THE EDITION FOR NEW GROWTH AND TECHNOLOGICAL INNOVATION

INTERMAT Paris has over the course of its successive editions become the reference trade show for all professionals working in construction and infrastructure around the world, with the aim of displaying a comprehensive range of equipment, machinery and solutions for construction projects, public works and building.

The next edition of INTERMAT will take place in a conducive market environment. In France, the construction market is fuelled by all the projects relating to Grand Paris, the leading development project in Europe and one of the largest in the world, but also by works relating to the organisation of the 2024 Olympics, which are likely to accelerate the delivery of Grand Paris infrastructure.

Construction equipment and solutions are an essential link in the building and public works supply chain, as they enable these projects to become reality and last over time. In 2018, INTERMAT will curate and display all of these solutions.

The construction and infrastructure sector is a leading driver for the development of regions and their appeal as regards mobility, housing, energy and employment in view of the profound economic, social and environmental changes currently happening. INTERMAT seeks to play a proactive role in this fast-developing market. We have chosen to make innovation and new technology two major development levers for the 2018 show.

And this naturally includes the INTERMAT INNOVATION AWARDS competition, a star attraction, paying tribute to the most innovative equipment presented by the show's exhibitors. Without wishing to reveal the results, the 2018 vintage holds considerable potential, with a large number of entries and the technologies that will meet the sector's new challenges in the field of safety and the environment, for example. New in 2018, the competition is divided into the exhibition's four hubs of expertise (Earthmoving & Demolition, Roads, Minerals & Foundations, Lifting, Handling & Transportation and Building & Concrete Sector) and also includes a "World of Concrete" award and four special awards: "Digital Transition", "Energy Transition", "Safety" and finally "Start-up".

Indeed, INTERMAT 2018 will shine a spotlight on young firms working in the construction sector. The Start-up Village by Eurovia will offer professionals a chance to discover innovation in, for example, equipment sharing platforms, site supervision and 3D plan drawing and modelling, but also an exoskeleton and connected concrete!

Make a date four months from now in Paris, from 23 to 28 April 2018, to meet the show's 1,500 exhibitors and discover their new solutions, including some of them live in action!

Isabelle ALFANO
Director, INTERMAT

Edito



EQUIPMENT, A KEY FACTOR FOR CONSTRUCTION PROJECT COMPETITIVENESS

More than ever before, work site machinery lies at the heart of construction processes. The globally acclaimed know-how of French Public Works contractors owes much to it. Our partners, manufacturers and suppliers of equipment and solutions, play an essential role in providing us with the most effective equipment. Since its very first edition, FNTF has supported INTERMAT which is a leading international showcase.

In many areas, ranging from continuous performance improvement to better energy efficiency or compliance with new legal standards, equipment constantly faces new challenges. Through their use in a wide range of environments, equipment and machines are constantly adapting to provide the best possible personal safety, use natural resources, materials and energy sparingly, and make construction projects more acceptable to stakeholders. Throughout the construction cycle, equipment and systems have entered a new dimension relating to digital technology, which is now part of our companies' everyday lives.

Construction equipment and machinery users and the FNTF liaise on a regular and permanent basis with equipment manufacturers. This continuous exchange nourishes their upstream innovation policy. Machinery constructors work unceasingly to produce increasingly effective tools, at the cutting edge of innovation. Following a long spell which saw the machinery fleet declining, the effects of the extension of the Macron Act have enabled the French industry to catch up and reconstitute the fleet, at a time when an upturn is beginning to be felt in the Public Works sector.

Among the projects generating new demand for machines, Grand Paris plays a preponderant role. Furthermore, with the growing concentration of populations in cities, we can expect to see demand shifting towards machines which are more compact and versatile, and fitted with a wide range of attachments. The nature of urban construction work, the growing concern for active and passive safety, will lead to the use of electronic technology offering even higher consideration to operator needs.

These 2018 Awards have reaped a productive harvest, with products that are more efficient, more user-friendly, safer and less polluting. We are also witnessing the emergence of new innovation streams relating to digital tech, such as data capitalisation and management of worksite processes.

Make a date in your diary to visit INTERMAT 2018, so that you can discover these new products unveiled before your eyes by machinery and equipment manufacturers!

Bruno CAVAGNÉ
Chairman, FNTF

A black and white photograph of heavy construction machinery, possibly a crane or excavator, is visible in the top left corner of the page.

Trends report

INTERNATIONAL INNOVATION AT INTERMAT 2018

INTERMAT has always been a venue for the display of innovation in the field of equipment, machinery and processes used in construction and materials production.

Edition after edition, INTERMAT has unfailingly succeeded in highlighting this inventiveness, acknowledging the most outstanding initiatives through its INTERMAT Innovation Awards.

This year, an international judging panel of 13 experts studied the 90 entries submitted by INTERMAT 2018's exhibitors, to select 37 nominated products and designate 13 prize winners.

In the same way as INTERMAT 2018, the 2018 INTERMAT Innovation Awards:

- offer proof of the global construction equipment range,
- illustrate the variety of sectors in which equipment and machinery play an essential role in production,
- support the enhancement of the exhibition's offering, with a specific focus on the concrete sector,
- highlight the major developments that capital construction goods are seeing today and will see in the near future,
- reflect an environment marked by contractors' concerns for productivity, the environment, worker health and personal safety.

AN INTERNATIONAL AND MULTIDISCIPLINARY PANEL

The make-up of the 2018 INTERMAT Innovation Awards 2018 judging panel mirrors the diversity of the INTERMAT visitor audience.

This panel, headed by the chairman of the French public works association FNTP, welcomed 6 French judges and 7 international judges from Belgium, Italy, the Netherlands, Norway, Spain and the United Kingdom.

These experts represented the industries that use the construction machinery user industries exhibited at INTERMAT 2018: public works, civil engineering, roads, buildings, rental, and the concrete sector.



A MULTI-SECTOR CATEGORY LIST

For its 2018 edition, INTERMAT opted to make its awards in new categories corresponding with the new organisation of the exhibition into four hubs of expertise: “Earthmoving & Demolition”, “Roads, Materials & Foundations”, Lifting, Handling & Transportation” and finally “Buildings & Concrete Sector”.

In addition to these categories, three Special Awards reinforce the focus offered by the show on current construction trends: “Digital Transition”, “Energy Transition”, and the creativity and vitality of “Start-Ups”.

These special awards are joined by another which pays tribute to the best innovation in the concrete sector, exhibited at the second edition of World of Concrete Europe, co-located with INTERMAT 2018.

Finally, as a nod to the increasing attentiveness of the profession to this particular issue, the judges this year decided to create and designate a special “Safety” award.

AN INTERNATIONAL RANGE

The wealth of the 2018 INTERMAT Innovation Awards offers proof of the variety and quality of the entries submitted for the judges’ attention. The 37 nominated applications came from manufacturers and suppliers from 16 countries, predominantly European, but also from the USA, Japan and New Zealand.

2018 INTERMAT INNOVATION AWARDS: THE TRENDS


Among this abundance, the judges noted a great many entries proposing solutions connected with energy saving and/or the use of low polluting energy sources.

Another noteworthy factor is the high number of IT apps presented. Some of these are a “digital layer” added to equipment, while others are dedicated to fleet management and to customer-provider interaction.

The panel also identified irreversible trends such as the digitalisation of construction and construction resources, which could be seen in the range of applications, but also the development of BIM, explicitly mentioned in several entries. With, in addition to this logic, the automation and even robotization of certain activities. These major trends thus represent a taster of what awaits in the 2021 INTERMAT Innovation Awards...

HEADLINE PRODUCTS


- No fuel-driven engine and no hydraulics either. Equipment manufacturers are increasingly offering equipment powered by electricity, but **VOLVO CE** has gone one step further. The EX2 is a compact excavator powered by two lithium ion batteries which provide energy for eight hours of operation. It carries out its movements using electromechanical linear actuators. The average power consumed by the EX2 does not exceed 3.5 kW, and its idling consumption, in particular, is insignificant. Energy is recovered from the deceleration of the rotation of the superstructure and the lowering of the arm. The manufacturer advertises



lower maintenance costs and ten times lower noise levels. It is considering developing several versions of the machine: all-electric, hybrid power and a version with fuel cell and batteries. The architecture of this prototype also opens up the possibility for remote operation using a mobile device.

- **DMIC's** UBIWAN® SMART telemetry solution uses a self-powered terminal, Ubispot® 3, on machinery which does not have its own intermittent or permanent power source. This connected application for the monitoring of construction equipment is available in PC, tablet and smartphone versions. It provides real-time data of the location, operating time and availability of the machines fitted with the terminal. The manufacturer gives the example of mobile equipment, earthmoving machines, booms, etc. but also reels or welding stations. The application manages user rights, and issues alerts if the equipment is used outside the designated zone or authorised hours.
- Concerns for the environment have pushed operators to increasingly recycle road surfacing asphalt. Another aim, to protect workers on site, is to reduce asphalt vapour emissions, in particular by lowering the temperature at which it is laid. **FAYAT's** TRX is a mobile asphalt plant which meets these two criteria. From asphalt recycled at 0% or 100%, it is capable of producing 150 to 430 t/h of either hot or warm mix. This continuous plant has an electronically-operated burner with pneumatically-assisted fuel spraying and a frequency converter-powered turbine, two systems designed to improve energy efficiency. Drying gases are reincorporated in the process. The power generators offer three operating modes, according to whether the plant is in production phase, preparation phase or switched off, thus producing even higher energy savings.
- It may be a young company, but **RB3D** has already racked up solid experience in the production of cobots (collaborative robots), in industrial and military environments. On the request of a major road building contractor, and working closely with them, **RB3D** designed Exo Push, an exoskeleton for use by asphalt rakers working on road projects. The Exo Push is made of three components: a handle which detects the intention of the operator, an electrical linear actuator which amplifies their force, and a supporting leg which avoids counter stress on the user's body. The raker's strength is multiplied by five and their posture is more upright, eliminating any spine problems. As the device makes tasks less tiring, it enables work to be carried out all day, thus improving site productivity and work quality.
- Mobile aerial work platforms have become an essential item of equipment for the construction and maintenance of buildings and infrastructure. They can be used both outdoors and indoors. This is the case with the Lightlift 33.17 Performance IIS, produced by **HINOWA S.p.A.** This tracked machine can be powered either by 76 V 150 Ah lithium ion batteries or by a Kubota diesel engine. Despite its working height of up to 32.5 m and a 16.5 m outreach, with a 230 kg load bearing capacity, it remains very compact and its height when retracted, under 2 m, enables it to pass under standard doorways. The jib of the machine can be moved by $\pm 90^\circ$ and the basket can rotate by the same margins. This AWP is fitted with a variable stability system, both narrow and wide. The manufacturer has fitted its machine with a tilt control system which makes it slow down when it approaches a dangerous position. It can also work at a negative angle.

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- Telehandlers today offer increasingly impressive performances in terms of height, outreach and load capabilities. Their stability during operation has therefore become an absolute necessity. **MANITOU** has fitted its two rotating models, the MRT 2470 and the MRT 3050, with a new stability measurement system. This uses pin-mounted strain gauges, which accurately measure the deformation of the braces caused by the ground resistance to the force of the jacks. This continuous measurement automatically adjusts the machine's load bearing capabilities according to the ground's reaction to each stabiliser.
 - Installing and removing slab formwork panels may require heavy load handling at-height. **ALPHI** has designed the MAXUPDOWN, a tool to handle the brand's Maxidalle formwork panels from the ground. Its telescopic mast fitted with a panel hooking system can operate at heights of up to 5.60 m. It is easy to work with two buttons, one to install the panel on the prop heads and the other for removal. It does not need any external energy source, as bottled compressed air is used; this results in operating time in excess of a day. In addition to making work less tiring, the MaxUpDown, which breaks down into parts which can be carried by hand, generates productivity increases of up to 25% according to the manufacturer's estimations.
 - How can the memory of a concrete structure be kept throughout its life and operation? By building the memory into the structure itself. **360SMARTCONNECT** fits RFID devices into parts of the structure; these devices then automatically interact with smartphones through NFC technology, connecting them with the builder's service platform in the cloud without the need for a specific application. The manufacturer points to use cases in prefabricated concrete elements or in buildings where concrete is poured on site, for example in concrete toppings. Uses can range from maintenance recommendations to operations related to BIM. The manufacturer claims that these devices can last for 200 years.
 - Using 3D printing to make buildings has opened up the opportunity to make concrete structures on site or in a prefabrication plant: a shift towards automation, closely connected with the use of digital in the construction industry. Among the advertised benefits: faster building, lower risks and less material wastage. **SIKA FRANCE** offers a solution based on its expertise in concrete admixtures. The 3D printing process, using a robot which controls an extrusion nozzle – an approach which could be twinned with BIM – requires a material with the appropriate properties. Sika's "ink" is a cement that sets on extrusion, applied in successive layers. The manufacturer says that its material can produce regular and high-quality walls.
 - Equipment manufacturers are beginning to offer fully electric machines. On its e12 hydraulic excavator, **MECALAC** capitalises on the characteristic structure of its vehicles by fitting batteries in the rear half chassis. These batteries measure 1m³ in volume and weigh 1,650kg, and are placed in what would be the engine compartment on traditional Mecalac machines. And just like the engine, they act as a counterweight. The manufacturer has chosen a LiFePO₄ (Lithium Iron Phosphate) solution supplying 650 V for its batteries offering a power capacity of 146 kWh with two engines. The first drives the transmission with an automatic gearbox, and the second operates a hydraulic pump to rotate the superstructure and move the chassis and the equipment. During deceleration phases, the machine's kinetic energy is recovered to charge the batteries. The operating time between charges is 8 hours. The battery life span is advertised at 3,000 cycles, the equivalent of the machine's lifespan. This durability is due to the LiFePO₄ formula, which are less polluting than lithium ion batteries and offer lower fire risks.

