

June 2015

# iVT

INTERNATIONAL  
INDUSTRIAL

# Industrial revolution?

This hybrid backhoe loader will change the way construction equipment is built, says Huddig

## Eastern Europe in the spotlight

The best of the region's industrial vehicle design

Interview: **Teddy Wu**,  
**Dressta** president

Market Report: **The death  
of Russian off-highway  
innovation?**

## Case studies

Zetor Forterra HD tractors

Dapper 5000  
multipurpose loader

## Intermat review

Five trends we spotted

## Electronics

The next evolution of CAN

## Mobile hydraulics

Off-highway steering  
made easy

## Sunlight-readable high-tech displays

**▶** A high level of clear readability – especially in the case of strong sunlight – is an important requirement for displays in many industrial vehicle applications. Operators are often dependent on the performance of their displays so as not to endanger safety or the project being carried out. How is it possible to create displays that offer the required resistance to strong sunlight?

SemsoTec, a high-tech company based in Munich, Germany, which specializes in display technology including complete customized hardware solutions for industries such as automotive and off-highway, has developed a special process using optical bonding.

“With this innovative new process, individual elements of the display are bonded together using an optical material, which in the case of a touchscreen includes the operating element, the display and the sensor. The result is suppression of the disrupting reflection of sunlight and enhancement of contrast level,” says Jochen Semmelbauer, SemsoTec CEO.

LC-Displays from SemsoTec can achieve a high brightness level of up to 1,000cd/m<sup>2</sup>. This value defines the amount of light that is produced on the outside surface of the display, describing exactly the light intensity characteristic on this surface. Using this technology, special displays are also very readable even in the case of strong sunlight under the most difficult of conditions.

For many industrial applications, this combination of reliability and toughness (rugged design) will be indispensable under the influence of extreme environmental conditions.

### READER INQUIRY SERVICE

To learn more about this advertiser, visit [www.ukipme.com/info/ivm](http://www.ukipme.com/info/ivm)  
Quote Ref: 513



## Wire-actuated encoders enhance safety

**▶** In addition to global efforts on the part of manufacturers, associations, organizations, and ultimately the machine users themselves, the new version of European Standard EN 13000 focuses on new and enhanced security requirements, for example for all-terrain cranes, hydraulic lifts, MEWPs, and vehicle-mounted cranes. But in the construction and agricultural equipment markets, the requirement for intelligent safety systems has also increased.

Hand-in-hand with its customers, Siko has developed new wire cable sensors that, in combination with safe control systems, enable the overall system to be certified pursuant to SIL2 PL d. With MTBF values of >100 years, these sensors are therefore ideal for use in certified complete systems.

The Siko wire-actuated encoders SG32, SG42 and SG62 provide this enhanced security using a specialized and fully redundant sensor system, which is used to precisely determine



the position. Their two completely separate sensor systems detect the exact position and display them separately as analog signals.

With measuring lengths from 3-6m, these sensors are therefore ideally suited for accurate position determination of the outriggers on cranes and working platforms, as well as for determining the position of booms.

Furthermore, the highly durable structure of the sensors is even more impressive, as the spring assembly is protected against the ingress of dirt and water and invariably works perfectly – even in a temperature range of -40° to +85°C.

### READER INQUIRY SERVICE

To learn more about this advertiser, visit [www.ukipme.com/info/ivm](http://www.ukipme.com/info/ivm)  
Quote Ref: 514

## Setting new standards in comfort

**▶** The standard HVAC and heaters of the Kalori range are the ideal solution for OEMs equipping the cabin of their construction or agricultural vehicles, saving them considerable time and effort in developing a specific item that won't give any better comfort.

From 2-14kW, the Kalori range of evaporators and heaters comprises a variety of shapes, enabling them to be installed under the seat, in the roof, beneath the cab or in the dashboard. Adaptations can be carried out easily – sometimes only by developing a bracket or a specific air duct part.

To this end, the company's engineers develop plastic-injection or vacuum plastic parts, according to the investment/quantity ratio.

The Kalori Trim Line (which is now one of the most diverse lines of air diffusers, grills and accessories on the market) offers all the accessories required to produce the desired air diffusion and the controls. With its global solutions, its technicians can send OEMs a proposal in several days, ensuring they won't lose time and money through involvement in an expensive development for which the manufacturer may not always receive the desired return on investment.

Choosing standard and 'design-proven' products also results in choosing quality because of the large experience already achieved with these standard products and the improvements they deliver.

Of course, some projects will always require a dedicated HVAC, and this is also a large part of the activity in the Kalori design office.

### READER INQUIRY SERVICE

To learn more about this advertiser, visit [www.ukipme.com/info/ivm](http://www.ukipme.com/info/ivm)  
Quote Ref: 515



## Take control of your productivity

**▶** J R Merritt Control's ultra-compact CS3 joystick series has been designed specifically for both off- and on-highway industrial vehicles, including excavators, forklifts, truck-mounted cranes, bucket trucks, construction, agricultural, mining and forestry equipment, scissor lifts, boom lifts and aerial work platforms. Its durable housing, center-pivot design, and ultra-tough proprietary boot ensure this joystick is able to withstand a lot of abuse.

Ideally suited for high duty-cycle applications, the fully customizable CS3 maximizes the performance and efficiency of operations through a variety of handle styles and grips with an assortment of push-button and lever options.

With corrosion-resistant components and conformal coated electronics, this rugged controller provides an environmentally sealed and safe mounting for any application that is

exposed to the elements. Offered in single- and multi-axis models, it is engineered for smooth, non-biasing handle action and supports a variety of deadman functions.

These devices also feature long-life Hall-effect technology for a contactless proportional signal.

The CS3 line of joysticks can also be configured to a range of output configurations, including CANopen, J1939, and basic CAN protocols, for seamless equipment integration.

### READER INQUIRY SERVICE

To learn more about this advertiser, visit [www.ukipme.com/info/ivm](http://www.ukipme.com/info/ivm)  
Quote Ref: 516

