ORACLE

Journal of the Institute of Sheet Metal Engineering

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The Oracle, mouthpiece of the Institute, speaks for and to the world of Sheet Metal Forming & Pressworking by way of featuring News, Views and Topics around the Industry

Institute of Sheet Metal Engineering

The Metal Machinery Makers Association

GOLD MEDAL DINNER DANCE

Friday 11th May 2018

At The Copthorne Hotel (Merry Hill) The Waterfront, Level Street, Brierley Hill, DY5 1UR

For Tickets

ISME Members & Guests please contact:
Adrian Nicklin 07774 260126 / adriannicklin@btinternet.com

MMMA Members & Guests please contact:
Bill Neal 07725 277590 / billneal@mmma.org.uk

Evening Itinerary

Guests arrive at **6.30pm** for reception

7pm Dinner served

8.15pm Guest speakers **Pete Waterman OBE**
and ISME Gold medal presentations sponsored by Sertec.

Approx. **9.00pm till 11.00pm** music by The Carl Sinclair Band

Bar till **Midnight**

Hotel Rooms are available, please contact hotel direct
reservation code, ISME 11-05-18 (£85 per double room)

Dress Code is Black Tie

This is a members, partners and invited guests event.
Tickets can be booked on an individual or company basis.
Tables will cater for 10 persons.
Booking form will be online at the beginning of December.

Invites & Ticket Sponsor
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From the President

Dear Reader,

There has been a lot of speculation recently about the extent to which robots are beginning to encroach on occupations and activities previously thought to be immune from their march.

If, like me, you can't wait for one of the clever little fellows to come along take over all the tasks you hate, or even if you have concerns regarding their seemingly inexorable progress, you might like to ponder on the following,

It's Been 100 Years and the Robots Still Haven't Taken Over – an essay by Roslynn D. Haynes, posted on the www.lithub.com website.

I recommend it as a really informative read which delves into the history of robots, where the word "Robot" comes from, and the way robots have been portrayed in books and films since the term was coined over 100 years ago.

Alternatively of course, you might prefer to stick with this issue of Oracle, which I am sure will prove just as enlightening in its own unique way.

Warm Regards,

Alan Shaw - President

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SERTEC **PROUD**

From the Secretary

Dear ISME Members,

Writing these notes with an outside temperature of -4C and the country in the grip of The Beast from the East it seems strange to think that they are for inclusion in our Spring edition. Hopefully by the time you read them the sun will be shining and the cold snap will just be a memory. However, there's been plenty of activity in ISME to keep us busy. You will read elsewhere a report of the fascinating works visit to Martin Robey Ltd and another successful Meet the Experts day at the Thinktank.

At our October Council meeting an idea to revive the Annual Dinner Dance in partnership with our colleagues at the MMMA was presented and unanimously accepted. The two organisations been working hard together to make the event a great night out and a chance for the industry to celebrate its success and contribution to the UK economy. A major coup in acquiring Pete Waterman as our guest speaker has been achieved and the announcement that Ray Jelf will be awarded the ISME Gold Medal has been very well received. We are further delighted to announce that The Sertec Group have very kindly agreed to sponsor the Gold Medal Award. All this has contributed to us already exceeding our target of 150 ticket sales and moving to a larger room with a capacity of 300. Please contact Adrian Nicklin or Bill Neal if you haven't already booked your place.

This year's ISME Skills Competition will be held at the Black Country Living Museum. Adrian Nicklin has a knack of finding iconic venues for the Competition and let's hope it encourages even more young people and their companies to submit entries. If you'd like to help out on the day, please let Adrian know.

Also, at the October Council meeting it was decided to update our web site with a complete make over and to also set up Facebook and Twitter links to help us make more contact with the younger generation. Full details will be the next Oracle.

Notice is given of the 73rd Annual General Meeting

of The Institute of Sheet Metal Engineering

to be held on

Thursday 19th April 2018
at 12.00 Noon prompt

at the offices of

Regent Engineering Company (Walsall) Ltd.

Unit 3-4, Darlaston Central Trading Estate
Salisbury Street, Wednesbury. WS10 8XB

Member News: Dave Gilbert

Further to his former employer falling into administration last year, ISME member Dave Gilbert took the brave step of starting his own sheet metal subcontracting business, DGFabs. After a successful first 12 months, Dave has decided to launch a range of his own products to expand his business. Here is his account of the development.