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- Renting machines with a driver is a service which enables contractors to foresee additional resources for their projects. The MATOS-CONNECT solution by the start-up **MATOS** is a collaborative trade tool. Through a SaaS (software as a service) platform, it manages sales, admin, finance, equipment and operator allocation for specialist rental firms. It manages customer orders, automatically generates rental contracts, work sheets, etc. Finally, it coordinates the assignments of operators on their smartphones and can send them documents.
 - Voice commands can provide an alternative to manual commands, in “hands free” mode, or replace them all together. Under the product name Evas, **EFA FRANCE** offers an embedded voice command system which communicates, via a CAN bus, with all its fitted equipment. It can handle several voices and several languages, and offers pre-recorded voice orders, but can also be fully customised using dictionaries, by entering new words or by voice learning. **EFA FRANCE** gives a selection of voice orders: start/stop, working headlights, take the strain, etc; or the activation of working modes. Finally, it is possible to obtain information from the machine on its operation: fuel levels, battery charge, etc.
 - Table saws are one of the most dangerous pieces of equipment on building sites. HANDSAFE by **SIMA**, is a circular saw for wood, fitted with a system that recognises skin and distinguishes inert materials. When the operator’s hand touches the blade, it is immediately spotted by the ISS (Instant Stop Sensor). This activates the brake which stops the blade in a tenth of a second. The machine is not affected by this emergency stop and it merely requires resetting to continue work.



The competition

INTERMAT Innovation Awards: a springboard for worldwide innovation in the sector.

A true global showcase for innovation, the INTERMAT Innovation Awards pay tribute to equipment, technology, services, products or solutions which contribute to progress in the construction and infrastructure sector.

This seventh edition of the international INTERMAT Innovation Awards competition received substantial interest from entrants, with a total of 90 applications submitted.

The competition is exclusively open to exhibitors registered for INTERMAT and World of Concrete Europe. Products compete in one of the following four categories:

1 - Earthmoving & Demolition

- Equipment and Machinery
- Components and Accessories

2 - Roads, Minerals & Foundations

- Equipment and Machinery
- Components and Accessories

3 - Lifting, Handling & Transportation

- Equipment and Machinery
- Components and Accessories


4 - Buildings & Concrete Sector

- Equipment and Machinery
- Components and Accessories

Five Special Awards are also made across all categories:

- Digital Transition Award
- Energy Transition Award
- Start-Up Award by Eurovia
- World of Concrete Europe Award
- Safety Award

Thirteen prize winners will therefore be designated.



In addition to being innovative in nature or offering an original feature, the selected products must demonstrate significant progress in the technical design and technologies used, or propose advances in terms of cost-efficiency, operation or consideration for the environment. They must also fully comply with the European and French legislation and standards currently in force.

NEW IN 2018

- A judging panel with new members, bringing together “user” experts from European construction contractors and representatives of the sector’s European federations.
- New category names, aligned with the new exhibition sectors and its four hubs of expertise.
- Five special awards to recompense the initiatives of companies in the sector offering a specific innovation.

THE JUDGING PANEL AND JUDGING PROCESS

Under the chairmanship of the French national public works federation FNTF, the entries are examined by a panel of professionals during three working meetings. At these sessions, the panel selects the entries that are accepted as valid, shares out the entries between panel members according to their respective fields of expertise, holds discussions and designates the winners of the eight Awards and the five Special Awards.

The judging panel reserves the right not to award a prize in a category if it considers that it does not offer any innovative products and, on the contrary, can decide to make an additional special award to a product which displays a noteworthy specificity, in particular in worksite accident prevention.

RESULTS AND AWARDS CEREMONY

The official announcement of the results and the award ceremony of the INTERMAT Innovation Awards take place three months before the trade show, at the Pre-INTERMAT gala dinner on 18 January 2015 at the Maison de la Mutualité, Paris, in front of more than 300 industry professionals.

The judges

Chairman of the Judging Panel: Bruno CAVAGNÉ - FNTF

Judges:

Pascal BEECKMANS - BESIX

Pierre BOELS - ERA, BOELS RENTAL

Koen COPPENHOLLE - CEMBUREAU

Ricardo CORTÉS SANCHEZ - SEOPAN

Peter CROSLAND - CECA

Vincente FLUTEAUX - SOCIÉTÉ DU GRAND PARIS

Bernard HERITIER - RGRA

Thierry LAHUPPE - LOXAM

Pascal LEMOINE - FNTF

Massimiliano RUGGERI - IMAMOTER, CNR

Vincent SIMON - UMGO-FFB

Didier THEVENARD - EUROVIA

Kjetil TONNING - FIEC, VEIDEKKE



Bruno CAVAGNÉ (FRANCE)

FNTF (Fédération Nationale des Travaux Publics) - Chairman

Bruno Cavagné, 54 years of age, heads the Toulouse-based group GIESPER, working in civil engineering, pipework, public utility works, structural works, painting, hospitality and promotion. Its companies are established in the south of France.

Before becoming chairman of the FNTF, Bruno Cavagné, a man keen on exchange and encounters, had already become deeply involved in the business world: firstly in Toulouse at the regional public works federation FRTP (chairman from 2008 to June 2013) and the city's chamber of commerce and industry (chairman of the public procurement committee from 1997 to 2009); board member at Canalisateurs de France (utility network builders) then at FNTF and Syndicat de France.

Bruno Cavagné is a member of the MEDEF executive board, a CESE councillor on economic issues and industrial relations, a member of the boards of directors of BTP Banque, SMAvie BTP, CNETP and Vice President of SGAM btp, Vice President of the Infrastructure Advisory Council (Conseil d'orientation des infrastructures).

He is a Knight of the French National Order of Merit.

He became chairman of the FNTF on 18 September 2013 and was re-elected for a second term of office on 31 May 2017.



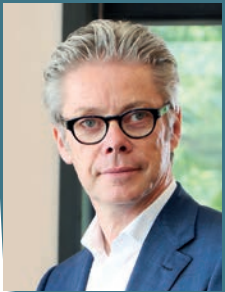
Pascal BEECKMANS (BELGIUM)

BESIX - Procurement and Logistics Director

A graduate in civil engineering from Louvain University, Pascal Beeckmans commenced his career in the non-ferrous metal sector before quickly shifting his focus to industrial facilities projects as project manager, international business director and then project director in the Hamon group (cooling towers).

He then became vice president procurement and logistics in the CMI group (recovery boilers and furnaces for steelworks) and finally director for procurement and logistics in the construction sector at BESIX. In each of the functions and companies, the technical aspects and innovations constitute ways of standing out in an increasingly complex competitive landscape.

In particular, Pascal Beeckmans is one of the ambassadors of the innovation campaign "Unleash", launched in 2016 by the BESIX group. It has already enabled employees to put forward several hundred innovation projects, which were shortlisted, the first of which are now in execution phase. The BESIX Group is a multidisciplinary company with a leading position in its markets: construction, property development and concessions. BESIX Contracting specialises in construction, infrastructure and marine works, often in contracts with a high level of complexity.



Pierre BOELS (NETHERLANDS)

ERA (European Rental Association) - President BOELS RENTAL - Director

Boels Rental was established in 1977. Pierre Boels, CEO & Owner of Boels Rental started in the family business in 1980.

In their 40 years of existence Boels Rental has grown from a regional Rental company to one of Europe's leading Rental companies.

Boels Rental has branches in 15 countries with a workforce of 3,000 employees.



Koen COPPENHOLLE (BELGIUM)

CEMBUREAU (European Cement Association) - CEO

Before joining CEMBUREAU, Koen was Head of European Affairs for ArcelorMittal (2007-2012) and Senior Counsel European Affairs for General Electric (2000-2007).

Koen was Senior Counsel with the law firm Linklaters (1995-2000) and legal clerk for the Dutch Judge in the European Court of Justice (1992-1995). He started his career as research and teaching assistant European law at the University of Leuven.



Ricardo CORTÉS SANCHEZ (SPAIN)

SEOPAN (Asociación de Empresas Constructoras y Concesionarias de Infraestructuras) - Technical Director

Senior Industrial Engineer at Escuela Técnica Superior de Ingenieros Industriales at Madrid Polytechnic University.

He has spent more than thirty years working as Public Works Equipment Director, and over the past few years as Construction Director for the largest companies in the Spanish construction industry, working at home and abroad (South America, Middle East, Jamaica, etc.).

Since 2004, he is the Technical Director of SEOPAN, the Association of Building contractors and Infrastructure operators, a trade association bringing together the largest Spanish firms in the sector, representing cumulative turnover of nearly 80 billion euros.

In October 2004 he became co-founder, Secretary General and representative of SEOPAN to the Spanish Technology Platform for construction, established in order to:

- Promote, facilitate and drive the R&D&I activity among the sector's companies and in particular in SMEs,
- Create a network of contacts to enable the promotion of innovation, R&D&I,
- Exchange information on R&D&I.
- Support interaction in the area of innovation in the sector.

He represents SEOPAN before FIEC (European Construction Industry Federation) and AENOR (Spanish Standards Association).

He was a member of the INTERMAT Innovation Awards judging panel in 2006, 2012, 2015 and now 2018.

He also chairs the judging panel for the SMOPYC innovation awards (Spanish Construction and Public Works Machinery Exhibition).



Peter CROSLAND (UNITED KINGDOM)

CECA (Civil Engineering Contractors Association) - National Civil Engineering Director

BEng (Hons), CEng, C.WEM, MICE, MCIWEM.

Peter is a Chartered Civil Engineer and a Chartered Water & Environmental Manager with over 30 years experience of working on a range of projects both in the UK and Internationally, working in Denmark, Greece and Bosnia.

He has advised on multi-disciplinary projects including education, infrastructure, buildings (commercial and housing), sewerage, water treatment and water supply and the investigation and remediation of brownfield sites. Peter has worked for a number of major public and private sector organisations at Divisional, Regional and Strategic Director level.

Peter is now the National Civil Engineering Director for the Civil Engineering Contractors Association (CECA) and advises on health, safety, environmental, water, technical, contractual and commercial issues.

Peter has been involved in 'Best Practice' initiatives for over 15 years and has judged regionally and nationally for the Construction Industry Council, CECA and Constructing Excellence. He is currently Chairman of the HSE Tackling Ill Health Working Group and Vice Chair of the Institution of Civil Engineers Health & Safety Expert Panel.



Vincente FLUTEAUX (FRANCE)

SOCIÉTÉ DU GRAND PARIS - Sector project manager

An academic background in geology and geotechnical engineering at Paris VI and Conservatoire des Arts et Métiers.

Infrastructure engineer at RATP, seconded to Société du Grand Paris in 2011, as technical consultant on the Grand Paris Express network.

Recently appointed sector project manager on civil engineering contract T3A from Ile Monsieur to Fort d'Issy Vanves-Clamart (excluded).



Bernard HERITIER (FRANCE)

RGRA (Roads and Planning Journal) - President

Education:

École Centrale Paris Engineering School (1973).

Career:

1994 - 2015 :

EIFFAGE Group – Technical Director, Eiffage Travaux Publics (2005 – 2015).

EXCOM Member – Technical Director at Appia, road building branch (1994 – 2004)

Contributed to many projects for roads, motorways and airports (new build, maintenance), civil engineering and railways (HSL).

