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Simple, inexpensive, compact

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The Amada Product Portfolio includes:
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- CNC LASER CUTTERS
- CNC PRESSBRAKES
- NC HYDRAULIC/MECHANICAL SHEARS
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- SOFTWARE
- BANDSAWS
- BANDSAW BLADES
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MACHINE TOOLS
AFRICA A SUCCESS
AND SOME CHALLENGES AHEAD

While preparations for Machine Tools Africa 2017 involved a lot of hard work, the resulting success of the show more than made up for it and satisfied the large number of exhibitors. Compliments were received from customers as well as overseas principals for a well organized exhibition, which was the first standalone Machine Tool Expo in 20 years. The show which was held in May this year attracted more than 100 exhibitors who used up the floor space of Hall 6 & 7, the two largest halls at Nasrec Exhibition Grounds south of Johannesburg. Almost 6000 visitors entered the gates to get an overview of the latest production equipment available for the metal working industry. Foreign visitors came from 27 countries across Africa and other continents.

On behalf of the Machine Tool Merchants Association (MTMA), I would like to thank all exhibitors for their participation and the visitors for attending Machine Tools Africa. We look forward to seeing you again in 2020 when the next Machine Tools Africa will take place.

Prior to the exhibition, the machine tool market was relatively positive and enquiries as well as orders, placed all members in a good mood for the exhibition. The automotive sector, with increased demands for exporting vehicles and larger local component manufacture, has lured many 1st tier suppliers to open plants in South Africa. This resulted in a lot of high-tech equipment entering the South African market for the production of high quality components. In particular, the sheet metal industry has had a boost with large press lines being installed around the country. The various car plants have invested and continue to invest large amounts in new equipment, enabling them to produce world class products. These continued investments filter through to 2nd and 3rd tier suppliers to the automotive industry and are a welcome support to the members of the Machine Tool Merchants Association.

The NTIP (National Tooling Initiative Program) starts to bear fruit as the various colleges around the country produce young artisans who are being absorbed by the tooling industry, mainly due to increased demand from the automotive sector. With the training on CNC machines behind them, they are well equipped once confronted with the challenges of the industry.

Volatility in the machine tool market is clearly noticeable when we evaluate statistics submitted by members of the MTMA. Smaller companies find it more difficult to invest in new modern machines, largely due to uncertainty in the market as well as the cost of machines due to extremely unfavourable exchange rates. The lack of government work entering the private sector is a further problem, while many contracts which unfortunately have been placed overseas could have been executed locally, supporting and encouraging the local market. This would enhance large scale employment on all levels of the income bracket and bring relief to an industry struggling for work at present.

As the world is talking more and more about the 4th Industrial Revolution, also known as Industry 4.0, the machine tool market is seeing a change in CNC controls and automation. The use of App operated devices such as phones and pads will influence the communication between man and machine in the foreseeable future. At the forthcoming EMO exhibition in Hanover, Germany, exhibitors will demonstrate what can be expected in the years to come. Machines will be controllable from hand held devices and information can be received on them regarding production output and machine performance etc.

The members of the MTMA will continue to support local industry with information on the latest technologies available and further encourage organizations such as the various colleges, the NTIP and TASA who develop young artisans to maintain their good work.

Hans-Peter Neth, Chairman MTMA.
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web: www.cmlmachines.co.za

Key Personnel
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Accounts: Debbie du Plessis

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Fax: (041) 451-5960
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web: www.craftmt.co.za

Key Personnel
Managing Member: Eddie Harris

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Key Personnel
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Service Engineer: Ray Wilson
Bookkeeper: Riedwaan Stenekamp

AGENCIES:
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Key Personnel
CEO: Philip Thompson
Director: Thomas Zackey
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TECHNICAL FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bending Length</td>
<td>1270 mm</td>
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<tr>
<td>Max. Power</td>
<td>40 ton</td>
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<tr>
<td>Max. Bending Capacity</td>
<td>5 mm (St42)</td>
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<tr>
<td>Axes Number of Machine</td>
<td>4 (Y1, Y2, X, R)</td>
</tr>
<tr>
<td>Free Down Speed</td>
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<tr>
<td>Bending Speed</td>
<td>10 mm/sec</td>
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<tr>
<td>Return Back Speed</td>
<td>170 mm/sec</td>
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<tr>
<td>Stroke (Y1, Y2)</td>
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<tr>
<td>Daylight</td>
<td>387 mm</td>
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<tr>
<td>Backgauge Stroke (X / R)</td>
<td>500 / 250 mm</td>
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<tr>
<td>Distance Between Housing</td>
<td>1050 mm</td>
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<tr>
<td>Throat Depth</td>
<td>350 mm</td>
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<tr>
<td>Main Motor</td>
<td>5.5 kW</td>
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<tr>
<td>Oil Capacity</td>
<td>80 lt</td>
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<tr>
<td>Machine Dimensions</td>
<td>2.15x1.65x2.30 m</td>
</tr>
<tr>
<td>Weight</td>
<td>3050 kg</td>
</tr>
</tbody>
</table>