My new 'products' company will specialise in 'outdoor entertainment in metal' and include outdoor woodfired ovens, outdoor bars, gazebos and associated products.

All are designed and built in house using 'old school' sheet metal pattern development to find the best shape and size of the internal stainless-steel ovens, the most useful and practical materials. The ovens are made up of aluminium, stainless and mild steel, with the manufacturing process including Guillotining, Punching, Rolling, Press braking, Mig Welding, Tig Welding, Spot welding and riveting.

The oven product is a fantastic example, which encompasses all sheet metal working, updated from simple handmade prototypes and old fashioned marking out of each piece, into a cad certified and CNC made product. In Sheetmetal terms it's a masterpiece! In real terms it's a simple wood burning oven - albeit, the best you can buy.

For more details look at Dave's new web site gilbertowoodfiredovens.com

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ISME at Thinktank
"Meet the Experts Day" February 2018

Each half term the Thinktank in the Birmingham Museum, Millennium Point hold a Meet the Experts Day where large companies and Institutions are invited to hold an exhibition with an intent to engage young people into engineering and in STEM subjects generally. Experts showed various aspects of engineering, primarily from their own work experience. This was often in the form of interaction with the parts being shown. Companies were encouraged to bring along various examples of engineering parts and be prepared to talk about these and how they are used within their industry. Items with which the children can "play" – dismantle – build – explore – etc. are particularly welcome.

ISME was represented by Sertec, Radshape with Bentley radiator grills, Midland Power Press Services and model maker and engineer Alec James. Our friends from IMechE Midlands were also with us.

On the Sertec stand toolmaker apprentice Rhys Bowman and technician apprentice Alex Pugh showed their work pieces from last year's ISME Skills Competition and components made by Sertec for JLR. They talked to the visitors about the opportunities in engineering, sharing their own experiences as apprentices.

ISME's good friend, Alec James with his colleague Chris, again showed some of the excellent models he has built including a rotary engine, radial engine and a Congreve Ball clock. Watching the rolling ball fascinated children and parents alike.

The Thinktank is usually busy at half term but the event was held on a sunny day and footfall in the Thinktank was down on previous years as parents took advantage of the sunny weather to visit outdoor events. However, the number visiting the ISME stand was up on last year, with parents and young people taking a particular interest in the Ball Clock and MPPS videos. Many long conversations were held with children and their parents, which made it a very rewarding day.

The Institute was supported on the day by Adrian Nicklin, Bill Pinfold, Mark Whitcomb and John Davis and our thanks also go to Steve Morley and Judith Bagley of Sertec for supplying the stand and encouraging their staff take part and engage the engineers of the future.

A long but very rewarding day and hopefully we will run the event again next year with an even bigger and better display.

- *Presswork up to 700 Tonnes Capacity*
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- *Assembly*

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Ever considered a career in making sheet metal components?

Sheet metal components are in lots of things that we use every day and we cannot do without, in exciting sectors including:

automotive
catering
railways
retail
aerospace
construction
surgical
white goods
...plus many more!

A sheet metal or a pressed sheet metal component is a product of a highly skilled team – one that you could be part of.

Like all successful teams, all members contribute into ensuring the product meets the customer's requirements. As part of this team, you could work with:

- product designers
- prototype makers
- tool process design engineers
- estimators
- computer-aided engineering (CAE) engineers
- toolmakers, tool setters
- tool and die maintenance technicians
- quality technicians
- shop floor production technicians.

At the Elite Centre for Manufacturing Skills, we offer a range of exciting apprentice and CPD training options which can lead to skilled and rewarding careers.

Image supplied by HT Brigham

You will be taught in our unique, purpose-built training workshop which includes a mini press-shop, die maintenance area, as well as classrooms and computer-aided engineering lab.

Apprenticeship pathways

There are many options in the metal forming sector. With apprenticeships available related to taking products from a prototype component, through to high volume manufacturing processes.

Tool and Die Maintenance (Level 2-3)

When press tooling is making lots of components to meet customer volumes, the skills of the tool and die maintenance person are needed to bring the tool back to standard to meet the next production run ASAP.

As a skilled tool and die maintenance worker, you will learn to recognise the problem from the last component made and make a decision on what needs to be done – whether to regrind cutting edges or replace a worn out or broken cutting or forming die. In most cases this has to be done under pressure from the production team, and needs you to work in the most efficient way. Your machining, hand work and grinding skills are essential in this occupation. The position also requires an element of administration to keep maintenance records up-to-date and creativity doing tool improvements to increase longevity. The position gives you the ideal opportunity to move to Level 3 Toolmaker.

