

# EuroBulkSystems

The European journal for in-plant handling and processing of powders, granulates, pastes and liquids

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Germany-based bulk logistics operator Steinkühler has taken delivery of a Dino Silverline road tanker loader at its Krefeld site (see p5). The machine, made by Van Beek of the Netherlands, allows the contents of bags and bulk bags to be loaded into the vehicle quickly, cleanly and safely. Previously bulk bags were discharged into the tankers from above, by means of a forklift, but this involved workers climbing on top of the vehicle. Now the operation can be achieved much faster at ground level.



Earlier this year Matcon moved to a prestigious, larger new head office building which also houses an advanced test plant, equipment assembly space and conference facilities all under the same roof. On p8 managing director Charles Lee explains how the company has continued to expand over the past 30 years, diversifying into other areas of powder handling and processing while continuing to develop and refine the cone valve IBC technology for which it has become world famous.

Recent installation of a series of stainless steel flexible screw conveyors from Flexicon at the US food manufacturing plant of MaraNatha, which makes organic and natural nut butters, has helped increase output by as much as five-fold. The flexible screw conveyors replaced bucket-type conveyors which were proving very time-consuming to keep clean to the high standards required at the plant. On p12 we examine the respective merits and drawbacks of different types of mechanical conveyor for in-plant bulk handling applications.



As mentioned briefly in our January/February issue, Gericke has introduced a new wear-resistant cone valve for pneumatic conveying of abrasive materials which is rated up to 10 bar g. It is designed to operate effectively with high-temperature products and is capable of closing completely in a pressure-tight manner against full product flow of materials such as cement, sand and aluminium oxide. On p11 we outline latest developments with valves and diverters for dry bulk applications.



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## IN THIS ISSUE

### Market Intelligence ..... 2

Latest news concerning European bulk processing facilities: new projects, plant closures, amalgamations, etc

### News ..... 3-7

Schenck acquires Clyde Process Solutions; Braby delivers 5000th silo; Schütz builds new Scandinavian IBC manufacturing plant; Romaco Group sold to DBAG; Coperion wins €100M Middle East contract; GEA Pharma Systems signs Nordic agency agreement; laboratory analysis into how powders segregate during handling

### Interview ..... 8

Charles Lee, managing director, Matcon, UK

### Focus on valves and diverters: latest technical developments and some novel applications ..... 11

### Choosing the right in-plant mechanical conveying system ..... 12

Evaluating the respective merits of belt conveyors, bucket elevators, screw conveyors, aero-mechanical conveyors, vibratory conveyors, flexible spiral conveyors, and tubular drag conveyors for moving materials over short distances

### New equipment ..... 14

Contamination-free flexible docking system; frequency converter for bucket elevators; fast and easy moisture measurement; filling bulk bags under clean-room conditions

# Lean manufacturing is applied to powders handling

*Matcon, which over the past 30 years has uniquely pioneered and developed the cone valve IBC system for powder handling, has at the same time been expanding into related areas such as micro ingredients formulation and business-to-business packaging. Earlier this year the company relocated to elegant and significantly larger head office facilities from where it controls its worldwide operations while continuing to develop new advanced powder handling and processing systems. Managing director Charles Lee outlines his company's modus operandi and business priorities to EuroBulkSystems managing editor Richard Miller. He explains that Matcon's recent international reputation as a leading exponent of lean manufacturing was acquired more as a direct consequence of its customers' adaptation of Matcon technology, rather than any grand strategic plan.*

**Richard Miller: Matcon has just moved into new head office facilities in Evesham. To what extent are these superior to what you had previously at Moreton-in-Marsh?**

Charles Lee: Our former premises in Moreton-in-Marsh and our factory at Blockley served us well for many years but had become cramped, tired and run-down requiring considerable upkeep. Our new facility in Evesham is modern, spacious, clean and fully equipped with state of the art equipment and services designed to meet Matcon's requirements well into the future. Very importantly we have now combined all parts of our UK operation under one roof which is a huge operational benefit delivering immediate efficiencies. Evesham has a good road and rail infrastructure and has easy access to Birmingham airport. The town and surrounding areas provide an excellent pool of talent from which we find it quite easy to recruit.

**RM: Your company has subsidiaries around the world, many with their own test plants. Are these subsidiaries all wholly owned?**

CL: To design, commission and support our powders handling systems requires a very close and detailed relationship with our customers, which has to be sustained and supported over many years. The vast majority of our customers are overseas and to support them properly we like to have our own skilled team in place locally. To that end we have established our own wholly owned companies in most of the key geographical markets. These are typically small business units that have sales and service capability. Where we don't have our own team on the ground we have a network of trusted agents and partner companies to help provide the necessary service and support to our customers.

**RM: Do manufacturing and R&D activities take place at any of your subsidiaries, or is this centred on the UK?**

CL: We have an extensive supply chain that stretches throughout UK and mainland Europe. However, all manufacturing activities are controlled centrally out of UK to enable effective and efficient management. Our R&D programme is driven primarily by input from customer requirements and on-site experiences around the world but again is managed centrally in UK.