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Project Manager: Goran Jeutec
Designer: Jonathan Summerfield

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Product Manager: Johnny Pierdica
Sales Manager: Richard Poalses
Marketing and Admin Manager: Joanne Zimmermann

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**Key Personnel**
Director: Steve van Wyk
Director: Gary Willis
Director: Andrew Poole

First Cut – Cape Town
Moody Avenue, Epping Industrial
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Tel: (021) 531-3126
Fax: (021) 531-3178

**Key Personnel**
Director: Jan Kriel

First Cut – Port Elizabeth
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**Key Personnel**
Director: Andrew Poole

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web: www.harp.co.za

Key Personnel
Chairman: Frank Thompson
Managing Director: Seamus Thompson
Sales Director: John Thompson
Service – Export & Import Manager: Heather McCamlie

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- Machine tool accessories
- CNC vertical boring mills
- CNC lathes
- CNC pipe threading lathes
- CNC turning and milling centres
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- CNC planer horizontal milling and boring machines
- CNC floor type borers
- CNC bed type borers
- CNC vertical machining centres
- CNC hydraulic guillotines
- CNC hydraulic pressbrakes
- CNC bed type mills
- Webster & Bennett vertical boring mills
- Butler Elgamills
- Horizontal boring mills
- Universal ironworkers
- Plate rolls
- Bench lathes
- Bench mills
- Pedestal drills
- Electro-Magnet base drills
- Industrial grinders
- Slotters
- Plate bending machines
- Bordering and trimming machines
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web: www.hurco.co.za

Key Personnel
Regional Manager: Christo Moolman
Office Administrator: Roxanne Chase

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**Machinery & Accessories Market – August/September 2017**

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web: www.libcor.co.za

**Key Personnel**  
Manager – Sales: John Silburn  
Sales & Marketing: Kyle Silburn

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e-mail: info@lindsa.com  
web: www.lindsa.com

**Key Personnel**  
Owner/Technical/New Machines: Ampie Ackermann  
Finance/Technical/New Machines: Robin Ackermann  
Marketing/Shipping/Consumables: Andrea Wardill

**AGENCIES:**  
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**PRODUCTS:**  
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web: www.mtpsa.co.za

**Key Personnel**  
Managing Director: Bart Pieterse  
Sales Manager: Richard Gladwin

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Keith Dougans and Malcolm Moriarity

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PO Box 17650, Randhart 1457  
Tel: (011) 824-0387  
e-mail: sales@metalchipmachinery.co.za

**Key Personnel**  
External Sales: Malcolm Moriarty  
Internal Sales: Keith Dougans

**AGENCIES:**  
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**PRODUCTS:**  
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**Machinery & Accessories Market – AUGUST/SEPTEMBER 2017**

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**Spotlight on the South African Machine Tool Merchants Association**

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web: www.pbsmt.co.za

**Key Personnel**
Managing Director: Paul Savides
Commercial Manager: Alroy Savides
Support Specialist: Stephen Phipps

**AGENCIES:**
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- Microcut
- Matech
- Excetek
- CJMT Gear Shapers
- Yida
- Perfect
- Akira Seiki
- Cosen
- Annway
- **PRODUCTS:**
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  - Machining centres
  - Injection moulders
  - CNC lathes
  - Wirecut EDMs
  - Spark eroders
  - Bandsaws
  - Surface grinders
  - Gear cutters and shapers
  - EDM drilling machines
  - Annway toolholders
  - Miscellaneous machine spares: vices, clamp kits, coolant pumps, heat exchangers, 4th axis, EDM filters, wirecut consumables, lubrication pumps, etc.