Toolmaker (Level 3)

Toolmakers have the ability to work with a computer-aided-design (CAD) drawing and models to make a press tool that makes a pressed metal component in line with customer design and specifications, making sure that the correct tool materials are used.

You will have the ability to hand machine the tool components to size and shape, or Computer Numerical Control (CNC) machine the tool components. Once all the tool components are made and heat-treated you will be responsible for assembling the tool, checking fit and alignment, and fitting to the power press for tool trails and adjustments to ensure the size and shape is correct. Together with the tool designer, toolmakers are responsible for ensuring the tool meets the expected run at rate. This is an exciting, challenging occupation. Completing Toolmaker Level 3 can allow you to progress to Level 6.

Image supplied by GMS Services

Tool Process Design Engineer (Level 6)

Tool process design engineers have the ability to create a process that takes prototype components into full economically viable mass production. The role requires the ability to understand complex technical capabilities at the product level and then can move to full mass production without disrupting existing processes and tooling schedules while running the new development in parallel.

As a tool process design engineer, you will lead on activities ranging from early concept feasibility, computer-aided-design, trialling and modelling activities, through to full production in time for the prescribed launch and customer schedule. This includes re-balancing existing production commitments testing and analysing impact on both human and machine resources. You will develop a detailed knowledge of metallurgy, metal forming and cutting processes including power press regulations, working closely with customers and senior managers to bring efficient high volume pressed components into full production meeting all quality, cost and volume delivery requirements.

Image supplied by Impression Technologies

Continuing Professional Development (CPD)

In addition to our apprenticeship programmes we offer a wide range of CPD training tailored to your needs.

Upskilling bitesize training will be available through our training workshop facilities in:

- mathematics
- problem solving
- process design, fixture design, computer-aided-design (CAD) tool design
- power press selection, setting and maintenance
- press tool design principals, handling lifting and splitting
- measuring techniques including statistical process control (SPC)
- single-minute exchange of dies (SMED)
- geometric dimensioning and tolerance (GD&T)
- introduction to sheet metal processes
- introduction to forming simulation
- material utilisation
- health and safety in the tool room
- tooling repair techniques
- estimating, quotation analysis, capacity planning.

For more information about how our apprenticeships and training can transform your career, contact the Elite Centre for Manufacturing Skills today!

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enquiries@theecms.co.uk

theecms.co.uk

ECMS is a collaboration between the Black Country Local Enterprise Partnership, the University of Wolverhampton, Dudley College, Cast Metals Federation, Confederation of British Metalforming and Institute of Cast Metals Engineers.

OMERA Trimming & Beading Machines

The real innovation in OMERA is the constant improvement in the plant and equipment. Since the 1960's the OMERA brand has become synonymous with "Trimming - Beading machines".

Products and solutions offered by Omera were improved during the years following all the market challenges in manufacturing.

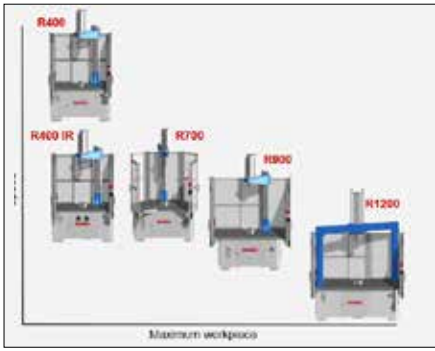
Omera's heritage and reputation is written in terms of customers' satisfaction: machines that are still working perfectly well after decades of manufacturing and machining problems easily solved.

The trimming process, as well as the related operations such as flanging, curling etc., is quite simple but requires time.

When a Trimming - Beading machine needs to be added to a production line, which includes a "fast" Press, it is necessary to consider the difference levels of productivity between the Press and the Trimming - Beading machine.

Producing Trimming - Beading machines means creating a new design specification for each machine. The material behavior during the deformation or blanking operation, the definition of the required tolerances and repeatability are all considerations on a customer by customer, project by project basis. Every machine built increases our knowledge. It is important to achieve the desired result for our customers, ensuring the "experience" is always positive.