**Charles Lee, 48, graduated in 1984 with a degree in mechanical engineering from Trinity College Dublin. He held various engineering positions in food manufacturing and materials handling in his native Ireland before joining Matcon in 1991. Initially starting as sales manager for Ireland, then as manager in Scandinavia, USA and France, he relocated to the UK in 1995 and was appointed managing director in 1997. He has been a shareholder since 1995 and currently owns almost 13% of the company.**

**RM: Do you have any plans to set up additional subsidiaries – perhaps in India, South America or Eastern Europe?**

CL: India, South America and Eastern Europe are among the many exciting territories we are active in at the present time. If we find the combination of excellent market opportunity and most importantly the right people to employ we would certainly consider setting up new subsidiaries. Having said that we know from experience that it takes a lot of hard work to establish, manage and sustain an effective overseas subsidiary and we approach any such challenge with great care and respect. If we move too fast, spread our management too thinly or engage the wrong people it could be a costly and time consuming error.

**RM: Does Matcon operate 'strategic alliances' with other bulk processing equipment manufacturers, perhaps when seeking very large turnkey contracts?**

CL: Absolutely. Our turnkey solutions comprise a combination of our own proprietary technology and that of other strategic partners. Rather than re-invent the wheel by attempting to

develop our own copy-cat products we prefer to openly offer "best of breed" component modules and focus each party on their core competencies. To that end we work with many top tier partners who themselves are well recognised brands and leaders in their own specialist field. Generally customers appreciate knowing that key process equipment has a strong foundation and is independently supported. Of course Matcon manages the mechanical and controls integration and ensures the turnkey solution. Wherever possible we build complete systems at our own facility for comprehensive testing, together with the customer, prior to shipment.

**RM: Does your company have the 'financial muscle' to be lead contractor for a multi-million-dollar project?**

CL: We find it easy to finance projects that are well understood by all parties and correctly planned and specified from the outset. Matcon has a strong policy and an excellent track-record in successfully identifying, minimising and managing risks at all stages of our projects utilising thorough commercial and technical due diligence tools and regular reviews. We don't believe in masking risk through "blind" contingencies or buying contracts just to boost turnover. This is for the security and benefit of all our stakeholders including our customers, shareholders and the wider supply chain and service providers that support us. Our cash-flow, profitability and credit rating are in very good shape and we have fantastic support from our banking providers with whom we work closely and transparently. All of this allows us to flex our financial muscle as necessary to support the many multi-million dollar projects we undertake.

**RM: Throughout its 30 year history Matcon's success has been centred on the famous cone valve IBC system. Do you have any plans to branch into any new, unrelated areas of powder handling and processing?**

CL: Matcon holds the cone valve IBC system very close to its heart and this continues to play a central role in our success in powders handling

systems. The benefits it provides to customers have not diminished with time – in fact in many respects it is only now coming of age and achieving enormous recognition. However, given the nature of our integrated, turnkey projects the cone valve itself makes up only a small, albeit important part of our total solutions. We already have many new products and systems that are not related to the cone valve – for example in micro ingredients formulation and business-to-business packing.

**RM: Are certain aspects of your cone valve technology still protected by patents? Have you taken out any new patents in recent years?**

CL: Certain aspects of our cone valve and other technology are protected by patents and we will continue to invest in protecting our intellectual property as we go forward. Having said that as the company moves more towards turnkey solutions more and more of our competitive advantage is derived from our know-how, experience and methodology – none of which lend themselves readily to patenting. Our patent portfolio has thus become much more selective and focused in recent years.

**RM: To what extent is the German company AZO a major competitor? It also specialises in advanced powder transfer and processing technology centred on containers.**

CL: AZO is one of a number of well respected, globally active, turnkey providers of powders handling systems which would include Nucon, Reimelt, Gericke, Guérin, Noltec, J-Tec and others. Historically these companies have focused on continuous powder handling systems utilising various forms of fixed storage vessels and conveying. That is how they are best known and where most of their experience lies. Matcon's pedigree is in batch container based systems from the start and our experience lies in this specialist area. Other companies may try to add containers to their wide range of product offerings. However, to Matcon this is our core competence and the area where we focus all our



**Matcon's new Evesham headquarters which combine administrative offices, a well equipped test plant, assembly space and conference facilities on a single 2800m<sup>2</sup> site.**



**Charles Lee explains Matcon's "Flexibatch" automated recipe formulation system to delegates at a recent technical conference on lean manufacturing; the equipment was subsequently shipped to a US customer.**



**On the occasion of the official opening of Matcon's new head office on 18 February 2011, Charles Lee is pictured talking to Jim Bulman, mayor of Evesham (centre right) and Linda Robinson, chairman of Wychavon District Council.**

business development. To a large extent the market recognises our uniqueness in this respect and we seldom compete directly with any of these other players in our key target markets. On the contrary we occasionally even collaborate directly with these companies on the same projects – each fulfilling different aspects of the customer's overall requirements.