**SERVICES:**
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- Service and maintenance
- Renishaw reverse engineering
- Digitizing
- After sales service
- Special machining operations research

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**PUMA MACHINE TOOLS (PTY) LTD**

27 Forge Road, Spartan Industrial Township, Kempton Park
PO Box 1472, Kempton Park 1620
Tel: (011) 976-8600
Fax: (011) 394-2471
e-mail: info@pumamachines.co.za
web: www.pumamachinetools.co.za

**Key Personnel**
Director: Mike Lee
Sales: Anthony Lezor

**BRANCHES:**
- Cape Town
  - Unit 9, Peter Park, Montague Drive, Montague Gardens
  - PO Box 1167, Milnerton 7435
  - Tel: (021) 555-2270/1
  - Fax: (021) 555-2272
- Durban
  - Unit 32, Ivy Park, 3 Ivy Rd, Pinetown
  - PO Box 1186, Pinetown 3600
  - Tel: (031) 701-8149
  - Fax: (031) 701-0313
- Port Elizabeth
  - 2 Haupt St, Sidwell
  - PO Box 414, Port Elizabeth 6000
  - Tel: (041) 453-2720
  - Fax: (041) 453-6678

**AGENCIES:**
- Doosan Infracore
- CSM
- Dener
- Chevalier
- Chin Fong
- Hankook
- S & T Dynamics
- Vision Wide Tech. Co. Ltd
- Citizen
- Dahli
- JFY

**PRODUCTS:**
- CNC lathes (2, 3 & 4 axis, vertical and horizontal)
- Machining centres (vertical and horizontal)
- Barfeeders/loader
- CNC and index type rotary tables
- CNC tooling, tool holders, chucks and accessories
- Special purpose machines
- CNC CAM auto lathe
- Rotary transfer machines
- Single cut sawing machines
- Layer sawing
- Plate sawing
- Edge milling machines
- Profile milling machines
- Slab milling machines
- Railway sawing and drilling machines
- Mobile rail milling plants
- Rail axle sawing machines

**SERVICES:**
- Service and maintenance
- Fixture design and robot integration
- Turn key solutions
- Production lines
- Machine monitoring software

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**REDMAN ENGINEERING SUPPLIES CC**

Unit 4, Gate 2, Ivy Park, Ivy Road, Pinetown
PO Box 10032, Ashwood 3605
Tel: (031) 701-4732
Fax: (031) 701-4736
e-mail: info@redmanengineering.co.za
web: www.redmanengineering.co.za

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**MTMA**

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**Spotlight**

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**Machinery & Accessories Market – AUGUST/SEPTEMBER 2017**

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**RETECON (PTY) LTD**

100 Plane Road, Spartan Industrial Township, Kempton Park
PO Box 1472, Kempton Park 1620
Tel: (011) 976-8600
Fax: (011) 394-2471
e-mail: machines@retecon.co.za
web: www.retecon.co.za

**Key Personnel**
- Member: Shane Redman

**AGENCIES:**
- Hartford • Aero Turn • Henco • Gosan
- Chung HS WH • One CNC • Argo

**PRODUCTS:**
- CNC machining centres • CNC turning centres
- CNC lathes • Turret milling machines • CAD/CAM software systems

**SERVICES:**
- Installation, commissioning, training and after-sale services of machines and CAD/CAM systems

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**ROTHCO (PTY) LTD**

6 Derrick Road, Spartan, Kempton Park
PO Box 1756, Kempton Park 1620
Tel: (011) 970-1930
Fax: (011) 394-1132
e-mail: info@rothco.co.za
web: www.rothco.co.za

**Key Personnel**
- CEO: Aurelio Grech-Cumbo
- Sales & Quality Manager: Lizette Gerber
- Manufacturing Manager: Dan Andrei

**AGENCIES:**
- Mitutoyo • GOM • Marposs • Hermle • Geomagic Software • Schuler Group • Inglass HRSFlow • Accuway • Elb Schliff
- JS EDM • Renishaw • Ital Presse • Lilian • LTF • Tacchella • Samputensili • Zani

**PRODUCTS:**
- Leading importer and distributor of high-tech precision contact and optical measuring equipment, CNC machining centres and equipment • Represent leading OEM’s in Metrology and Measuring, CNC, CMMS, verniers, micrometers, scanners, reverse engineering, press tools, spline/broaches and gauging equipment • Installation, maintenance, service, calibration and training of products • In-house services, such as measuring, calibration, reverse engineering, deformation testing, quality assurance and control, maintenance and servicing of all products and equipment is available

**SERVICES:**
- Developing highest level of quality in production and services for every customer • Design and manufacture of specially produced form tools, jigs, fixtures and NC & CNC machining of high precision components • Training, installation, SANAS calibration, ISO 2008:9001 and more
RETECON (Pty) Ltd ARE PROUD TO BE
THE SOLE DISTRIBUTORS OF PRECITEC
COMPONENTS IN SOUTH AFRICA

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spares@retecon.co.za • www.retecon.co.za

Cape Town: 021 555 2270/1 • Port Elizabeth: 041 453 2720 • Durban: 031 701 8149
**Spotlight on the South African Machine Tool Merchants Association**