Development of applied research, innovation (materials, roads, civil engineering, engineering structures). Implementation of many partnerships (engineering schools, universities, technical centres).

Leadership of the group's technical and scientific network

Involvement in trade associations (USIRF, FNTP, Qualiroute, AFGC...)

1977 – 1994:

CEBTP (Paris – Saint Rémy les Chevreuse).

Director (1988) – Technical Director (1986) – Head of Department (1983)

Study and research engineer in soils, roads, materials.

Design and engineering:

Foundations and deep foundations for earthworks, roads.

Projects in France and abroad (Middle East, Asia and Africa), export support to firms.

Research and development (soil mechanics, materials, roads, NDT). Design of innovative processes and equipment.

1974 – 1977: Algeria (Civilian service, Ministry of Public Works).

Road and motorway projects, road and airport maintenance.

Research and innovation:

Participation in research projects in the profession (Roads and civil engineering).

Organisation and supervision of national research agency projects (ANR expert) and national projects (IREX).

Development of processes (measurement and equipment).

Participation in innovation judging panels (FNTP Awards, Innovation Eiffage, Le Moniteur...).

Associations:

Participation in industry life (USIRF – road building contractors' union), FNTP, other trade associations (IDRRIM, CFTR, Laboroute, Qualiroute).

Board member of FNTP, USIRF, and RGRA.

Lecturing and teaching:

ECP, CNAM, Ponts Formation, CHEC...).

Member of scientific advisory boards (Mines Douai, SETRA....).

Technical publications and contributions to collective works.



Thierry LAHUPPE (FRANCE)

LOXAM France - Equipment director

With a background in engineering, from nuclear maintenance to construction, I have spent my entire career in jobs where technical components or innovation make all the difference. I have been in charge of Equipment departments for twelve years, and my participation as a member of the Innovation Awards judging panel is an opportunity to exchange and encourage initiatives in this field.



Pascal LEMOINE (FRANCE)

FNTF (Fédération Nationale des Travaux Publics) - Technical and Research Director

The holder of an Engineering degree from the French Arts et Métiers academy, Pascal Lemoine is responsible for engineering, equipment and collective research in the Technical and Innovation Committee at FNTF. He is the director of IREX (institute for applied research and experimentation in civil engineering).

He regards the promotion of innovation and research as vital to the competitiveness of businesses both at home and abroad.

For several years, working with various stakeholders – construction companies in particular – he has helped to draw together the expectations of its members in the important fields of processes, equipment and their use. He is highly involved in actions relating to the digital transition of the public works profession.

He has been a member of the INTERMAT judging panel for several editions and considers it a genuine opportunity to detect market developments and future trends.



Massimiliano RUGGERI (ITALY)

IMAMOTER CNR (Consiglio Nazionale delle Ricerche) - Technical Director, project manager

My course of study includes an MSC in Electronic Engineering, and a PhD in Management Engineering; I had an experience in Industry as electronic system designer for automotive systems and engine control systems, where I gained my experience on power management.

My job in CNR, started in 2001, my research interests are related to electronic system control of heavy duty machines, both for transmissions and for components hydraulic systems and for electro-mechanical systems and electric motors.

I also am involved in studies related to autonomous machines and in machine cluster control and, in general on distributed control systems.

I also hold the Microprocessor Systems and Computer System Design courses at the Electronic Engineering faculty of Ferrara University in Italy.

I'm glad to participate in Interimat as a judge for the Innovation Awards and I hope to contribute to choose the most promising technologies and solutions for a better world.



Vincent SIMON (FRANCE)

UMGO-FFB (Union de la Maçonnerie et du Gros-Oeuvre - Fédération Française du Bâtiment) - Deputy Secretary General

As structural engineer, director and secretary general of a trade organisation for the Building trade, I have developed my career around three passions: construction, event management and politics.

Negotiating, explaining producing, budgeting, writing, publishing, communicating, facilitating dialogue, organising meetings between all players in construction, being attentive to contractors and planning for the future: all of this is my daily bread.



Didier THEVENARD (FRANCE)

EUROVIA - Equipment Director

Leader of the FNTP Equipment Section and Chairman of the USIRF Equipment committee.

Through his professional responsibilities and his different elected roles, Didier Thévenard is in permanent contact with all of the worldwide manufacturers of public works machinery. He is particularly interested in all innovations which can improve equipment in technical terms and in the areas of accident prevention, energy efficiency and digitalisation. He considers that acquiring data from production sites and machines and their operation constitutes a genuine source of opportunities for the profession.



Kjetil TONNING (NORWAY)

FIEC (European Construction Industry Federation) - Vice President
VEIDEKKE ENTREPRENØR AS - Area Manager Heavy Construction
CONFEDERATION OF NORWEGIAN ENTERPRISE (NHO) - Board member
THE NORDIC ROAD ASSOCIATION (NVF) - Board member

Civil & Structural Engineer (M.Sc.) Business Economist (BBA).

More than 30 years of professional experience in leading positions in national and international construction companies and consulting engineer firms, as well as in the Norwegian army and public administration.

Currently Area Manager with Veidekke Entreprenør AS, Norway's largest construction company (6,400 operatives, 224 apprentices, 100 trainees).

Numerous honorary chairmanships and responsibilities in the Boards of regional, national and European companies and professional associations of contractors and consulting engineers.



THE WINNERS



INNOVATION
AWARDS 2018



The winners

EARTHMOVING & DEMOLITION

- Equipment & Machinery Award: **VOLVO CE** - EX2
- Components & Accessories Award: **DMIC** - UBIWAN®SMART

ROADS, MINERALS & FOUNDATIONS

- Equipment & Machinery Award: **FAYAT** - TRX
- Components & Accessories Award: **RB3D** - EXO PUSH

LIFTING, HANDLING & TRANSPORTATION

- Equipment & Machinery Award: **HINOWA S.p.A.**
Tracked aerial platform Lightlift 33.17
Performance IIIS
- Components & Accessories Award: **MANITOU GROUP**
Machine stabilization recognition system

BUILDINGS & CONCRETE SECTOR

- Equipment & Machinery Award: **ALPHI** - MaxUpDown
- Components & Accessories Award: **360SMARTCONNECT** - Connected Concrete

SPECIAL AWARDS

- Digital Transition Award **EFA FRANCE** - EVAS
- Energy Transition Award **MECALAC** - Mecalac e12
- Start-Up Award by Eurovia **MATOS** - Matos-Connect
- World of Concrete Europe Award **SIKA FRANCE** - Concrete 3D printing
- Safety Award **SIMA** - HandSafe wood cutting saw

EARTHMOVING & DEMOLITION

Equipment & Machinery Award



VOLVO CE EX2

PRESS CONTACT

VOLVO CONSTRUCTION EQUIPMENT

Charlie EBERS

Phone: +44 2079235864

charlie.ebers@se10.com

Stand Ext6 F 056+6 A 076+6 A 042

DESCRIPTION

The EX2 is a fully electric compact excavator prototype that delivers zero emissions, 10 times higher efficiency, 10 times lower noise levels and reduced total cost of ownership compared to its conventional counterparts. It is believed to be the world's first fully electric compact excavator prototype.

OPERATING PRINCIPLE

To make the EX2 prototype fully electric, the combustion engine has been replaced with two lithium ion batteries, totaling 38 KWh, which store enough electric energy to operate the machine for eight hours in an intense application, such as digging compact ground.

TECHNICAL DESIGN

- ▶ The hydraulic architecture has been replaced with electric architecture which incorporates electromechanical linear actuators that help to optimize the transmission chain. Removing the hydraulic system and the combustion engine, as well as reducing the cooling needs, has led to significantly lower noise levels.
- ▶ Decoupling the subsystems, as well as using highly efficient actuators and power sources, increases total machine efficiency and controllability.

ECONOMY

With 10 times higher efficiency than its conventional counterparts, average power consumption is comparable to that of a large iron (3.5 kW). This means that operating costs and total cost of ownership are significantly reduced.

Unlike a conventional machine, the EX2 does not need to use any power when it's in idle mode. Because this type of compact excavator usually spends approximately 40% of its time in idle mode on a job site, this improvement will significantly reduce operating costs.

With no engine or hydraulics, maintenance requirements are reduced, resulting in a lower total cost of ownership.

The cost of electricity is cheaper than the cost of diesel so fueling a fully electric machine will reduce operating costs.

OPERATION

- ▶ The EX2 has 10 times lower noise levels than a conventional machine – making it suitable for use in densely populated areas, even at night. Reduced noise levels decrease operator stress and fatigue.
- ▶ Thanks to embedded sensors, the position of the actuators is always known so there is the opportunity to incorporate operator assist functions that help operators deliver higher quality outcomes, in less time and with less effort.
- ▶ The EX2 delivers the same power and force as its conventional counterparts, as well as faster speeds in combined movements. As this type of movement is the most common kind for this machine, productivity is improved.
- ▶ The EX2 can recover energy, it's a fully reversible system so energy is recovered when the boom is lowered and the cab is rotated.

USE

- ▶ To increase flexibility and allow customers to use the most convenient solution for them, the EX2 has been designed to work in four different ways. It can be fitted with two 600 V, 19 kWh lithium ion batteries, which last a minimum of four hours each (a total of eight hours) if the machine is continuously digging (trenching cycles – which are not the main operation for this type of machine – they are usually only operated for around three hours a day). Other options include one 600 V, 19 kWh lithium ion battery and a diesel range extender or one 600 V, 19 kWh lithium ion battery and a fuel cell system. Alternatively, the machine can be plugged in to the grid for its power and/or to recharge the batteries.
- ▶ To increase safety in hazardous working environments, the EX2 can be controlled remotely from a mobile phone or tablet. This is made possible by the machine being fully electrified, so there are no mechanical joysticks.

ENVIRONMENTALLY FRIENDLY

The EX2 is a zero emissions machine. Environmental impact is reduced as no particulate matter, nitrogen oxide or carbon dioxide are released.

ADDITIONAL INFORMATION

- ▶ The EX2 is a prototype machine so it does not currently have a market launch date.
- ▶ Volvo CE has several patents for the EX2 prototype machine, some are published and some are in different stages of the publication process.
- ▶ As the EX2 is a prototype machine, it does not fully comply with EU standards yet. Because the project was focusing on the hardware and software, functional safety compliance was not included in the scope. However, overall risk assessment has been done to the extent of the new electronically controlled functions according to EN60204 and ISO12100. Full machine compliance to the European Union standards and regulations is a part of the next stage in the project.

EARTHMOVING & DEMOLITION

Components & Accessories Award



DMIC

UBIWAN®SMART

Connected management solution
for construction machinery and equipment

Stand 5b FG 023

PRESS CONTACT

DMIC

David BABIN

Phone: + 33 (0)5 57 77 92 30

david.babin@dmic.fr

DESCRIPTION

UBIWAN®SMART enables to reveal, real-time, location, usage and availability of each and every outdoor construction machinery and equipment. Even when the asset has no proper or continuous power supply, what was not possible so far.

This innovation is mainly based on the introduction of LoRa technology (low-range / low-energy) within the geolocation device, boosted by a secret firmware, and the development of a really smart, easy-to-use and collaborative app.

With UBIWAN®SMART: Optimize the global use of equipment on different sites - Decrease time to find it - Simplify equipment scoring and assignment - Collaborate directly and efficiently - Lower and control the resort to rental - Reduce the TCO (Total Cost of Ownership).

OPERATING PRINCIPLE

UBIWAN®SMART is a full web app, available on any device connected to Internet (PC, Tablet Computer, Smartphone...).

It enables to reveal location and activity of each and every asset equipped with UBISPOT®3 device.

UBIWAN®SMART is particularly easy to learn and use, thanks to its ergonomics and performance, especially in retrieval of data and map display.

UBIWAN®SMART also enables agents in the field to release any asset, by a simple touch on the screen.

More details:

With UBIWAN®SMART, you can see immediately on a map where your assets are. You can also find them classified by department, construction site, ID or key-word.

Each asset description sheet gives you at a glance its availability (currently used or not)

► which you can modify by a simple touch,

► use rate and last movements.

You can also modify this description sheet (Picture, Internal ID/Registration, Product Class, Department, Purchase price...) and give some use objectives which will be automatically and visually reported on the "use rate" KPI.

► You can create alerts when your asset is used outside a geographic zone or time window, too.

► You have complete latitude to manage user rights and define equipment segmentation.

► All data available in UBIWAN®SMART can be transferred in your ERP/BIM through APIs.

