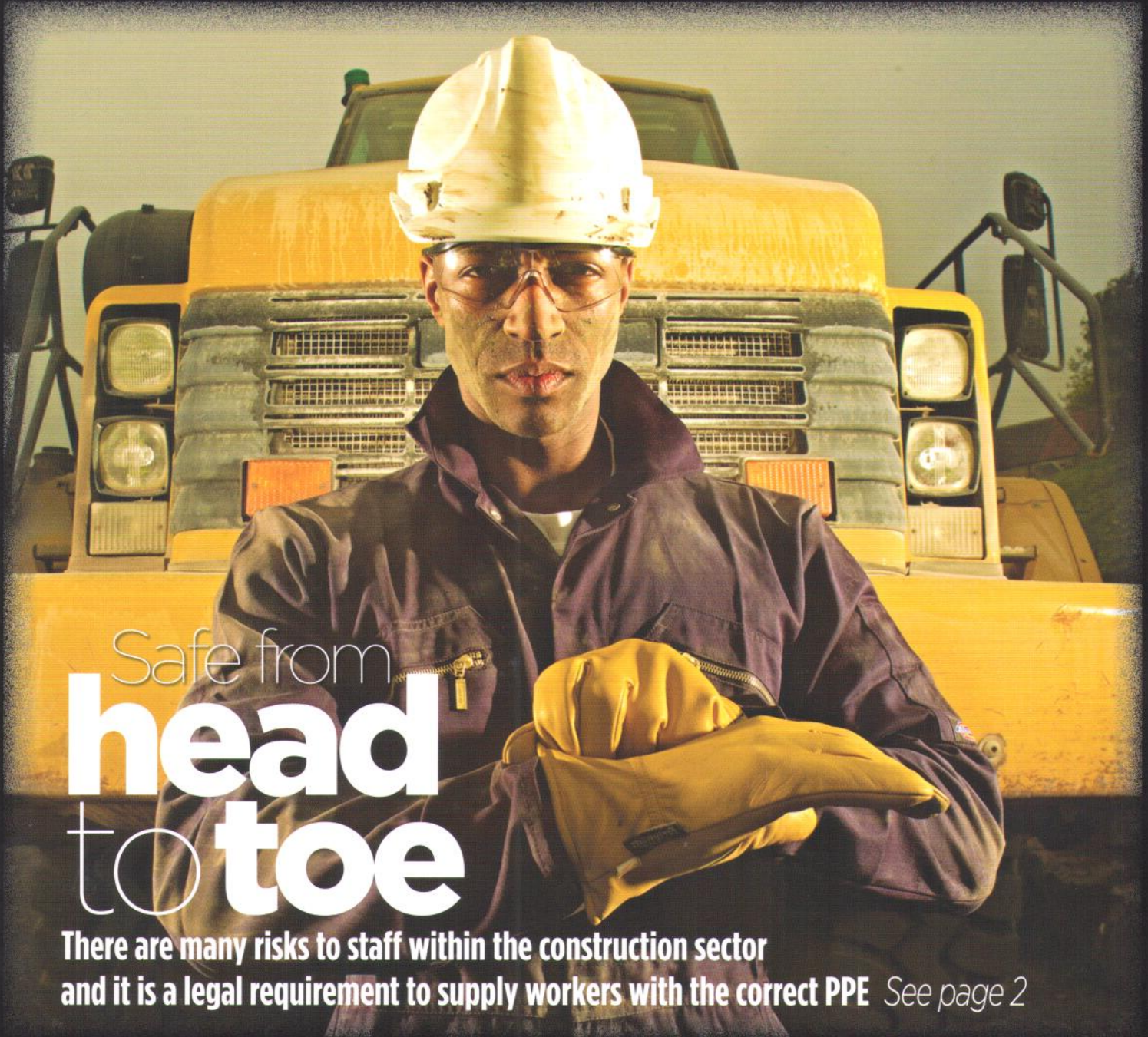


THE MAGAZINE FOR INDUSTRIAL LEADERS

CONSTRUCTION & CIVIL ENGINEERING

www.ccemagazine.com SUMMER 2016



Safe from
**head
to toe**

There are many risks to staff within the construction sector and it is a legal requirement to supply workers with the correct PPE *See page 2*