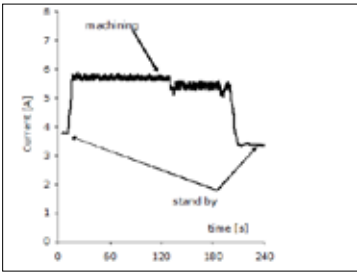
The slides in the machine are moved by pneumatic, hydraulic or electric units. Each process is analyzed and studied, and every solution has the target to assure quality, efficiency and flexibility according to customer's ideas.



Our wide range of solutions leads to a unique portfolio and make it possible to fit any request, for any customer.

Our experience based on years of tests, prototypes and simulation enables us provide the proper solution for different machining processes.

The testing trials with Customer in attendance are part of the machine pre-shipping procedure.



Concerning the energy management, OMERA supply spindles equipped with inverter performing Start & Stop.

The power consumption for basic pneumatic, hydraulic units solutions are optimized in their sizing and pressure management assuring a high Energy Efficiency.

The Brushless units assure the best energy efficiency performance; regenerative drives available for multi axis machine, allowing to exchange power feeding and power braking on a common power line optimizing energy balance.

In addition, the OMERA approach to safety issues represents a unique case in this market. Safety is not a secondary problem for Omera designers. The collaboration of a Certified Body allows us to develop the correct safety standards. These efforts lead to the reduction of braking time for spindle and unit axis, improving operator comfort. Safety on board drivers guarantees SIL3 safety level. On request, specific risk analysis can be supplied for special machines.

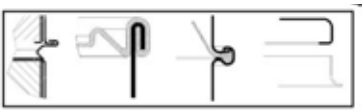
To reduce the setup time, all machines are provided with a rapid tool configuration. We can ensure rapid die changing by the movement of slides positons using brushless technology or simple electric motors. This technology is also available for presser, automation, centering units, etc.

Our portfolio also includes CNC machines.

Specific CAD CAM is developed by Omera. Starting from tool-path on CAD drawing we go through CAD-CAM to the machine control system.

Thanks to our wide standard portfolio, we provide a wide range of solutions assuring a perfect ratio between costs and performances in several metal deformation processes, from a basic-manual to highly-automated solutions for optimizing customer's investment plans, assuring customized solutions for specific needs.

Technological Solutions For Sheet-Metal Working



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New lightweight solutions can increase the range of electric cars

AP&T, which develops production solutions for the car industry with focus on weight, safety and energy efficiency, believes that new opportunities for the design and manufacture of lighter car components can give the next generation of electric cars the range needed for a true breakthrough.

Reducing vehicle weight has been a priority for the world's car manufacturers for a long time, since lower weight results in lower gasoline or diesel consumption and thus also lower emissions of climate-damaging carbon dioxide.

Replacing conventionally manufactured body parts with parts made of press-hardened steel, which is both strong and lightweight, has proven to be a relatively easy way to reduce weight without compromising safety. Most manufacturers today already have the first wave of weight-savings measures under their belt. However, efforts to reduce weight continue at the same rate that emissions standards are becoming more stringent, which means that designers of the next generation of cars are faced with new challenges.

AP&T has been developing production solutions for press hardening since the beginning of the 2000s, and is currently one of the dominant players in the market. The company is responsible for over a fifth of all press hardening lines installed for car manufacturers and component suppliers around the world.

"The press hardening solutions we are currently developing are much more sophisticated and provide completely different opportunities than previously. By using advanced press control, each part can obtain the exact qualities required. For example, soft zones can be added to a part," says AP&T Director Business Development and Marketing Per Josefsson.

For the next major step aimed at weight savings, however, replacing a part with a corresponding one made out of a different material will not suffice. According to Per Josefsson, a broader overall perspective on material selection, manufacturing method and design is needed to achieve an optimal solution. AP&T calls this a holistic approach.

"We can take a regular B-pillar as an example. Many manufacturers today use B-pillars made out of press-hardened steel. Instead of replacing the material in that part alone, it might be better to choose an entirely different design. The entire car door ring could be manufactured in one piece out of high-strength aluminum, for example, which combines high strength with much lower weight than steel can offer. Doing so would provide a rational production process and major weight savings."

In autumn 2017, AP&T presented the world's first production line for manufacturing complex-shaped car components out of high-strength aluminum specifically. The innovation has received a great deal of international attention, and has received both the Altair Enlighten Award and the SIQ Quality Innovation Award.

The new possibilities to design and manufacture components out of lighter and stronger materials enable a new wave of weight savings, which can subsequently greatly boost the development of electric cars.