UBISPOT®3 device includes GNSS/GPRS/LoRa™ and a movement detector. UBISPOT®3 is inviolable and designed to resist in outdoor environments. It is self-powered for 5 years and is ready to use without installation.

TECHNICAL DESIGN

UBIWAN®SMART improves productivity: you know exactly where your outdoor assets are and what they are doing. This is possible thanks to a smart, 5 years self-powered device: UBISPOT®3.

► The integration of LoRa technology (low-range, low-power) and of a secret firmware enables us to propose a business model which did not exist so far for assets used outdoor, not self-powered and/or with a far under <5 K€ initial value.

► This ability to equip almost all assets gives a more exhaustive view of global activity, thus of equipment real output.

► Robust and tamper-proof design of UBISPOT®3 is also a first on the IoT market, considering outdoor and professional use issues.

UBIWAN®SMART levels up the global performance of your teams, thanks to a collaborative and intuitive app, accessible through any device connected to Internet.

► Data are broadened by the action of field workers,

► Site managers and foremen become more autonomous and efficient thanks to permanent access to rich data and KPI.

ECONOMY

When using UBIWAN®SMART:

- ▶ reduce time allocated to inventories and equipment search,
- ▶ automate scorings,
- ▶ control and lower the resort to rental,
- ▶ improve assets use rate,
- ▶ benefit from a genuine tool for supporting decision-making when it comes to renew the stock of assets and to price it,
- ▶ reduce the number of construction machinery and equipment,
- ▶ reduce staff turnover / Retain skilled employees,

And benefit from a 149% ROI!

(Result given for a 200 assets base - average value of 4,500€/unit).

OPERATION

UBIWAN®SMART contributes to improve significantly work quality by reducing time spent in equipment search and by automating and accelerating off-putting and repetitive tasks (such as scoring usage time, making equipment available, connecting usage time to a construction site, daily multiple phone calls etc.).

Reliability of data feedback (especially usage time, geolocation and KPI), and ability to exploit them as they are or to integrate them in your ERP (through APIs) allows to take better risk management decisions and to charge the right costs to the right construction sites.

The accurate knowledge of available assets alongside a worksite enables faster decision making in the field and to lower the resort to rental.

USE

UBIWAN®SMART improves the daily experience of your company staff, and in particular helps to:

- ▶ reduce stress related to equipment search (time spent on phone and on the field),
- ▶ reduce managerial pressure, thanks to real-time information visibility and better performance induced by the use of UBIWAN®SMART solution,
- ▶ improve confidence between the stakeholders involved in the production process (managers, employees but also customers, where relevant), thanks to movements and equipment activity tracking,
- ▶ give better valuing and pride of one's work, through decrease of boring tasks (search, scoring...) replaced by added-value contributions and actions (decision making thanks to data available in UBIWAN®SMART).

Moreover, providing digital and advanced tools to employees constitutes a real and differentiating HR loyalty-building lever.

ENVIRONMENTALLY FRIENDLY

By using UBIWAN®SMART, companies reduce their environmental footprint, many ways:

- ▶ by locating the nearest resource = Less energy expenses on asset transfers,
- ▶ by improving the use rate of your current equipment = Less additional equipment consumption,
- ▶ by optimizing maintenance process = Less energy and materials consumption (higher environmental cost of breakdowns vs preventive maintenance) = Extended life-cycle of material assets.

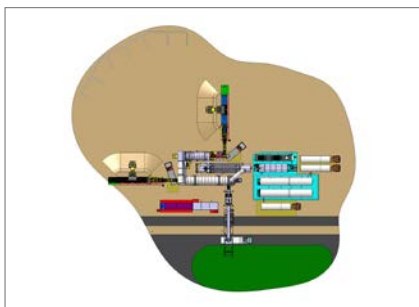
ADDITIONAL INFORMATION

UBIWAN® and UBISPOT® are registered trademarks.

Patent pending.

ROADS, MINERALS & FOUNDATIONS

Equipment & Machinery Award



FAYAT

TRX

Stand 5a C 151

PRESS CONTACT

FAYAT - MIXING PLANT DIVISION

Gian Paola PEZZI

Phone: +39 0039054488111

g.pezzi@marini.fayat.com

DESCRIPTION

Unique in the world, continuous Mobile hot mix asphalt plant capable to reuse RAP from 100 to 0% with hot and warm mix technology.

OPERATING PRINCIPLE

Continuous hot mix asphalt plant able to produce hot or warm mixes with the reincorporation of RAP from 100 to 0%. This process respects the most drastic environment requirements thanks to the system of gas reincorporation in the process. The working principle is to heat RAP by gases and/or materials with moderate temperature. This high output plant is compact, mobile, easy to move from a production site to another. This asphalt mixing plant is able to run on a range of 150 to 430 t/h.

TECHNICAL DESIGN

Improvement of recycling performances of one high capacity mobile continuous asphalt mixing plant for hot or warm mixes able to reuse up to 100% RAP.

ECONOMY

Production cost saving by reusing the maximum of RAP resource's (reclaimed asphalt pavement) available on motorways or high traffic roads.

OPERATION

This mobile asphalt plant enables to produce high quality mix asphalt with high output for medium- and large-sized job sites with the smart solution in terms of maintenance, user and environment friendly.

Energy efficiency is optimized on 2 main points: burner and electrical generator optimisation. The high efficiency main burner based on pneumatic assistance fuel atomisation is driven with electronic drive for a very accurate air /fuel ratio. Moreover, the fan is driven with inverter to optimize the fan speed and reduce the noise and energy consumption. The generator sets are managed by the software planning to optimize the generator set running hours according the plant condition.

USE

Last generation of plant with remote system placed in an ergonomic cabin with respect for safety requirements of the EN 536:2015 Standard. This plant is also really designed for the transport, the erection, the operation as well as the easy and pragmatic maintenance.

3 configurations of the general set exist.

1st one: the plant stop without preparation for production : need of light and electricity in the operator room.

2nd one: plant stop but in preparation for production: medium generator set will run to heat bitumen and pipes.

3rd one: while the plant is running the power will be delivered by the main generator.

ENVIRONMENTALLY FRIENDLY

The main objective of this plant is to enhance as much as possible the available locally road resource which is composed of RAP respecting the most drastic environment requirements. This plant will also be able to use liquid biocarburant together with gas LPG to feed the burner.

Binder storage is done by high efficiency electrical heating mobile bitumen tank. Liquid fuel oil is done in a high efficiency electrical heating mobile tank with integrated retention.

ADDITIONAL INFORMATION

The advantage of this high output mobile plant is to be erected on a medium-size platform near the jobsite that needs prepared materials. The aim is to reduce the total carbon footprint considering the transport of the raw materials (aggregates, RAP) and the transport of the final product.

ROADS, MINERALS & FOUNDATIONS

Components & Accessories Award



RB3D EXO PUSH

PRESS CONTACT

RB3D

Serge GRYGOROWICZ
Phone: +33 (0)3 86 46 92 58
serge.grygorowicz@rb3d.com

Stand Start-Up Village by Eurovia 6 B 020

DESCRIPTION

The Exo-Push is an exoskeleton that assists the efforts of the racker in the manual operations of the asphalt leveling.

As such, it is the first electric "wearbot" to penetrate the world of road construction.

Developed by RB3D and from the work on military exoskeletons for the DGA (French Army Procurement agency), the system is the result of cooperation with the teams of a great actor of road construction.

It aims to reduce the difficulty of manual operations by acting on 3 points:

- ▶ A postural recovery.
- ▶ A reduction in physical effort.
- ▶ Maintaining the user's heart rate in long working areas.

In test on different fields since mid-2017 the product begins its marketing at Intermat 2018.

OPERATING PRINCIPLE

The exoskeleton consists of 3 parts:

- ▶ A stick governs that detects the intention of the user.
- ▶ An electric linear actuator which amplifies the force detected by a coefficient of 5.
- ▶ A strut capable of stiffening in order to avoid counter-forces on the user's body.

These 3 systems are powered by a LiOn battery which gives it an autonomy of 4 to 6 hours.

System comply with European's safety rules.

TECHNICAL DESIGN

The equipment allows its user to maintain a constant high rate throughout the day thanks to the amplification of effort.

This is accomplished without additional fatigue for the user.

The equipment brings more lucidity at the end of the day for its user and thus contributes to the overall performance improvement of the site in terms of quality and safety.

ECONOMY

The energy used in the exoskeleton is 100% electrically, which greatly reduces the need for mechanical maintenance.

There is no frequency of maintenance to be expected.

The machine is equipped with a GSM chip that allows it to be maintainable and up-gradable remotely.

OPERATION

The work is of the same quality as the operations carried out by hand in terms of adjustment.

Thanks to its additional length compared to a manual rake there is less risk of foot print on asphalt before finishion.

USE

The Exo PUSH was designed with the idea of a single button machine.

This brings a great simplicity of use and a high speed of grip for the raker. Typically training in use and good practices can be achieved in an hour.

This exoskeleton prevents MSD hazards that occur after years of practice in heavy display operations.

By maintaining the user in ergonomic postures, decreasing the joint stress by 5 and decreasing the frequency of movements.

ENVIRONMENTALLY FRIENDLY

The increase in the percentage of recycled asphalt in the formulations results in greater spreading forces.

The Exo Push allows pushes up to 50 kg, multiplying the effort capacities of the operators.

There is also potential for reducing the application temperatures of the mix.

LIFTING, HANDLING & TRANSPORTATION

Equipment & Machinery Award



HINOWA S.p.A.

Tracked aerial platform Lightlift 33.17 Performance IIIS

PRESS CONTACT

HINOWA S.p.A.

Susanne LANDSTORFER

Phone: +39 0442539100

s.landstorfer@hinowa.it

Stand Ext5 J 016

DESCRIPTION

The new Hinowa Lightlift 33.17 has an operating outreach of 16,5 meters, a working height of 32.5 meters, a load capacity of 230 kg throughout the working range, multiple simultaneous movements and a new wider and more comfortable basket (160 cm vs 140 cm): With a height lower than two meters, it is possible for the machine to easily pass through any industrial and civil doorway.

New features: Concerning the rotation in restricted stabilization area it is possible to turn 360° (with limited outreach).

The machine is equipped with a variable stabilization: wide (4,200 x 4,950 mm) and narrow (3,000 x 6,000 mm).

Another new feature is the new performance jib arm that can be moved $\pm 90^\circ$ (previously 0/-90°), basket rotation is $\pm 90^\circ$ as well.

This machine is also equipped with Go Home function. This reduces the closing time and avoids errors.

But the most sensational new feature is that with this model underground working is possible!

OPERATING PRINCIPLE

The handling and the operation control of the machine are both simple and immediate. The control panel provides one button for tower boom rising, one for stabilization, one for destabilization and a joystick for the aerial movements. Operator instructions are communicated through an easy-to-read display.

Furthermore, it is possible to carry out multiple simultaneous movements.

As far as the power unit is concerned, the Lightlift 33.17 is available in two different configurations: with Kubota D902 diesel engine and electric engine or with a lithium ion battery pack 76V 150 Ah.

This latter version ensures zero emissions and high performance in terms of battery life, reduced noise level and limited environmental impact.

TECHNICAL DESIGN

The machine structure is made by a main boom and two telescopes and by a tower boom and three telescopes.

Thanks to the excellent up&over of 17 meters and the articulated/column structure formed by 3 telescopes + 2 telescopes + jib arm, with the new Lightlift 33.17 can be worked with trajectory flush against the wall, making even the most delicate operations possible.

ECONOMY

The new Lightlift 33.17 is equipped with the RAHM control and diagnostic system, which offers strong advantages in two regards.

Firstly, in terms of increased security, as it allows the machine to be located at all times thanks to an on-board GPS device. Secondly, from a maintenance perspective, since it allows the Hinowa service team to carry out diagnostic procedures, software updates and troubleshooting remotely.

OPERATION

The machine automatically shuts down after 2 hours of inactivity saving battery power.

Split of hydraulic and electrical systems to simplify the service.

Both software and safety controls are in compliance with new regulations.

Thanks to the use of high quality components and of innovative design traits, this machine is able to reach the highest levels of reliability within the industry.

USE

On the remote control is integrated a display with simplified interface that is able to provide useful information to the operator. The interface menu is Multilanguage.

Hinowa has also focused great attention on operator safety. Thanks to slope control, the platform automatically decelerates in hazardous conditions. The anti-entrapment "Sky-Guard®" system protects the operator in the basket, allowing for operation with absolute peace of mind.

The Lightlift 33.17 is a high performance and reliable product, able to respond concretely to customer's needs.