**BRANCHES:**
Rothco (Pty) Ltd – Cape Town
13 Old Faure Road, Eerste River South
PO Box 3980, Somerset West, 7129
Tel: (079) 386-3146
Fax: (086) 219-6814

**Key Personnel**
Sales Representative: Carlo Coenraad

Rothco Services Durban
Tel: (083) 277-4222
(083) 449-5546
E-mail: info@rothco.co.za

**AGENCIES:**
Baltec Maschinenbau AG • Blaser Swisslube • Chiron-Werke GmbH & Co. KG • COORD3 • Ecroll AG Werkzeugtechnik • Esprit – DP Technology • EWS Tool Technologies • Ewag AG • F. Zimmermann GmbH • Fortworth • Geometric Americas • Hanwha TechM Co. Ltd • Heatburb Metalforming Machine Co. Ltd • Hegenscheidt-MFD GmbH • Heinrich Georg GmbH-Maschinenfabrik • HTT Hauser Tripet Tschudig AG • Jig grinders • Hyundai-Kia Machines: CNC machines • Knoll Maschinenbau GmbH: Swarf management systems • KWC AG, Engineering (Induga GmbH): Low pressure die casting machines, non-ferrous die casting • LAIP S.A. • Tool holder system • Llambrich Precision: Drill chucks and accessories • LNS S.A. & LNS Asia (Fedek): Bar feeders/loaders/chip conveyors • Makino Milling Machine Co. Ltd: Bandsaws and thread rolling machines • Mollart Limited: Deep hole drilling machines • Nakamura-Tome Precision Industry Co. Ltd: CNC Machines • Oscarmax EDM Co. Ltd: Electric discharge machines • Palmary Machinery Co. Ltd: Grinding machines • Pama: Floor type boring and milling machines • Pao Fong Industry Co. Ltd: Vertical turret milling machines and drill sharpening machines • Perfect Machinery Co. Ltd • Peter Lehmann • Pibomulti: Multispindle heads, right angle and adjustable angle heads, turret heads, spindle speed multipliers • Pietro Carnaghi: CNC Vertical lathes and gantry mills • Reishauer AG: Gear grinding machines • Renishaw: CMM probes, software and retrofits • Rothe Erde GmbH • RUF GmbH & Co. KG • Schleifstein Maschinenotechnik GmbH • SEIWA • SMS Eumuco GmbH • Sodi-Tech EDM Ltd • SPV Spintec Group • Starrag Heckert Technology • Stratays Inc. • Taymer International Inc. • TESA • Voumard Machines Co. SA • Wagner Muller GmbH • Weiler Werkzeugmaschinen

**PRODUCTS:**
Baltec Maschinenbau AG: Radial riveting machines • Blaser Swisslube: Coolants, cutting oils, grinding oils, lubrication • Chiron-Werke GmbH & Co. KG: High volume vertical CNC milling machines • COORD3: Coordinate measuring machine • Ecroll AG Werkzeugtechnik: Roller burnishing tools • Esprit – DP Technology: CAD/CAM System • EWS Tool Technologies: Tool holder system • Ewag AG: Universal and production tool grinding machines • F. Zimmermann GmbH: 5-Axis Gantry type milling machines • Forthworth: Manual turret and boring milling machines • Geometric Americas: CAD/CAM – TekSoft & CAM Works • Hanwha TechM Co. Ltd: Swiss-Type auto machines • Heatburb Metalforming Machine Co. Ltd: Cold forming machines • Hegenscheidt-MFD GmbH: Re-Railing equipment • Heinrich Georg GmbH-Maschinenfabrik: Cut-To-Length-Lines • HTT Hauser Tripet Tschudig AG: Jig grinders • Hyundai-Kia Machines: CNC machines • Knoll Maschinenbau GmbH: Swarf management systems • KWC AG, Engineering (Induga GmbH): Low pressure die casting machines, non-ferrous die casting • LAIP S.A.: Tool holder system • Llambrich Precision: Drill chucks and accessories • LNS S.A. & LNS Asia (Fedek): Bar feeders/loaders/chip conveyors • Makino Milling Machine Co. Ltd: Bandsaws and thread rolling machines • Mollart Limited: Deep hole drilling machines • Nakamura-Tome Precision Industry Co. Ltd: CNC Machines • Oscarmax EDM Co. Ltd: Electric discharge machines • Palmary Machinery Co. Ltd: Grinding machines • Pama: Floor type boring and milling machines • Pao Fong Industry Co. Ltd: Vertical turret milling machines and drill sharpening machines • Perfect Machinery Co. Ltd • Peter Lehmann • Pibomulti: Multispindle heads, right angle and adjustable angle heads, turret heads, spindle speed multipliers • Pietro Carnaghi: CNC Vertical lathes and gantry mills • Reishauer AG: Gear grinding machines • Renishaw: CMM probes, software and retrofits • Rothe Erde GmbH • RUF GmbH & Co. KG • Schleifstein Maschinenotechnik GmbH • SEIWA • SMS Eumuco GmbH • Sodi-Tech EDM Ltd • SPV Spintec Group • Starrag Heckert Technology • Stratays Inc. • Taymer International Inc. • TESA • Voumard Machines Co. SA • Wagner Muller GmbH • Weiler Werkzeugmaschinen