New opportunities

Swain Group has made a significant acquisition

H&S sentencing

Construction firms pay out almost £8m in fines



£20m Cardiff project

Contracts agreed on student accommodation scheme

Chairman

Andrew Schofield

Editor

Libbie Hammond
libbie@schofieldpublishing.co.uk

Art Editor

Gerard Roadley-Battin

Production Manager

Fleur Daniels

Staff Writers

Jo Cooper
Andrew Dann
Josh Younespour

Operations Director

Philip Monument

Research Manager

Laura Thompson

Editorial Researchers

Mark Cowles
Alasdair Gamble
Tarjinder Kaur D'Silva
Keith Hope

Sales Director

Joe Woolsgrove

Sales

David King
Mark Cawston
Rob Wagner

Production/ Office Manager

Tracy Chynoweth

Schofield Publishing
Cringleford Business Centre,
10 Intwood Road, Cringleford,
Norwich, NR4 6AU, U.K.

Tel: +44 (0)1603 274130

Fax: +44 (0)1603 274131

www.ccemagazine.com

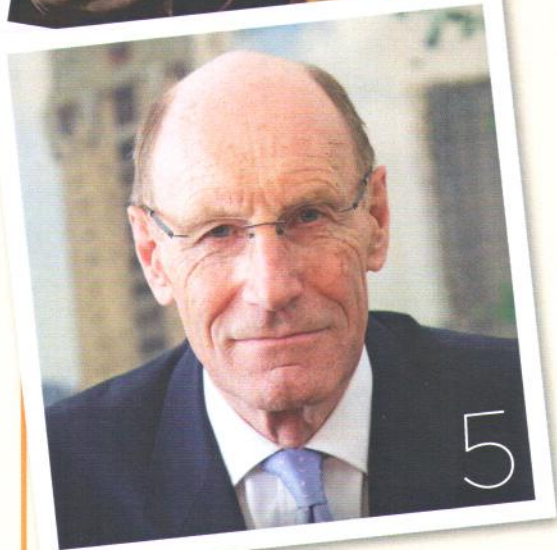


@cce_magazine



© 2016

Schofield Publishing Ltd



COMPANY PROFILES

- 35 **KNIGHT GROUP**
- 38 **HAYLEY GROUP**
- 42 **ARTISAN**
- 46 **STANTON BONNA CONCRETE**
- 51 **GECO MECHANICAL & ELECTRICAL**
- 54 **NFT**
- 56 **LIEBHERR-GREAT BRITAIN**
- 61 **MACHINE MART**
- 63 **SANDVIK MINING AND ROCK TECHNOLOGY**
- 66 **MCCRORY ENGINEERING**
- 70 **JOSEPH GALLAGHER**
- 76 **WARMAFLOOR**
- 79 **CEMEX UK**
- 84 **COLCRETE EURODRILL**
- 86 **VANDERSANDEN GROUP**
- 91 **FP MCCANN**
- 94 **ARAB ENGINEERING BUREAU**
- 98 **BAUFRITZ**
- 105 **PAVE AWAYS**
- 108 **COLEMORE TANG CONSTRUCTION**
- 112 **QATAR RAIL**
- 118 **PFEIFER GROUP**
- 123 **ELECTRICAL INDUSTRIES GROUP**

FEATURES

2 PPE

The perils of construction sites and how the right personal protective equipment can keep workers safe

5 BREXIT

Sir John Armitt discusses the impacts of Brexit and the establishment of an ICE Leadership Group founded to create single voice on the subject

6 ENERGY EFFICIENT HOMES

The Government is encouraging homeowners, businesses, property developers, and commercial tenants to manage their energy more efficiently

10, 11 NEWS

Updates and information from the construction and civil engineering market

12 IT

Construction can make advances with the continued adoption of Building Information Modelling and advances in technology

14 ALTERNATIVE MATERIALS

Fly ash is a viable alternative material and one that is becoming increasingly appealing to a sustainability-focused construction sector

16 NEW LEGISLATION

Changes to the CDM regulations and the issues they have created

18 FEICA

FEICA supports Europe's adhesive and sealant industry, and has a long-term strategy for increasing quality and performance

22 INTERVIEW

Ben Clark talks to Ian Burton of Taylor & Braithwaite, about his career and the expansion of the company

25 CONTINUOUS IMPROVEMENT

Cemex UK Aggregates' JUSTCi programme has benefited not just the bottom line but also company culture

28 IT

How can construction address the problem of stolen plant machinery?