ENVIRONMENTALLY FRIENDLY

Thanks to the lithium-ion version, this new Lightlift 33.17 is able to achieve unparalleled results in terms of operational versatility, low sound emissions, environmental impact and granting also high autonomy. This system only powers the electric motor when a movement is actually being performed.

Thanks to reduced noise emissions and the total absence of exhaust fumes, in lithium version they can be used without restriction of time, even in closed spaces like malls, churches, museums, airports, or, without disturbing normal activities, even in recreational spaces like villages and cruise liners. The "clean" attributes of this technology make it an attractive option even for the production areas of food and chemical industries.

The lithium ion technology guarantees an extension of the operational capacity of the machines and constitutes true economic investment efficiency by end customers and renters. More functional, lower costs, lower consumption, more respect for the environment.

LIFTING, HANDLING & TRANSPORTATION

Components & Accessories Award



MANITOU GROUP

Machine stabilization recognition system

PRESS CONTACT

MANITOU GROUP

Thomas CHESNAY

Phone: +33 (0)2 40 09 21 88

t.chesnay@manitou-group.com

Stand 5b F 015

DESCRIPTION

The MRT 2470 and MRT 3050 use a strain gauge inside the pin of the stabilizers cylinders in order to get the information of the exerted strength on the ground. This system, innovative and patented by Manitou, allows more safety on using stabs.

OPERATING PRINCIPLE

When the machine is fitted on stabilizers, the lifting of the machine creates strength on the pin that the micrometric strain gauges will measure and send the information to the machine system, in order to know the working position and change automatically its load capacities.

several levels of efforts allows to know the applied strength on each stabilizer and in this way perform the stability and the safety on the use of the machine.

The invention had been patented by Manitou in Italy, and under verification for Europe.

TECHNICAL DESIGN

- Use of a micrometric strain gauge to measure the effort.
- Improve of the information of stabilization for more safety on jobsite. Automatize the activation of the stabs' recognition is not new on that machines' type but is improved by Manitou, thanks to this system. It allows more precision and safety.
- Decrease of number of components for better assembly.

ECONOMY

- Reduction of the components quantity and performing the supply chain system.
- No additional cost for this element.
- No service to do by the owner.

OPERATION

Better safety on job site with improve of the accuracy of the effort. The ground pressure is measured continuously according to different load values. Previously, only a ground contact measured the on/off.

USE

Better accuracy of use, less errors feedbacks and machine downtime for better total cost of ownership.

ENVIRONMENTALLY FRIENDLY

No impact on the environment.

BUILDINGS & CONCRETE SECTOR

Equipment & Machinery Award



ALPHI MaxUpDown

PRESS CONTACT

ALPHI

Jessica BESSIN

Phone: +33 (0)4 79 61 85 90

j.bessin@alphi.fr

Stand 6 E 141+6 D 134

DESCRIPTION

The MaxUpDown is a tool helping to handle the MaxiDalle panels. The system is composed by a telescopic mast system working by compressed air. It enables to lift and lower the MaxiDalle panels without effort in great height from the ground.

The companions work on one level and have no longer to handle heavy loads in height. This system thus allows to fight efficiently against painfulness and to reduce MSD while remaining in safety. The hands are never higher than the heart, thus meeting the expectations concerning health at work.

OPERATING PRINCIPLE

The MaxUpDown enables to lift and lower the formwork MaxiDalle panels without effort. The telescopic mast can be extended up to 5.60 m high, which allows a formwork and stripping at great height from the ground. Only 2 companions are sufficient for the installation of a panel in 120 cm which represents less than 15 kg per person. A value that follows ISO 11228 (ergonomics and manual handling) and ISO 11226 (working postures) as well as the SUMER survey relating to the medical supervision of workers exposed to the professional risks.

To the formwork, the system allows to lift and hook the MaxiDalle panels on the prop heads. To the stripping, a safety net receives it makes secure the descent of the panel.

TECHNICAL DESIGN

Its autonomous telescopic mast presents many specific aspects which distinguishes it from competing materials: it is removable and therefore carried by hand, element by element. Compact and lightweight, it is easy to use (two buttons for lift and lower).

It enables more than one work day of use thanks to a unique green energy source, compressed air with autonomous cylinders. Easy to use, companions don't have to make any control excepted a visual check to be sure that the tool is in good condition.

ECONOMY

The solution is more efficient than the existing conventional solutions. With an increase of productivity by 25% and a cost of energy of 0 euro (compressed air) the profitability of the product is proven.

The strength of the system is also very good by limiting the number of moving parts (no return, cable, pulley...) which reinforces its already long life.

The real increase in productivity allows the company to get a better profitability of the material, to free up the companions' work time and to assign them to other functions on the building site. In addition, the safety of the use of this material reduces the risks of accidents that every construction company must face regularly. The use of the MaxUpDown thus enables the company to act positively on two important levers for a fine running of a building site.

OPERATION

Easy to use with only 2 buttons to lift and lower the MaxiDalle panels, the MaxUpDown increases significantly productivity on sites. For example, the formwork with MaxiDalle panels of a 120 m² surface at the height of 3.90 m requires 4 companions and enables an average efficiency of 30 m²/man/day. By using the MaxUpDown, the average efficiency reaches 40 m²/man/day and requires no more than 3 companions.

The tool increases the productivity by 25%.

USE

The main benefit for the end user is safe productivity and significant reduction of MSD as well as a decrease of the associated tiredness. The user works safely from the ground without any manual handling of the load in height. This fight against painfulness allows to increase productivity considerably.

In addition, the user acquires skills on the use of a modern and easy material through a training provided by us. At each start of a construction, our teams follow and train the staff to use the MaxUpDown. Throughout the duration of the building, we carry out quality checks and we stay in direct contact with the users. This allows us to exchange and make any necessary improvements.

ENVIRONMENTALLY FRIENDLY

All system elements are separable and made in steel or aluminium. The MaxUpDown is completely recyclable.

Making the choice to use compressed-air cylinder is also a will to respect the environment by using green energy.

BUILDINGS & CONCRETE SECTOR

Components & Accessories Award



360SMARTCONNECT

Connected Concrete

PRESS CONTACT

FINAO SAS /
360SMARTCONNECT

Rolland MELET

Phone: +33 (0)6 12 41 05 21

rm@360sc.io

Stand Start-Up Village by Eurovia 6 B 020

DESCRIPTION

In the value chain associated with the life cycle of a structure, many stakeholders in the BTP ecosystem are involved.

By transforming the concrete into an interface to datas and services associated with the structure, 360SmartConnect enables each of these stakeholders to create new values for itself (process, optimization...) or for its successors in the chain.

Concrete Connected is a SIMPLE, ROBUST and INTEROPERABLE solution.

OPERATING PRINCIPLE

We integrate passive and robust RFID / NFC devices into concrete.

These devices have the ability to force a standard smartphone to connect to our service platform in the cloud that handles security and connects data and services to the physical object that integrate the device who is identified by the system.

Our mobile web interfaces then allow to interact with these datas, or other services associated to the construction.

This allows to solve the problems of traceability, transfer of ownership (Dematerialized delivery note), maintenance (backlog with time stamp) coordination on construction site, connected signage...

WITHOUT ANY MOBILE APPLICATION directly from the site.

TECHNICAL DESIGN

The connected concrete allows:

- ▶ Make possible the implementation of processes and their follow-up in an ecosystem as open as the BTP once.
- ▶ Streamline and increase reporting reliability.
- ▶ Accelerates the flow of information to information systems.
- ▶ The creation of a new value-added service in connection with the construction.

ECONOMY

Connected concrete allows to generate value throughout the life cycle of concrete production / prefabricated product / work / recycling by integrating in the core of its material its identification, its qualities and certifications, its production status, without any third party system. All actors in the ecosystem will be able to easily interact with, disseminate services and collect information.

OPERATION

The system is robust, interoperable and lasts 200 years.

Does not require a dedicated terminal to interact (a simple smartphone is enough).

Neither does it consume energy, nor does it emit waves.

USE

Once the operator understands the operation... it's a child's play.

ENVIRONMENTALLY FRIENDLY

Neither does it consume energy, nor does it emit waves.

DIGITAL TRANSITION AWARD



EFA FRANCE EVAS

Stand 5a H 017

PRESS CONTACT

EFA FRANCE

Romain BECHU

Phone: +33 (0)2 47 61 78 50

r.bechu@efa-france.com

DESCRIPTION

EVAS is the first embedded voice control system with integrated database communicating in CAN BUS interface. It is multi-speakers, multi-languages, and works off-line.

The system recognizes the order configured by the operator and translates it by sending a CAN frame on the network. EVAS allows you to control the vehicles functions, to activate combinations of functions, or to ask for information by voice, while leaving the operator focused on its main mission.

Pre-recorded voice commands are offered during system setup, but it is also possible to record your own commands. It is therefore a 100% customizable system, it can register up to 1,000 orders. Its configuration is simple and intuitive.

Therefore, EVAS will bring you safety, productivity and comfort. In addition, its IK08 impact resistance and IP67 protection allow it to adapt to all the most severe environments.

OPERATING PRINCIPLE

Reacting to an audio signal delivered by a technically and ergonomically dimensioned microphone, in harmony with the equipped system and its environment, EVAS decomposes the phonemes which constitute the orders given by the operator.

Then an algorithm compares this phoneme sequence with a list of orders to be recognized previously configured.

When one of the expected orders is recognized, EVAS sends the corresponding command setpoint to the equipped system. Up to 1,000 orders can be configured via dedicated configuration software, which gives access to exhaustive embedded phonetic decomposition dictionaries available in French, English, German and Spanish. These dictionaries can be added to by entering new words or by vocal learning.

Based on a phonetic decomposition, the voice control system EVAS is multilocutor, male or female, strong or weak voice. EVAS is designed to be usable by everybody and tolerates some linguistic approximations (accent, pronunciation default, ...)

EVAS has been specially designed to adapt to the environmental constraints of mobile machinery.

The transmission of the commands is made according to the product variants in CAN, digital, serial communication, ... EVAS can therefore be coupled to various systems such as a CAN network, a PLC, a radio control, ...

TECHNICAL DESIGN

EVAS is based on the following technologies:

- ▶ Phonetic decomposition algorithm for voice recognition powered by embedded Linux.
- ▶ Complete linguistic database.
- ▶ CAN 2.0A/B.
- ▶ High-performance microphone range.

ECONOMY

The ergonomics provided by EVAS can allow easier access to the critical machine data. Monitoring this data allows better preventive, corrective and curative maintenance planning.

EVAS voice assistant acts as a third hand for the operator, its use can allow an increase in human productivity in certain situations.

OPERATION

The EVAS voice control system allows to assist user by replacing manual machine controls or by offering a "hands-free" alternative to them, bringing safety, ergonomics and productivity. Examples of simple applications are: control of the machine, information request, functions activation, control screen navigation, function combinations activation, ...

USE

EVAS allows the operator to stay focused on the essentials: his work. By simply speaking to his machine, he can now control it while keeping his hands free.

Activation of functions, modes, sensors statement or information request, navigation on screens, triggering of complex action chains: The embedded voice control solution EVAS offers considerable potential in terms of applications.

ENVIRONMENTALLY FRIENDLY

REACH and RoHS.

ADDITIONAL INFORMATION

EVAS is even more effective when used with adaptalarm (configurable sound system) which allows a real human-machine dialogue because it can answer to operator's questions.

ENERGY TRANSITION AWARD



MECALAC

Mecalac e12

PRESS CONTACT

MECALAC

Martine MERCIER
Phone: +33 (0)4 50 64 13 13
mmercier@mecalac.com

Stand Ext5 L 002

DESCRIPTION

The Mecalac e12 is the world first compact wheeled excavator run only by electricity, without any compromise on battery life, performances and compactness.

OPERATING PRINCIPLE

The key to battery life and performances resides in the architecture of that machine. The power supply, separated from the revolving frame, allows putting a huge 146 kWh capacity, giving an outstanding 8h of battery life. The technology used for the power pack combines a much greater life than regular batteries, and a full safety. Two electric motors supply simultaneously and independently the front end attachment and the travel function. The transmission, fully electrical, provides a huge drawbar pull force at low speed while allowing to recover energy when braking.

TECHNICAL DESIGN

We analyzed the working cycles of wheeled excavators to choose the components, in order they are used in their working range of best energy efficiency.

The 650 Volt Lithium-Iron-Phosphate power pack provides a 146 kWh energy capacity and supplies two main electric motors. A first motor moves the drive shaft through a gearbox. The second motor, totally independent from the first one, drives the main hydraulic pump (front-end attachment, turret slewing, chassis articulation). Thanks to an electronic management, this architecture made of two distinct power circuits allows to optimize the energy efficiency of each function.