"The driving forces for continuing to reduce weight are strong regardless of the propulsion system, but the most exciting development is in electric cars. More lightweight solutions in cars mean fewer batteries are needed to achieve greater range, which is precisely in line with market demands and what is needed to speed up the transition to a more sustainable transportation sector," says Per Josefsson.

RADSHAPE

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Institution of MECHANICAL ENGINEERS
Improving the world through engineering

MIDLAND POWER PRESS SERVICES MPPS

APT
AUTOMATION PRESSES TOOLING

BAUROMAT

babcock

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I S M E

Institute of Sheet Metal Engineering

Presents

The 2018 ISME

Sheet Metal Technology Competition

FOR APPRENTICES & TRAINEE'S

Judgement Day to be held at:

BLACK COUNTRY LIVING MUSEUM

On Thursday 14th June, 2018

Tipton Road, Dudley. DY1 4SQ

ISME Forward

First of all we want to thank The Black Country Living Museum for hosting the ISME 2018 Competition.

The Institute of Sheet Metal Engineering is a learned body with individual membership open to those employed in the sheet metal and associated industries.

It was formed over 60 years ago to promote the science of working and using sheet metal and to provide opportunities for people to exchange ideas and information.

We also encourage the development of members by providing networking opportunities and creating an institute that people in the industry aspire to join. The encouragement of the development of sheet metal working skills in young people through the annual Sheet Metal Skills Competition is very important to the Institute.

The Institute has a student grade membership of £20/year for which you will receive copies of the ISME Journal, Oracle which keeps members up to date with the latest developments and events in the Sheet Metal Industry.

Students Joining on the day of the skills competition get the first years membership free. For details of membership please go to; **www.isme.btck.co.uk**

BLACK COUNTRY LIVING MUSEUM

What we are all about

Something magnificent and profound happened in this part of the UK. Its impact was felt the world over, as modernity took hold, creating fame and admiration for the Black Country.

The story of the Black Country is distinctive because of the scale, drama, intensity and multiplicity of the industrial might that was unleashed.

It first emerged in the 1830s, creating the first industrial landscape anywhere in the world. It is this that we rejoice in and want to share with you.

The award-winning corner of the West Midlands is now one of the finest and largest open-air museums in the United Kingdom. After very humble beginnings, a bright idea and 40 years of inspiration, this is twenty six acres worth exploring.

Amazing as it may seem, we have created a 'place' - a real and lively place, where once there was nothing and nobody. With a village and charismatic residents to chat with. Trams to ride. Games to play. Things being made. Stories to hear.

People - their triumphs to admire and troubles to be thankful that are not ours. Time to be well spent.

The ISME Competition Detail

The **Sheet Metal Skills Competition** provides great opportunity for young apprentices & trainee's to measure their skills against others in the sheet metal and pressed metal industry. To be the overall Winner of the ISME Trophy you must enter one of the test pieces and also provide an open class exhibit.

- All the drawings are on isme website (www.isme.btck.co.uk) along with the marking assessment forms. If you require CAD models - contact: **adriannicklin@btinternet.com**
- The entry should include a written account (Plan) on how and why the various making techniques were chosen and applied.
- The types of machines and tools used with H&S consideration must clearly be stated and if you wish include photo's.
- Every entry should included a self hand written 200 words about yourself.
- We expect the competitor to self validate Test Piece dimensions and record on the Marking Assessment Form being part of the Written Account.
- The Test Pieces will be judged as per the Marking Assessment Form. The Open Class work piece will be judged as per the Marking Assessment Form.

Please Note:

- The item entered should reflect the training level of the Competitor.
- Their trainer must confirm the competitors level on the entry form.
- The age of the competitor must stated on the entry form.
- All entries should be clearly labelled with competitors name and DOB preferred on inside of item.
- ALL COMPETITORS WILL RECEIVE FREE OF CHARGE 1 YEAR ISME MEMBERSHIP

entry forms can be downloaded at www.isme.btck.co.uk

To enter the competition, please complete the Entry Form.

Please complete an entry form for each competitor.

Entry forms can be downloaded at www.isme.btck.co.uk

Any queries please call 07774 260126

HARE

PJ Hare Ltd are leading UK manufacturers of hydraulic and hydro-pneumatic presses (1 to 400 tons), assembly tooling and integrated bespoke manufacturing solutions.