30 ROAD BUILDING

Automation technologies and how they will change the face of Britain's roads

32 BROWNFIELD DEVELOPMENT

Support from expert partners can assist developers in the use of contaminated land

A model of representation

As pressure for sustainable development from the construction sector grows, FEICA's role in supporting Europe's adhesive and sealant industry remains as critical as ever

FEICA

The Association of the European Adhesive and Sealant (A&S) Industry (FEICA) can trace its origins back to the first meetings of vegetable adhesive producers in the late 1950s. After years of developing within the sector, the organisation came into official being in 1972 in Düsseldorf, Germany. Moving to Brussels in 2007 to sit closer to the EU's legislators, the organisation is now Europe's only recognised body representing the industry across the entire continent. At present, membership includes 14 national



associations, which themselves have hundreds of national members, 19 direct company members and seven affiliate company members.

FEICA's primary remit revolves around several core activities ranging from influencing European legislation and sharing best practice, to encouraging sustainable development and providing a networking platform for all members and industry stakeholders.

"We work with our members to create a powerful voice for the A&S industry in Europe, constantly seeking to improve the

economic and legal landscape," explains FEICA President, Steve Kenny. "In Brussels we're very close to where decisions are being made in terms of emerging legislation and are therefore able to represent the voice of multiple parties across Europe and, in turn, provide one point of contact for the legislative body to communicate with our members. It's a very effective two-way process, where communication and knowledge sharing is key in order to ensure everyone is aware of and understands what is going on in the industry."



The European adhesives and sealant industry

In 2014 the market for adhesives and sealants in Europe was worth €13.4bn, with the largest share of this residing in the construction industry where 29 per cent of all A&S sales were made. Predominantly made up of SMEs, hundreds of manufacturers are managing product portfolios varying in size from just a few products to thousands, each specialised to serve the needs of a broad variety of applications within the construction industry as well as numerous other sectors.

"The opportunities for A&S in the construction industry are huge," Steve outlines. "In a construction environment, what contractors and clients want is to move as fast as they can, as safely as they can, and high performance adhesives and sealants are a key enabler of this. In addition, one of the big areas where A&S solutions are significant is in sustainable construction, as, although they often only make up around one per cent of a building's materials, they enable for the incorporation of a whole host of different types of materials that may have a much larger impact on a building's sustainable credentials."

Sustainable development

Across Europe, and indeed around the world, the demand for more environmentally sustainable buildings is rising all the time. Publicly funded buildings, in particular, are increasingly looking to achieve recognition through sustainable certification from bodies such as BREEAM, DGNB, HQE and LEED, to name but a few. However, in order to achieve such credentials, many certifying parties now require extensive information on building materials, such as life cycle analysis, eco-balances and emissions. In line with this, additional pressure is building from architects and contractors for more products that meet international sustainability standards, and various national legislatures are also starting to require products to demonstrate an environmental awareness.

"Legislation is one area that becomes very challenging for the A&S industry and is one we believe we are helping our membership address proactively," Steve highlights. "It's about understanding how sustainable development and construction standards are being pushed and how we can best position ourselves as an organisation to support our members. Making

sure they are current on the latest practices, needs and standards in the industry is what we're here for."

However, with legislation comes complexity, especially when applied to such a diverse industry, which operates across multiple nations and working bodies. "On a European level, legislation around sustainability can be very unclear and there are several aspects that are still developing and are constantly evolving," examines Jana Cohrs, FEICA Regulatory Affairs Manager for the Construction Working Group. "We try to help our members to understand and interpret it correctly, and where possible, find a common ground so that we all understand it in the same terms. Each member state is different, with their own national systems, and in applying them to different climates, building environments and traditions, this adds another layer of complexity."