The Mecalac e12 is 11-tonnes multifunction wheeled excavator with articulated chassis. The concept of articulated chassis is perfectly adapted to carry a battery pack of about 1 cubic meter and 1,650 kg. Integrated in the rear lower frame, it gives a great stability, an excellent battery life without affecting the compactness.

ECONOMY

The e12 benefits of the Mecalac experience and a proven architecture: the articulated chassis and the front-end attachment hydraulic and kinematic. The maintenance of diesel engine is totally gone: no more oil change, air and diesel filters change. On the contrary, the components of the electrical circuit are maintenance-free, including the powerful electrical motors that are brushless.

Moreover, the e12 leads to large decrease of operation costs the fuel being obviously replaced by electricity.

OPERATION

The technical choices made for the e12 and the energetic optimization are not made on the detriment of performances that are comparable to a regular machine.

The e12 has a full automatic gearbox: the driver doesn't have to shift gears and enjoys the speed limit and speed control functions. Paired with the electrical motors, the drawbar full force is outstanding including at low speed, allowing excellent crossing capabilities.

Unlike a regular machine, the circuits being all separated, it is possible to travel at maximum power while using simultaneously other functions (movement so the front-end attachment, auxiliary functions).

During deceleration phase, the kinetic energy is automatically recovered to load the batteries and extend battery life.

USE

The large capacity of batteries allow for working during 8 hours, so a complete day. The loading time is 6 to 7 hours on a 22 kW plug, so it is fully loaded on the morning.

The switch of the regular diesel engine to a full electric system allows for reduction of vibrations in the operator seat as well as the noise in the cab. This reduction benefits also to workers around the machine end neighbor. The absence of gases and the low sound level of the machine open the possibility to use it by night and in closed places (buildings, tunnels) without disturbance.

The architecture of the e12 allows to achieve all maintenance operations feet on the ground (greasing, battery charge), hence a guarantee of safety for the operator.

ENVIRONMENTALLY FRIENDLY

The only source of power of the machine being electricity, the excavator doesn't emit any gases or particles. The Lithium-Iron-Phosphate was chosen for its performances and qualities for the safety and environment. It is dry and inert: it doesn't catch fire, can't explode, neither pollute by leak of hazardous liquid.

Thanks to an adequate sizing, the battery operates at optimal conditions, maximizing its life. Based on one load/unload cycle a day, the original battery given for 3,000 cycles will last the complete life of the machine.

ADDITIONAL INFORMATION

This project of e12 is conducted in partnership with the CEA of Grenoble (Liten), Parker (electric motors and inverters) and Powertech (battery).



MATOS

MATOS-CONNECT

PRESS CONTACT

MATOS

Frédéric COROLLEUR
 Phone: +33 (0)7 83 98 85 44
frederic.corolleur@matos-btp.fr

Stand Start-Up Village by Eurovia 6 B 020

DESCRIPTION

MATOS is a young start-up that has developed MATOS-CONNECT, which is the dematerialized business tool of the equipment rental with drivers in the field of public works.

MATOS-CONNECT manages, in a dematerialized way (through a SaaS platform and business applications) planning, administrative, financial management and sales via digital connections (MATOS-RESEAU) for its customers who can then devote to their activity.

OPERATING PRINCIPLE

MATOS-CONNECT will offer the following services in its basic version:

For the customers:

- ▮ management of rental order (reservation, deposit of instructions, geolocalized indications of the important points of the site),
- ▮ automatic creation of leases,
- ▮ dematerialization of the Intervention Bonds with PJ (figures, with carbon footprint, photos, career bonus ...),
- ▮ access to a database of locatiers referenced by the network with a vision on their availability,
- ▮ remote control of security documents related to equipment and operators,
- ▮ scoring suppliers,
- ▮ possibility to make your requests for hiring in MATOS-RESEAU.

For "locatiers":

- ▮ planning (allocation of human and material resources) of their activity and related events (bad weather, breakdowns, accidents, etc.),
- ▮ order management and invoicing,
- ▮ transmission of mission orders and monitoring of the activity of mobile operators,
- ▮ dematerialization of documents: Construction site voucher, HR activity report and equipment,
- ▮ steering of the activity (analytical management of the activity),
- ▮ ADV management (order form, tariffs).

For operators:

- ▮ piloting of its activity in mobility, reception of mission orders and transmission of construction site vouchers, geolocation of particular points of the worksites,
- ▮ independent management of its security,
- ▮ transmission of documents concerning its HR management (leave request, bad weather, etc.).

TECHNICAL DESIGN

MATOS is an innovation of use and actually the only business tool (known by the team) in SaaS mode combined with a platform of connection for the locatiers and their customers.

The technical developments are computerized and realized with the current technologies allowing interfacing with a software part running on servers and the mobility and its technical constraints (interfacing of databases, access in disconnected mode, etc.). The technologies used:

- ▮ the PHP language,
- ▮ The Symfony 2 framework for the Web part based on the MVC standard,
- ▮ Bootstrap 3 for standard responsive display components complying with W3C rules,
- ▮ MariaDB (Mysql fork) for the database.

The planning will integrate an Artificial Intelligence engine for the allocation of resources, the management of the buckets of the sites and the management of the transfers. The management of tariffs (and framework contracts) will also be carried out via an IA engine.

ECONOMY

The economic impact of MATOS-CONNECT should be measured among the different actors:

For the client:

- ▮ facilitation of purchases: saving time in the search for a locatier,
- ▮ easy retrieval of mission vouchers, other good partners (quarry, deliveries of reels, etc.),
- ▮ simplified monthly management (access to lease order summary).

At the locatier:

- ▮ recovery of simplified construction vouchers,
- ▮ simplified invoicing, no forgetting of billing, improved cash flow,
- ▮ better planning and administrative management,
- ▮ ROI estimated by the market: 1 j/month/10 operators on average.

Beyond the obvious economic impact, MATOS-CONNECT aims to provide job comfort particularly for small business owners who do not have an administrative department by allowing them to devote themselves to their business generating turnover and which they like, namely the driving of machines.

OPERATION

MATOS' objective is to operate and develop MATOS-CONNECT, as well as the creation of the first national network of equipment rental with operator.

To cover the national territory, MATOS will run a network of partner companies (MATOS RESEAU) which will market MATOS-CONNECT to the locatiers and will thus be able to develop their chartering activity in the granted geographical area.

MATOS-CONNECT is made up of a platform accessible to the locatier via a subscription that allows him to access its digital business tool and the rental requests of his partner-customers and network customers. The manager and his operators also have access to an application that gives them access to digital and mobile administration management.

Customers have access to 2 types of subscriptions: the CONNECT Pack which allows them to work with a list of locatier partners they select and the NETWORK package (free) which allows them to launch a request for rental to the network.

USE

Designed by public works professionals, MATOS-CONNECT also makes use of specialists in UX and ergonomics to develop a tool that is functional, ergonomic and intuitive. Indeed, beyond the acceptability of the business tool that will pass through a user-friendly interface, MATOS-CONNECT aims to facilitate the life of the locatier and to streamline the administrative and commercial processes.

Aware that digital technology should not replace human relations, MATOS-CONNECT offers the flexibility to adapt to the wishes of its users.

At MATOS, safety on construction sites is also one of the major concerns that has integrated a security module on the application of locational operators who feel empowered. This security module can be configured by the customer and by site if necessary.

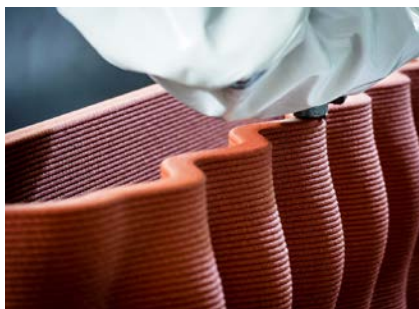
ENVIRONMENTALLY FRIENDLY

In addition to improving efficiency and reducing the use of paper, MATOS-CONNECT aims to provide its users with an algorithm for calculating the environmental impact of equipment on the site. This will allow the locatier to display it to his client on invoices or mission vouchers, which is a regulatory obligation since 01/10/2013, but which is little applied due to lack of tool.

The environmental benefits will therefore be indirect because, by measuring and comparing the environmental impact of construction sites, it is possible for the final customer to communicate with the public authorities and its owners.

Socially, MATOS has the ambition to streamline and facilitate the work of locatiers who work in reduced numbers (sometimes alone) by providing them with comfort and time by helping them in their administrative and commercial tasks which are often constraints for them.

WORLD OF CONCRETE EUROPE AWARD



SIKA FRANCE

Concrete 3D printing

PRESS CONTACT
SIKA FRANCE

Christelle MAUPETIT

Phone: +33 (0)1 42 93 04 04

c.maupetit@clccom.com

Stand 6 H 080

DESCRIPTION

Process that combines Large scale 3D robotic innovation applied to the concrete industry.

Designers and architects will use this technology to create completely new designs that change the way our cities look.

With this technology, we hope that we can support the imagination of architects and designers as they develop new exciting structures.

OPERATING PRINCIPLE

Cement-based ink with setting on demand which is extruded by a 3D printer layer-by-layer to produce full-size concrete elements. Realization according to digital designs, read and transformed into real object by the printer.

TECHNICAL DESIGN

Sika's know-how in formulation has made it possible to develop a cement-based ink that has been taken once extruded.

The large-scale 3D printing process allows the concrete material to be printed while benefiting from its advantages for architecture and construction. This innovation makes it possible to produce locally, with optimized and tailor-made designs.

A concept that combines technological and architectural breakthroughs.

ECONOMY

3D printing does not use molds for placing concrete, which generates significant production gains. It allows to print very quickly elements without heating system. Design optimization impacts the overall volume of concrete used for a part and therefore its manufacturing cost.

OPERATION

The Sika 3D printing system offers exceptional layer uniformity for a fault-free facing.

All with a rare print speed of 1 m / seconds. Continuous printing, without break, allows printing up to 10m high quickly thanks to Sika's setting on demand.

USE

Concrete 3D printing revolutionizes the placing of concrete on jobsite and precast industry.

It is part of industrial automation of construction, faster with less handling, more safety and less risk during manufacturing.

It participates in the digitization of the building sector and the development of BIM objects as part of the building's digital model.

ENVIRONMENTALLY FRIENDLY

3D printing removes a large part of existing waste on site or in precast. For the precast industry the use of this technology can suppress heating phases with a direct impact on primary energy savings achieved through sika process of setting on demand of the concrete.

This new manufacturing process removes molds or metallic slabs required for the manufacture of concrete elements. This generates an energy gain related to the manufacture and maintenance of these equipments.

ADDITIONAL INFORMATION

Sika's rapid concrete setting process, as well as its regularity and quality of facing are real advantages in the 3D concrete printing market.

We believe that this is what will make the difference at the stage of the industrialization in France of our concept.

SAFETY AWARD

**SIMA**

HandSafe wood cutting saw

Stand 6 C 120

PRESS CONTACT**SIMA, S.A.**

Rafael MARAÑÓN

Phone: +34 671509353

rafaelm@simasa.com

DESCRIPTION

A wood cutting saw, generally including a Tugstene blade, is one of the most dangerous machines that operate in the Building sector.

Beyond the many mandatory safety elements to which this machine must comply, the new SIMA HANDSAFE features a unique and exclusive safety system to stop short the blade the second that it touches human skin.

This safety system reduces the damage caused by accidents related to negligence or mishandling.

OPERATING PRINCIPLE

The new HANDSAFE features a unique and exclusive safety system to stop short the blade the second that it touches human skin.

This safety system reduces the damage caused by accidents related to negligence or mishandling. The integrated ISS (Instant Stop Sensor) detects the touch of human skin on the blade and launches the blade breaking system in 1/10 of a second.

TECHNICAL DESIGN

The integrated ISS (Instant Stop Sensor) detects the touch of human skin on the blade and launches the blade breaking system in 1/10 of a second.

Besides protecting the operator, the machine does not suffer any damage as a consequence of this sudden stop: just restarting it, the machine will carry on working.

ECONOMY

This machine is oriented to increase the operator safety.

The potential economies come from the cost of accidents that typically involve the amputation of one or more fingers, and the subsequent legal indemnities.

OPERATION

This machine has no relevant improvement in productivity, but its increased safety improves work quality.

USE

The new Handsafe means a quantum leap in safety for the operators of wood cutting machines.