We design and manufacture a range of solutions which can offer speed, reliability and "zero defects" through 100% in process inspection and full poke yoke. Hare Tooling solutions integrate leading edge measuring and sensing components with system control to ensure that the highest quality is maintained.

P J Hare aim to exceed customer expectations and work with a diverse cross section of the World's leading automotive, aerospace and manufacturing companies.

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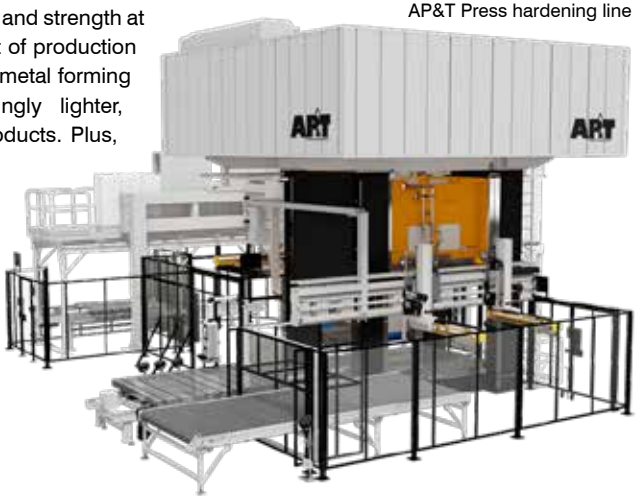
MACH 2018 Hall 20 Stand H20 - 327
MMMA Metalworking Village

The MMMA's Metalworking Village located within the MACH halls, will certainly attract a lot of attention. With 25 Members exhibiting their machines, products and services, in over 500 square metres. Some Member examples of technology on display include:-

PJ Hare will have their C frame and a 4 column presses on display. With an invitation to join them on the stand for a coffee to discuss finding a solution to your pressing issues.

AP&T are focussing on Light weight and strength at MACH. They remain at the forefront of production technology solutions that allow the metal forming industry to manufacture increasingly lighter, safer and more energy-efficient products. Plus, lots of other complete production solutions for roof drainage systems, heat exchangers, air ducts parts etc.

AP&T Press hardening line



Oerlikon Balzers, will be demonstrating their 'Tool life increase by more than six times' The Oerlikon Balzers BALINIT FORMERA PVD coating applied to a forming steel has proven to extend the press life of a tool by over 600%.

TMA, will be exhibiting one of their new range of World Group Presses with the latest PILZ safety control and light guards, Helm load monitor and fitted with the TMA servo feed. On display will be the New Mini TMA servo feed for material up to 101x3mm capacity.

Worlifts, on the stand will be a range of Hydraulic, Pneumatic and manual Maintenance Tools. Also, market leading maintenance tools helping to reduce maintenance times and improve safety. Lifting and handling and safety equipment systems will also feature on the stand.

Worlifts, Lifting and handling equipment

Bruderer, will be Celebrating their 50th Anniversary at MACH 2018. Formed in 1968, Bruderer UK has established a reputation of unrivalled excellence in the sphere of high speed precision stamping.

Todays slogan ''ONE NAME, A MULTITUDE OF POSSIBILITIES' Chose Bruderer UK as your one stop show for all press shop machinery and ancillary equipment.

Bruderer high speed presses

Schuler UK, Schuler Presses UK offer comprehensive service for mechanical and hydraulic presses, as well as for forming equipment by any manufacturer. Schuler is a World leader in forming technology. The company offer presses, automation solutions, tools, process expertise and service for the entire metalworking industry.

Voith, centre stage will be taken up by the Hybrid Servo Punch Drive HPD: Vioth combines proven hydraulics with an efficient servo drive. The HPD system is a versatile drive for punching and nibbling machines. It allows adapting the transmitted force individually to the specific operation profile. It is easy and compact to integrate.

Roemheld UK, 'Safe Clamping of Heavy Dies' will be the focus on display, a new range of wedge clamping elements with patented safety bolts, designed to attach a die set to the table and ram of a power press securely.A video showing the new wedge clamping system in operation can be viewed on the RoemheldUK you tube page.

MMMA Metalworking Village
MACH
The Metalforming Machinery Makers Association

Tool life increased by more than six times

In the automotive industry, emissions constraints and improved passenger safety require ever lighter yet more stable vehicles. As a result more Advanced High Strength Steel (AHSS) is being processed and studies show that the amount of AHSS per car is expected to grow from 68 kg in 2009 to over 250kg in 2020.