Environmental Product Declarations

One such area where legislation is posing a particular challenge is in the need for products to display Environmental Product Declarations (EPDs). EPDs are a type-3 eco-labelling system describing in extensive detail the complete product lifecycle analysis from the sourcing of raw ingredients right through to the disposal of an end product, and expresses a product's environmental impact in clear quantifiable terms. Historically, only two types of EPD have been available to manufacturers: a standard EPD, which only applies to an individual product, or an average EPD, which applies to a specific group of products. However, both of these are limited in the range of products they cover and mean that new products and innovations will often have to acquire their own EPDs at huge effort and expense.

"The need to develop a more

appropriate approach to EPDs for the A&S sector started in Germany, where the industry anticipated a growing demand from architects and contractors needing more choice of adhesives and sealants that would lead to the most sustainable buildings," Jana says. "However, a lot of A&S companies tend to be SMEs with large numbers of products and lack the expertise to implement EPDs. This requires the use of an external consultancy, which can cost from several thousand to several tens of thousands in euros per EPD, so is too expensive for many."

Dr Heinz Werner Lucas, an expert on EPDs at FEICA outlines the findings of an official FEICA survey taken amongst construction A&S manufacturers, which indicate the developing conditions for EPDs in the construction industry. "Out of 67 respondents, more than 90 per cent agreed that EPDs are becoming more and more important in the European construction sector," he details. "They agree that a growing number of customers are demanding EPDs for products that will be used in sustainable building programmes, and that, consequently, the existence of EPDs already is, or will become, a precondition for a certain portion



of their business; and finally, that the combined administrative, technical and financial efforts to create company specific EPDs for individual products or product groups are high and often require a consultant. This results in a clear and very high interest in finding a cost effective solution."

With early demand originating there, it was a partnership of three German organisations that first sought to find such a solution. Deutsche Bauchemie e.V. (DB), Industrieverband Klebstoffe e.V. (IVK) and Verband der Deutschen Lack- und Druckfarbenindustrie e.V. (VdL) joined forces to develop a third type of EPD: the model EPD. Unlike standard and average declarations, model EPDs are structured according to chemical

composition and cover all products within a certain range of formulations and applications. Each represents the worst-case product within their group of representative products, and therefore allows any product with an overall lower environmental impact to be covered. However, the German model EPD system was only accessible to German members of the associations and for products produced in Germany, so it was up to FEICA to take the approach and implement it across Europe.

In October 2015, FEICA decided to take the approach to Europe. The model EPDs cover the five core product categories within the European A&S industry as follows: reaction products based on epoxy resins, reaction products based on polyurethane resins, polymer modified mortars, dispersion based products and silicone based products/sealants. Using one of the most experienced consultants in the field, Thinkstep, the EPDs were developed using European Standard ISO 14025 and EN 15804 as a basis. Critically, whilst they have been developed and paid for by the associations, EPDs are easily accessible and free to use for all members.

"The benefits of such an approach are plenty," describes Heinz Werner. "For the A&S manufacturer they are faster and cheaper than individual EPDs, a large spectrum of products is covered, it makes producers aware of the environmental impact, they are valid in the whole of the EU, and it is left open for new products and companies to be covered in the future. For the legislators and programme operators it is a practical solution for SMEs, with it being based on a worst-case scenario there is no risk of 'greenwashing', it allows a broader selection of products to be used for sustainable building, and can contribute to the discussion of harmonisation of EPDs in the EU member states."

It is indeed a major step



forward for the A&S industry as the European construction sector increases its demand for sustainable building materials. Despite this, Jana explains that there is still a lot of work to do: "The lack of mutual recognition of EPDs within European member states also affects the model EPDs. We are still in the early stages of the initiative and because there are so many member states and programme operators involved it is important that we continue building up knowledge and distributing information throughout our network to make sure everyone understands the approach. However, we have had some very positive feedback so far, and whilst it will likely evolve over time, the key thing is that we have achieved an approach that makes sense for our industry and contributes to our positive environmental impact.