**RM: How crucial to the development of your company was the acquisition back in the 1980s of BULS (Bulk Unit Load Systems)?**

CL: The name BULS has long ago faded from Matcon's stage but without a doubt it was an extremely important acquisition for Matcon at that time and a vital stepping stone on our journey to success. In particular it brought the company rapidly into the pharmaceutical world bringing with it experienced people and good product concepts. Many of those people are still with us today and the concepts have been moulded and absorbed into the mainstream of Matcon's offering.

**RM: Do you think further acquisitions are on the cards for the future, or do you expect Matcon to expand organically?**

CL: Other than in the case of BULS we have not been inclined to grow our company through acquisitions. Our preference up to this point is to grow organically. Having said that if the right opportunity arose with strong strategic logic and most importantly the right people then we would not rule out the possibility.

**RM: I note that you have recently set up working relationships with Arotech Engineering of the Netherlands and with BFM Fitting of New Zealand. Do you plan to enter into any further similar accords or distributorships?**

CL: Arotech and BFM Fitting are only two of the many working relationships we have. As mentioned earlier our business model embraces the concept of "best of breed" and with this in mind we actively pursue strong working

relationships with partners who are themselves leaders in their specialist areas. We put great emphasis on trust in our partnerships and having owner or senior management commitment and flexibility on both sides to ensure sustainability through good times and bad. As regards distributorships, generally speaking we try to work directly with end-users and not through distributorships or other reseller channels. We find this approach much more effective, competitive and secure for customers and Matcon alike.

**RM: How important to your organisation are your test plants? Is there pooling of information and technology transfer between the Matcon test plants in different countries?**

CL: Customers don't really want to buy products – they want to achieve performance. Throughout our sales and operational process we place great emphasis on understanding our customers' performance goals and ensuring they are realistic and achievable. To this end we have made substantial investment in our test plants around the world, offering customers the opportunity to conduct full-scale testing of a wide range of our products. This is an absolutely vital part of our business and central to our policy of risk identification and reduction. The performance results and other lessons we learn from such testing are fed back to our management here in the UK and play a key part in our R&D and continuous improvement culture.

**RM: I believe you also provide rental units to allow customers to carry out trials on their own premises. Could you please provide further information about these rental units?**

CL: In addition to our test plants in various locations we have a number of mobile test units which can be shipped to customers for on-site testing. Typically this is focused on proving powder discharge and dosing capabilities. Sometimes this is on a rental basis where we



**Matcon's in-house test facility in the new headquarters which includes IBC equipment for minor and micro formulation, blending, consumer and B2B packing as well as washing.**

charge a nominal fee to cover our direct costs. Often the testing is a precursor to a significant project and any costs for testing can be offset against savings on the engineering element of the main project.

**RM: In recent years Matcon has championed the concept of 'lean manufacturing'. Could you please explain more about this and how it is likely to develop in future?**

CL: At the beginning of 2007 we discovered that most of our leading customers were actively pursuing the goal of lean manufacturing and in many cases had (without our knowledge) identified Matcon's IBC solutions as a means of making major advances in this respect. Some customers even considered the use of Matcon solutions as a strategic step to provide them with a significant competitive advantage in a very tough market place. Discovering ourselves in the middle of a lean revolution was quite a surprise – a little bit like going to sleep in your old bed and waking up in a new world. Since this discovery we embraced lean philosophy into our business plan and embarked on a journey of education and change in all areas of our business to align our work with the lean goals of our customers. Our sales and operations teams now have a growing understanding of what drives our customers and this in turn guides us in providing lean solutions. As we engage with more and more world class manufacturing customers we find ourselves learning more and more about

best practice and smart manufacturing and in turn applying this to fresh opportunities as they arise. As for the future, we will remain solidly on the same path of continuous improvement – which is a never ending journey.



**Matcon's "Flexibatch Micro" automated micro-ingredients formulation system in the test plant at the new HQ.**



**"Flexibatch" automated recipe formulation system undergoing factory acceptance tests before despatch to a customer in Africa.**

**Matcon at a glance:**

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	Tel: + 44 1386 769000 Fax: + 44 870 1911116 Email: info@matconibc.com Website: www.matconibc.com
Subsidiaries:	USA, China, Japan, Australia, Germany, France, Sweden and the Netherlands. Agents and partner companies throughout the world.
Total staff:	120
Key executives:	Charles Lee, managing director Paul Cooper, sales director Hans Pettersson, sales director Dave Cooper, operations director John Thompson, finance director
Turnover:	£20.7M in 2010
Founded:	1980
Expertise:	Lean and green manufacturing in powder process plants. Design and supply of turnkey, IBC-based solutions for batch and semi-continuous production. Emphasis is placed on detailed audit of customers' current state and their ambitions for a future state, taking into account commitment, skill levels, budgets and other key drivers with the goal of devising a lean solution that is appropriate and sustainable.
Main industries served:	Food, pharmaceutical, renewable energy, chemical, plastics, metal powder, friction materials.