The increased demand for ever more complex geometry beams and pillars, made from AHSS and delivered to the end user in ever shorter lead-times, means tools are required to spend more time in the press and process higher volumes of steel. Improved quality of tool steels can assist but still falls short of this ever moving goal.

Oerlikon Balzers BALINIT FORMERA PVD coating applied to a forming steel has proven to extend the press life of a tool by over 600%.

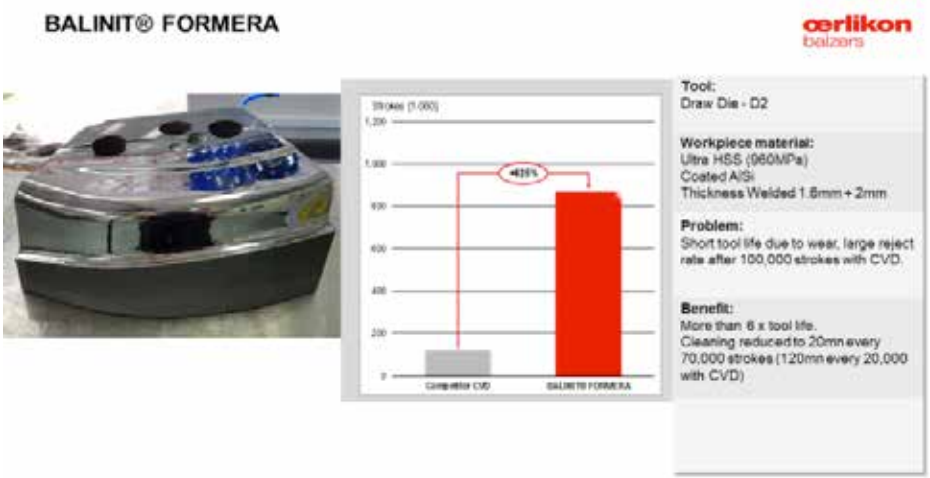
A pressing facility in the UK processing numerous parts for the automotive industry trialed Oerlikon's new coating on steels used in the production of laser welded 960Mpa Ultra High Strength Steel. They found tool life had improved from 120,000 strokes before tool damage to over 850,000 strokes and still in use. Tool maintenance was also reduced to 20mins every 70,000 strokes as opposed to 120mins every 20,000 strokes with a competitors coating.

The use of BALINIT FORMERA has given the end user a more than 200% improvement in maintenance free production and a significant increase in overall productivity.

The steels in the trial were prepared and coated at Oerlikon Balzers UK facility in Milton Keynes.

For further information please call 01908 377277, email info.balzers.uk@oerlikon.com or visit stand H20-329 at Mach 2018 (NEC Birmingham, April 9th – 13th).

www.oerlikon.com/balzers/uk



ISME Visit to Martin Robey Engineering Ltd, Nuneaton

Martin Robey Engineering Limited, has for many years been acknowledged as the major player in the manufacture and supply of parts for the Classic Jaguar and Jensen marques. Since 1978 a manufacturing facility has developed that is diverse, flexible and efficient.

The Company has facilities to manufacture a wide range of components from small brackets and deep drawn pressing to complete body shells for the Jaguar E-Type and Jensen Interceptor. They moved into their present purpose-built factory in 1982, covering a total area of 36,000 sq.ft. on a 2 acre site accommodating various departments.

Company founder and MISME Martin Robey, invited fellow ISME members to tour the facilities and 14 lucky attendees were treated to a tour of the business by Martin and his sons, followed by a presentation of the history of the company, from small part time beginnings in a garage, to where they are today.

Members were delighted to see the hand fabrication department where numerous craftsmen were producing low volume parts to an extremely high standard. Over the years, Martin has trained dozens of young craftsmen. It was also amazing to see how the rusting relics of heritage vehicles were restored to 'as new' showroom condition cars.

Our thanks go to Martin and his team for hosting this excellent visit.

Safe clamping of heavy dies

Roemheld will introduce at MACH 2018 on stand H20-444 in the MMMA village a new range of wedge clamping elements with patented safety bolts designed to attach a die set to the table and ram of a power press securely, regardless of whether the tool edges are straight or angled. A positive locking action allows even a heavy upper die to remain in place during maintenance or if the clamping pressure drops.

The clamps move automatically, making them easy to operate. A position control feature verifies closure and release and reports if no die has been placed or if the edge is incorrectly set.