"As an industry association, what we're doing is grappling with a very complex area where a lot of demands are being put on our membership," Steve says, summarising the importance of FEICA's approach to EPDs. "There are hundreds of our members who are involved in one way or another in construction, and we're trying to come up with something that is comprehensive, simple and meets the needs of those building the end products, the legislators and the members so we can demystify and simplify the process. Otherwise, as we have said, it's an extremely expensive and time consuming process to generate EPDs on a product-specific basis, particularly for some of the members who are very heavily involved in construction, and that's really why this initiative was born."

OCF Standard Test Methods

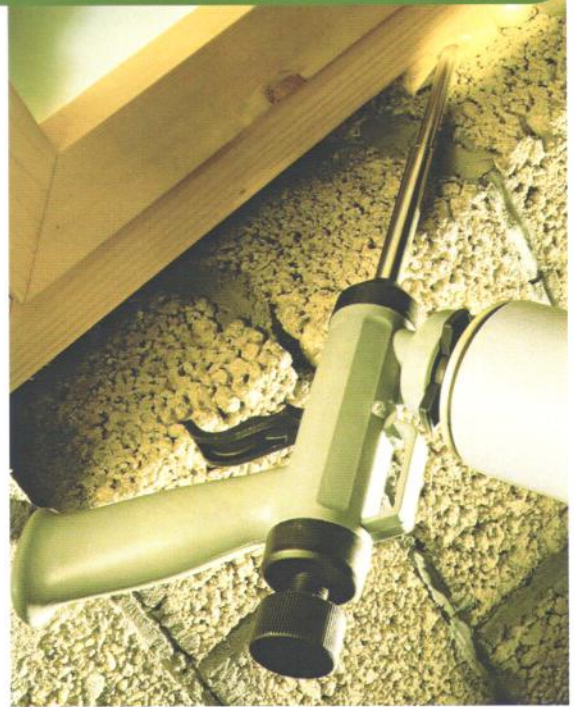
If the European model EPD initiative demonstrates anything it's that FEICA is totally committed to providing practical and cost effective solutions to its

members in order to encourage continued development and competitiveness in the industry. Ensuring the A&S industry continues to deliver quality products and detailed information to its customers has also been the theme in the development of standard test methods for one-component foams (OCF).

"OCFs play an important role in the construction industry by improving energy efficiency and helping to create a more pleasant environment," Steve outlines. "They bring significant benefits to window and door installation tasks and connect, provide thermal and acoustic insulation, and render joins airtight, while still allowing water vapour to migrate. Quick and easy to use, OCFs are typically supplied in convenient pressurised containers and are extruded on-site. Application takes a matter of minutes and they usually cure in little over an hour.

"However, a key challenge faced by the industry had been the lack of official standards for the verification and comparison of OCF products. Although there are many standards available for polyurethane (PU) foams, most are not appropriate for OCFs because they were developed for manufactured, cured PU foams. As a result, they do not give a reliable indication of the quality of an OCF because they do not take into account the application process, which has a huge bearing on its ultimate quality."

To solve the issue, FEICA set up an OCF Technical Working Group to develop a new range of standard test methods that deliver realistic and reproducible results for OCF products. All companies represented in the Working Group have committed to using these standard methods to evaluate and communicate the various properties of their products, such as foam yield. In addition to this, customers can now rest assured that the data they read on product packaging and in literature provides an accurate



and honest representation of the product performance, allowing a reliable comparison of different OCF products. "Crucially, this has not only improved the overall quality of the products but has also created a level playing field for companies," Steve adds.

Moving forward

"The future for FEICA will continue to centre on further strengthening the quality and performance of the A&S industry in Europe," Steve maintains. "We have a long term strategy that revolves around six focal points: compliance, representation, sustainable development, communication, networking and operational excellence. Driving improvements and encouraging proactive engagement across all member states in all of these areas will remain core to what we are doing. As we are funded by our members, the need to operate efficiently and to focus on matters that are important to our members is essential. Listening to our members, engaging in constructive dialogue with them and ensuring we effectively manage the use of resources and prioritise our activities based on the membership's best interests will underpin everything FEICA does long into the future." ○

www.feica.eu