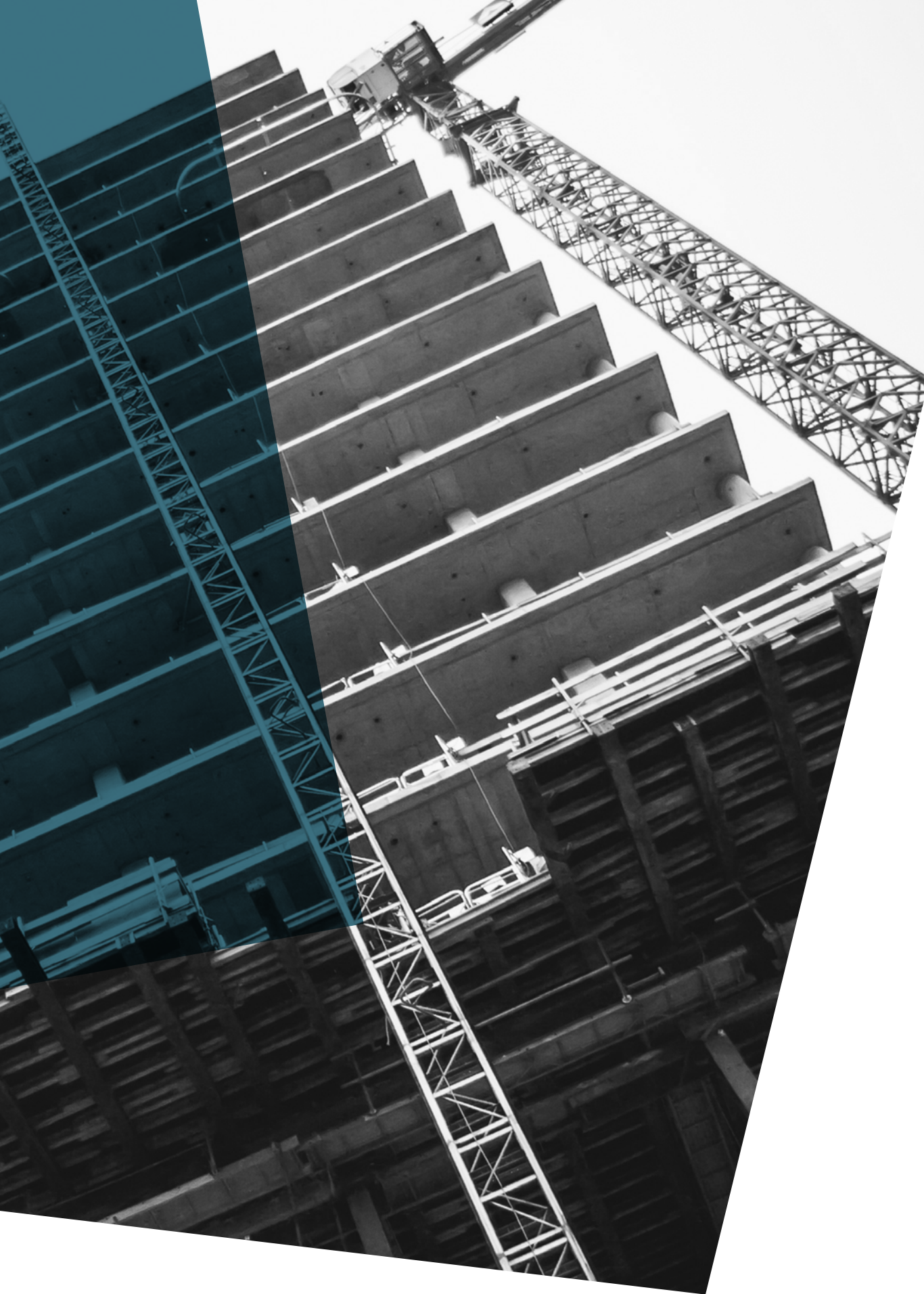
It is a breakthrough in risk prevention.

ENVIRONMENTALLY FRIENDLY

There is not significant improvement in this area.

ADDITIONAL INFORMATION

On sale already.



THE NOMINEES



**INNOVATION
AWARDS 2018**

EARTHMOVING & DEMOLITION

Equipment & Machinery

AUSA

Modular Site-Dumper of 6 & 10 ton capacities,
with Optimum Working Visibility

Stand 5b F 046

First modular Dumper, offering:

- ▶ two load capacities (6 or 10 ton),
- ▶ two skip unloading systems,
- ▶ two types of transmission.

The main challenge of the Project was to develop a comprehensive range of models to meet different customer needs (load capacity, type of transmission, mode of unloading) from a single platform, and being unified the main components (chassis, axles, engine, bodywork, electricity and hydraulics).

The customer will have many machines to meet different needs, with the same platform, so that, he will get benefits in terms of savings in maintenance and simplifying the training of users and mechanics.

One of the main advantages is also the visibility in transport mode with the innovative FVS (Full Visibility System). This is an exclusive AUSA solution that helps to the driver to avoid to fall-down to trenches or to run over a person working close to the machine. This concept improves productivity (fewer maneuvers) and safety.

PRESS CONTACT

AUSA

Albert VICENS
Phone: +34 938747311
avicens@ausa.com

KOBELCO CONSTRUCTION MACHINERY EUROPE B.V.

Hybrid Powered Excavator

Stand Ext6 C 120

PRESS CONTACT

**KOBELCO CONSTRUCTION
MACHINERY EUROPE B.V.**

Laura Van PINXTEREN
Phone: +31 362020352
laura.vanpinxteren@kobelco.com

Introducing the world's first Lithium-Ion powered Hybrid Excavator delivering the world's smallest carbon footprint combined with exceptional performances.

SPORT SYSTEM

TECHNIFAP - Automated cleaning unit for DPF
and catalysts

Stand 5a D 057

PRESS CONTACT

SPORT SYSTEM

Grégoire SAMUEL
Phone: + 33 (0)5 63 38 85 00
s.gregoire@sport-system.fr

TECHNIFAP allows the complete cleaning of DPF or catalyst in a fully automated circuit-based unit closed and chemical-free. All ashes and soot are filtered (10 ppm) and collected before being recycled by an ISO14001 company specializing in waste treatment. None of them is released into the environment.

Too often ignored, the cleaning of the DPF, the catalyst or the SCR is a very interesting alternative to the replacement of a new part.

This unique and innovative process adapts to all types of DPF and catalysts (TP, PL, Agricultural, Industry...).

EARTHMIVING & DEMOLITION

Components & Accessories

DISPATCHER

Dispatcher

Stand 5b J 022

PRESS CONTACT

DISPATCHER

Maxime GUESNE

Phone: + 33 (0)6 52 25 53 81

maxime.guesne@dispatcher.fr

Dispatcher, Welcome to Simplicity - Make it simple and fluid for the future of construction.

Dispatcher is a global platform for construction equipment. The services are designed for construction and rental companies. A mobile application, a cloud platform, an ecosystem and Internet of Things devices are part of the offer. Digital services are available throughout the entire value chain: quotation, order, equipment management, operations and planning, customers services and telematics.

On site or at the office, book internal equipment or rental machine with one click on Dispatcher. The platform optimizes the internal fleet utilization and make seamless the rental purchase process on site.

For renters, Dispatcher offers a full customer communication service and a booking pipe as well as a full operations and scheduling system.

Telematics services via Internet of Things devices can complete the operation monitoring.

EPC GROUPE

DIGITAL CONSTRUCTION: Collaborative Platform

Airware and EPC Group

Stand 5a GJ 162

PRESS CONTACT

EPC FRANCE

Claudie CALABUIG

Phone: + 33 (0)4 90 47 17 25

claudie.calabuig@epc-france.com

Airware, a specialist in drone data processing and analysis, and EPC group specializing in manufacture, storage and distribution of explosives, especially in the building and civil engineering sector, are working together to offer an innovative global platform.

Airware offers a complete solution to manage and analyse drone data through a cloud platform and industry-specific modules to improve the safety and productivity of mining and construction. Together, EPC Groupe offers an additional module, EPC Premium, available in the Airware platform allowing a precise analysis of the activity, blast after blast.

"The most complete offer on the market for construction sites, mines or quarries, helping them to digitisedigitise and optimise their activities".
Reference www.lemoniteur.fr

FPT INDUSTRIAL

HI-eSCR2

Stand 5a D 031

PRESS CONTACT

FPT INDUSTRIAL

Fabio LEPORE

Phone: +39 0110076720

press@fptindustrial.com

HI-eSCR2 is an innovative powertrain solution to meet European StageV emissions limits on above 56 kW engines, ensuring high performance with no changes in after-treatment size compared to StageIV, thus allowing the transition to the next emission regulation with a maintenance-free system, not impacting on machine layout and providing unchanged advantages on performance and efficiency.

EARTHMOVING & DEMOLITION

Components & Accessories

IFM ELECTRONIC

O3M - Intelligent 3D sensor for mobile machines with overlay function

Stand 5a K 071

PRESS CONTACT

IFM ELECTRONIC

Florence COQUET

Phone: +33 (0)4 79 96 40 35

florence.coquet@ifm.com

IFM ELECTRONIC's innovative new generation of 3D sensors is designed to help mobile machine drivers with regard to securing of work areas, detection of obstacles (anti-collision function), driver's assistance and assisted machine control (path tracking function).

Now equipped with the overlay function, these 3D detectors allow the drivers to consult the information returned by the sensor directly on the image provided by the camera.

The anti-collision function can trigger an alarm for crash prediction. The future displays will show the camera images and process values thus ensuring reliable perimeter recognition

MECALAC

Connect Energy Link

Stand Ext5 L 002

PRESS CONTACT

MECALAC

Martine MERCIER

Phone: +33 (0)4 50 64 13 13

mmercier@mecalac.com

The Connect Energy Link is the safest quick-coupler for hydraulic excavator on the market with hydraulic and electric connection of accessories.

SVAB HYDRAULIK AB

Quantum Tool Recognition

Stand 5a J 163

PRESS CONTACT

SVAB HYDRAULIK AB

Fredrik ERIKSSON

Phone: +46 706831993

fredrik.eriksson@svab.se

The basic idea behind Quantum Tool Recognition is a system that wirelessly detects and identifies which work tool is used on the excavator.

The systems used in the daily work, such as the machine control system can take advantage of the information. This enables automatic settings of the systems based on the work tool used and potential error and expensive rework is avoided. Tool Recognition works for all types of tools.

With Tool Recognition it's easy to keep track of the tools at the worksite. The system monitors both the physical location and the use. Quantum can automatically notify the owner / operator when it is time for service. A map view in the operator's mobile app shows where the tools are located.

In cases where Tool Recognition is used together with Quantum Tiltrotator Control, the machine's hydraulic settings are adjusted automatically depending on what tool is attached to the machine. This saves time, optimizes tool precision as well as the machine's fuel consumption.

ROADS, MINERALS & FOUNDATIONS

Equipment & Machinery

FAYAT E TRAXX

Stand 5a C 151

PRESS CONTACT

SECMAIR

Yvon GERBEL

Phone: + 33 (0)6 07 34 35 20

y.gerbel@secmair.fayat.com

E TRAXX is a full traceability system with artificial intelligence for road maintenance.

E TRAXX:

1. Automatic spraying/spreading system for patching work with a combi-unit (Sprayer- Spreader).
 - ▶ Each data is associated to a date, time and position as well as the state of the equipment.
 - ▶ At the end of each working day, the recording system sends this data package as a unique file.
 - ▶ After the sending, data that have been put online is notified to you by email, as well as your own customer if you wish. Those information can be seen on our website malaxitu. secmair.com with a login and password, to access to authorized data.
 - ▶ From this time, user only needs a computer with an internet access. He will be able to check the roadworks background in DEFERRED TIME.
2. Full traceability for road maintenance work (Surface dressings/chipsealing, Microsurfacing/slurry).

FAYAT CEPIA

Stand 5a C 151

PRESS CONTACT

SECMAIR

Yvon GERBEL

Phone: + 33 (0)6 07 34 35 20

y.gerbel@secmair.fayat.com

Mechanised Hot Mix Asphalt (HMA) spreading.
Mechanised aggregates spreading.

THEAM

Sprider et ReCoDrive by Theam

Stand Ext6 A 020+EXT2 D 039

PRESS CONTACT

THEAM

Vanessa LUQUE

Phone: + 33 (0)6 87 68 61 95

vluque@theam.com

The system is installed on a truck and is designed to lay asphalt. 3 heated screws and the hydrostatic system help to reduce penibility on jobsite. A remote controller control the truck, the tipper and the Sprider from outside. The Sprider is dismountable. You don't loose asphalt at the end of the jobsite because of the heating of the screws. You don't need wheelbarrows. You increase productivity and profitability on site (different organization). You'll have cleaner asphalt jobsite (the movements are proportionnal and precise). The machine is full of safety. It's easy to clean with old gloves.