The system consists of a hydraulic cylinder block and a bolt guided within a housing, the bolt having a contact surface angled at 20 degrees. A projection on the bolt and a corresponding recess along the die edge ensure positive locking if the hydraulic pressure holding the upper die should fail.

Adapter plates for simple attachment to existing dies make retrofitting trouble-free. The wedge clamping elements, with single or dual action, exert a force from 25 to 1,250 kN. They are available to suit straight and angled die edges and are designed in a variety of styles, allowing customers to configure clamping arrangements using a range of options. Modular construction allows cost-effective production of the elements, high availability and short delivery times.

Permanent lubrication gives the clamps virtually maintenance-free operation. Due to their robust design, they are able to withstand high temperatures and soiling and offer long service life. On request, multi-layer coatings can be applied to the bolts and housings to reduce wear in challenging applications.

A video showing the new wedge clamping system in operation may be viewed at:
https://www.youtube.com/watch?v=QRotDIjhogE&feature=youtu.be

The new Roemheld wedge clamp, with its patented safety bolt designed to mate with a matching die adapter plate.

Midland Power Press Services Ltd
Continuing business expansion and investment in Tipton

With increasing demand from customers for repairs and major machine refurbishments, MPPS has expanded its manufacturing capacity by acquiring a new building just 100 metres from the existing factory.

The new manufacturing unit with 350 sq. metres (3,700 sq. feet) of working floor space gives MPPS significant additional space for dis-assembly, examination, repair and re-build of components and machine sub-assemblies. The transfer of fitting work to the new unit means that the original factory is now a dedicated Machining Facility with space available for additional machine tools.

With the dedicated machine shop MPPS investment in machine tools continues with the installation of a Trident L 1000 Lathe capable of handling components up to 5 metres long and weighing in excess of 8,000 kg. This follows earlier investment in two Sachman CNC Universal Head Boring Machines with cube size 2500 x 850 x 900 mm and component weight up to 4,000 kg, and a Dugard Eagle Vertical Machining Centre.

New Italian connection

Extending its range of services to UK industry MPPS is now the UK Agent for sales and service for OMERA S.r.l., Italy, a designer and manufacturer of Trimming & Beading Machines, Hydraulic and Mechanical Presses and Automatic Manufacturing Lines. The range of machinery offered by OMERA is complimentary to MPPS's established reputation for the installation, maintenance and repair of mechanical power presses and hydraulic presses.

EWS presses ahead with new products thanks to £500,000 investment with Bruderer

One of the UK's market leaders in cold roll formed products is set to bring a number of new products to market after investing heavily in upgrading its manufacturing capabilities.

Wolverhampton-based EWS (Manufacturing) Ltd, part of Arc Specialist Engineering Group, is targeting significant sales growth in a host of new markets as a result of the £500,000 investment.

Working closely with world renown high-speed press specialists Bruderer UK, the company has installed its first 250-tonne Zani 'Power Master' press and is already achieving high stroke rates as it aims to provide annual volumes of several million units.

Russ Cooper, Technical Director at EWS, said: "A large proportion of our sales is directed to supplying steel reinforcement for the fenestration sector and whilst this will remain a core part of the business, our intention is to expand our cold rolled expertise into new markets.

"To achieve this, we needed to invest in a different type of machine that was faster than what we had and could accommodate the intricate nature of the products we are targeting. I'd previously worked with Zani presses and knew how reliable and flexible they were and the type of stroke performance per minute they deliver."

He continued: "We approached Bruderer UK, the exclusive sole distributor in this country, with our plan and started to look at how we could specify the machine to get exactly what we wanted. It took about six months from initial enquiry to the machine being delivered, installed and commissioned. It is now fully up and running and operating at the volumes we need to meet projected sales."

EWS, which employs 70 people at its 40,000 sq ft factory in Wolverhampton, has further appointed Bruderer UK to deliver ongoing service and maintenance to ensure minimum downtime and the optimum performance of the machine.

Adrian Haller, Managing Director at Bruderer UK, continued: "The project was demanding in terms of meeting the stringent timescale, but was fantastic in showcasing how – working alongside partners such as Formit – who can build bespoke turnkey solutions for a complete production line.

"This is the first time we have worked with EWS and we are delighted to be playing a part in its diversification and growth."

For further information, please follow us @brudererуk on Twitter. More details can be found at www.ewsmanufacturing.co.uk

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