ROADS, MINERALS & FOUNDATIONS

Components & Accessories

DISPATCHER

Dispatcher

Stand 5b J 022

PRESS CONTACT

DISPATCHER

Maxime GUESNE

Phone: + 33 (0)6 52 25 53 81

maxime.guesne@dispatcher.fr

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DIGITAL CONSTRUCTION: Collaborative Platform

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PRESS CONTACT

EPC FRANCE

Claudie CALABUIG

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IFM ELECTRONIC

O3M - Intelligent 3D sensor for mobile machines
with overlay function

Stand 5a K 071

PRESS CONTACT

IFM ELECTRONIC

Florence COQUET

Phone: +33 (0)4 79 96 40 35

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ROADS, MINERALS & FOUNDATIONS

Components & Accessories

MANITOU GROUP

Variable speed hydraulic winch VARIOWINCH
for rotating telehandler

Stand 5b F 015

PRESS CONTACT

MANITOU GROUP

Franck LETHOREY

Phone: + 33 (0)2 40 09 17 56

f.lethorey@manitou-group.com

Hydraulic winches currently available on the market have a fixed hook movement speed: their hook speed with a limited load is identical with the full load speed, hence creating an impression of slow movement.

Manitou presents a new solution: the integration of a variable capacity hydraulic motor with independant control into a telehandler's hydraulic winch, leading to a significant max. hook speed increase with small loads while keeping the max. speed at max. load unchanged. End effect: significant efficiency improvements of all suspended load handlings.

To date this innovation is unique on the market.

VOLVO CE

Pave Assist

Stand Ext6 F 056+6 A 076+6 A 042

PRESS CONTACT

VOLVO CONSTRUCTION EQUIPMENT

Charlie EBERS

Phone: +44 2079235864

charlie.ebers@se10.com

Pave Assist is a family of paver-related modules and applications that automate many of the paving parameters that today have to be recorded manually in order to meet stringent road authority reporting requirements.

Providing a powerful set of tools to improve productivity, quality and site safety, Pave Assist combines Thermal Mapping, Weather View, Material Manager and Volvo Smartview modules.

The intuitive and simple to use system provides the paver operator with real-time operational data for a responsive, harmonious and efficient operating experience.

LIFTING, HANDLING & TRANSPORTATION

Equipment & Machinery

ETRAMO

Mini Dumper TRUXTA BENDie

Stand Ext5 L 034

The new BENDie petrol powered 4x4 mini dumper provides access even in the tightest corners. At just 730 mm (850 mm) wide the TRUXTA 4x4 is really compact and gets into places other units can't.

PRESS CONTACT

ETRAMO BVBA

Rico KERBAGE

Phone: +32 33260292

Mob: +32 477494696

rico@etramo.be

TADANO FAUN GMBH

TADANO ATF60G-3

Stand Ext6 F 106

The TADANO ATF60G-3 is a 3 axle mobile crane in the 60 t class with a new drive line concept.

PRESS CONTACT

TADANO FRANCE SAS

Jean-Marie GROSSMANN

Phone: +(0)6 75 71 22 77

jean-marie.grossmann@tadano.com

TADANO FAUN GMBH

TADANO Triple Boom System

Stand Ext6 F 106

The Tadano Triple Boom System consists in three tubes aligned parallelly to each other.

This arrangement results in a very strong stiffness with respect to bending and torsion, with comparatively small material usage.

Thus, very high loading capacities can be reached without an additionnal guying system, heavy and generating transport and installation/desinstallation costs.

PRESS CONTACT

TADANO FRANCE SAS

Jean-Marie GROSSMANN

Phone: +(0)6 75 71 22 77

jean-marie.grossmann@tadano.com

LIFTING, HANDLING & TRANSPORTATION

Components & Accessories

DISPATCHER

Dispatcher

Stand 5b J 022

PRESS CONTACT

DISPATCHER

Maxime GUESNE

Phone: + 33 (0)6 52 25 53 81

maxime.guesne@dispatcher.fr

Dispatcher, Welcome to Simplicity - Make it simple and fluid for the future of construction.

Dispatcher is a global platform for construction equipment. The services are designed for construction and rental companies. A mobile application, a cloud platform, an ecosystem and Internet of Things devices are part of the offer. Digital services are available throughout the entire value chain: quotation, order, equipment management, operations and planning, customers services and telematics.

On site or at the office, book internal equipment or rental machine with one click on Dispatcher. The platform optimizes the internal fleet utilization and make seamless the rental purchase process on site.

For renters, Dispatcher offers a full customer communication service and a booking pipe as well as a full operations and scheduling system.

Telematics services via Internet of Things devices can complete the operation monitoring.

EPC GROUPE

DIGITAL CONSTRUCTION: Collaborative Platform

Airware and EPC Group

Stand 5a GJ 162

PRESS CONTACT

EPC FRANCE

Claudie CALABUIG

Phone: + 33 (0)4 90 47 17 25

claudie.calabuig@epc-france.com

Airware, a specialist in drone data processing and analysis, and EPC group specializing in manufacture, storage and distribution of explosives, especially in the building and civil engineering sector, are working together to offer an innovative global platform.

Airware offers a complete solution to manage and analyse drone data through a cloud platform and industry-specific modules to improve the safety and productivity of mining and construction. Together, EPC Groupe offers an additional module, EPC Premium, available in the Airware platform allowing a precise analysis of the activity, blast after blast.

"The most complete offer on the market for construction sites, mines or quarries, helping them to digitisedigitise and optimise their activities".
Reference www.lemoniteur.fr

IFM ELECTRONIC

O3M - Détecteur 3D intelligent pour engins mobiles
avec fonction overlay

Stand 5a K 071

PRESS CONTACT

IFM ELECTRONIC

Florence COQUET

Phone: +33 (0)4 79 96 40 35

florence.coquet@ifm.com

IFM ELECTRONIC's innovative new generation of 3D sensors is designed to help mobile machine drivers with regard to securing of work areas, detection of obstacles (anti-collision function), driver's assistance and assisted machine control (path tracking function).

Now equipped with the overlay function, these 3D detectors allow the drivers to consult the information returned by the sensor directly on the image provided by the camera.

The anti-collision function can trigger an alarm for crash prediction. The future displays will show the camera images and process values thus ensuring reliable perimeter recognition.

LIFTING, HANDLING & TRANSPORTATION

Components & Accessories

VAN BEEST

Green Pin – Tycan®

Stand 5b E 027

PRESS CONTACT

VAN BEEST

Roan RETERA

Phone: +31623633678

r.retera@vanbeest.nl

Tycan® is a high-performance link chain created from Dyneema® – the world's strongest man-made fiber.

Tycan® chain has all the performance and flexibility of steel chain but is a fraction of the weight.

Tycan® is extremely safe to use, non-corrosive, non-conductive, completely waterproof and it floats on the water surface.

By using Tycan® customers can achieve greater productivity, reduced costs and a safer working environment for their staff.

BUILDINGS & CONCRETE SECTOR

Equipment & Machinery

BATIROC PROTECT

Bat'Access

Stand 6 E 133+6 D 142

PRESS CONTACT

BATIROC PROTECT

Myriam VANDENBROUCQUE

Phone: +33 (0)7 61 87 54 65

myriam.vandenbroucque@batiroc-protect.com

Spiral staircase, available as mounting kit, can be carried by hand.
Assembly and disassembly requiring only one person.
Self-supporting - self-stabilized and secure.
floor space taken up by the staircase: 1 square meter.

BLASTRAC

200VMB Vertical Steel Blaster

Stand Ext6 B 021+Ext6 B 088

PRESS CONTACT

BLASTRAC

Clément CHARPENTIER

Phone: +33 (0)6 07 13 41 90

marketing@blastrac.nl

Fast, effective and with a working width of 200 mm, the Blastrac 200 VMB is perfect for all vertical steel & concrete blast cleaning applications.
This machine is able to remove asbestos coatings such as screed or lead paint on vertical concrete surfaces. It is a remote controlled machine that doesn't generate any dust when connected to the right H-class dust collector.
That's the perfect solution to remove contaminated coatings on steel & concrete.

I.H.S CONCRETE PUMPS

Conqueror 2 -

The All-in-One Concrete Pumping Truck

Stand 6 E 134

PRESS CONTACT

INPRESS ONLINE

Jamie GAVIN

Phone: 07900367775

jamie@inpressoline.com

Integrated Hydraulic Solutions (IHS Pumps) will launch a revolutionary concept in the mix-on-site concrete industry at Intermat 2018: An All-in-One Concrete Pumping Truck capable of delivering, mixing, and pumping concrete from a single vehicle.

The 10 m³ mobile concrete batch mixer comes fully fitted with an on-board boom and line pump capable of pumping concrete from up to 80 m away. It is operated by a single driver, greatly reducing labour costs, and employs an on-board computer-controlled digital mixing system, ensuring an accuracy of mix far superior to that of traditional volumetric mixers that rely on counting rotations to evaluate the correct strength and consistency of the concrete mix.

BUILDINGS & CONCRETE SECTOR

Equipment & Machinery

OZBEKOGLU

Contaminated liquid recycling system (CLR-S)

Stand 6 H 114

PRESS CONTACT

OZBEKOGLU-REENGs

Cagri SEN

Phone: +90 5362188155
mcsen@ozbekoglu.com.com

How to use grey water for sustainable ready mix concrete production in order to make greener concrete batching plants.

PIX4D

Pix4D Crane Camera Solution

Stand 6 K 040

PRESS CONTACT

PIX4D

Sabrina CARDOT

Phone: +41 215520594
mcsen@ozbekoglu.com.com

BIM revolutionizes project design and management. It provides an efficient way to complete complex projects. However, the very detailed schedule and build sequences defined by the BIM process must be strictly adhered to be efficient.

Any construction errors or deviations from schedule can heavily impact the process. One way to ensure BIM efficiency is to daily monitor sites in order to spot errors and adjust the process early.

Although drones are a new efficient and affordable solution for site surveying, they have their limits (human intervention, flight permissions, weather conditions, legal or jobsite restrictions). It is then difficult to fly a drone on a daily basis at no cost.

This is why Pix4D created the Crane Camera solution. Integrating an innovative connected system, the Crane Camera is designed to be fixed on tower cranes and deliver highly visual and measurable 2D and 3D site representations automatically and daily without interfering with site operations.

BUILDINGS & CONCRETE SECTOR

Components & Accessories

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SATECO COFFRAGES & SÉCURITÉ

Connected Pressure Sensors

Stand 6 D 138+6 E 131

PRESS CONTACT

SATECO

Nadia QUESADA

Phone: + 33 (0)5 49 50 12 54

info@sateco.fr

SATECO proposes to users a suitcase understanding s complete system of pressure concrete sensors connected.

It is mainly used on the construction sites for the castings of big height walls (>7.50 m) for which a procedure of concrete pouring is necessary (important height, typical concrete sail, positioning of stalks spacers)...

His use is simple, it is enough to position the sensors (2-6) on a height of casting, after their putting in functioning the information of the pressure of the concrete exercised on the formwork is automatically passed on in the real time tablet. So the site manager can follow at a distance the casting and act immediately in case of overtaking of the pressures statutory concretes or of pouring dysfunction.



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PARIS
23 - 28 APRIL 2018

INTERNATIONAL EXHIBITION
FOR CONSTRUCTION
AND INFRASTRUCTURE

CO-LOCATED WITH



EXHIBITION CONTACTS

Isabelle ALFANO
INTERMAT exhibition Director
isabelle.alfano@comexposium.com

Laura SANCHEZ
Communications Director
laura.sanchez@comexposium.com

Raphaële TROMELIN
International Communications Manager
raphaele.tromelin@comexposium.com

Lorena RONDİ
Communications Officer
lorena.rondi@comexposium.com

PRESS CONTACTS



AGENCE RUMEUR PUBLIQUE

intermat@rumeurpublique.fr

Julien Marié: 01 82 28 37 31 / 06 64 99 56 79

Lucie Daudigny: 01 82 28 37 27 / 06 77 20 71 11

Thierry Del'Jesus: 01 55 74 84 92 / 06 60 47 90 38

PARIS.INTERMATCONSTRUCTION.COM



#intermatparis

SE INTERMAT

70 avenue du Général de Gaulle

92058 Paris La Défense Cedex - France

E-mail: communication@intermatconstruction.com