**SERVICES:**
**DESIGN/PROTOTYPE/MACHINE/TOOLING/SERVICE:** Sales • Supply and installation • Full service facilities • Wide range of spare parts • Programming training • CAD/CAM solutions • Turn-key projects • Consulting • 3D printing and direct digital manufacturing solutions • Blaser liquid tool solutions for coolants • Cutting oils • Grinding oils and lubrication • METROLOGY: Wide range of CMM equipment • Spares and service • CMM calibration • CMM retrofit • CMM software

**SAMSUNG MACHINE TOOLS SA (PTY) LTD**
29 Barium Street, Alrode 1451
Tel: 082-332-3888
Fax: (011) 908-8881
E-mail: louis@samsungmachinetools.co.za
Web: www.smtools.co.za

**Key Personnel**
President: Louis Struwig
Sales Representative: Conrad Lauscher
Sales Representative: Nicky de Klerk

**BRANCHES:**
ABMTS
51 Balers Way, Sunset Beach, Cape Town
PO Box 55258, Sunset Beach, Cape Town
7441
Tel: (021) 551-1215

**Key Personnel**
Owner: Abie

**AGENCIES:**
Samsung Machine Engineering Corporation (SMEC) • Nikken • S & T Dynamics • SP3 • Balbit • Lwenghtech • Stonic • ERI Tooling Systems • CHTEM • Fulltontech • S.C.A.M.I.

**PRODUCTS:**
CNC Lathes • CNC machining centres • CNC vertical lathes • CNC horizontal boring mills • Gear cutting • Barfeeders • Cutting tools • PCD tooling • CNC rotary tables

**SERVICES:**
Full service back-up

**MACHINERY & ACCESSORIES MARKET – AUGUST/SEPTEMBER 2017**
Available Machines:
- Centre Lathes
- Turret Mills
- Bandsaws
- Guillotines
- Press Brakes
- CNC Lathes
- CNC Machining Centres
- Various Used Machines

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**VMP-65 (A)**
- X Axis Travel: 1,650mm
- Y Axis Travel: 800mm
- Z Axis Travel: 800mm
- Table Dimensions: 1,700 x 800mm
- Spindle Power: 18.5KW

**VMP-1300 (A)**
- X Axis Travel: 1,600mm
- Y Axis Travel: 800mm
- Z Axis Travel: 800mm
- Table Dimensions: 1,680 x 800mm
- Spindle Power: 18.5KW

**FV-1600 (A)**
- X Axis Travel: 1,650mm
- Y Axis Travel: 800mm
- Z Axis Travel: 800mm
- Table Dimensions: 1,700 x 800mm
- Spindle Power: 18.5KW

**FVC-450**
- Swing Over Bed: Ø670mm
- Standard Turning Diameter: Ø327mm
- Max. Turning Diameter: Ø450mm
- Max. Turning Length: 650mm
- Swing Over Carriage: Ø450mm
- Bar Capacity: 78mm
- Spindle Motor: 22KW

**FVP-1300 (A)**
- X Axis Travel: 1,300mm
- Y Axis Travel: 610mm / 2 ways
- Z Axis Travel: 560mm
- Table Dimensions: 1,420 x 600mm
- Spindle Power: 18.5KW

**FVP-1600 (A)**
- X Axis Travel: 1,700mm
- Y Axis Travel: 800mm
- Z Axis Travel: 800mm
- Table Dimensions: 1,800 x 800mm
- Spindle Power: 18.5KW

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Fax: (011) 392-3711/2
e-mail: skok@global.co.za
web: www.skok.com

Key Personnel
Sales Director: Brian Wright
Sales Manager: Jeff Burrows
General Manager: Benjamin Cole

BRANCHES:
Skok Natal
Tel: (031) 709-3718
Fax: (031) 709-3718

Skok Port Elizabeth
26A Mangold Street, Port Elizabeth
PO Box 1866, Port Elizabeth 6000
Tel: (041) 363-8525/35
Fax: (041) 363-8536

AGENCIES:
Johnford • Goodway • Mega • Hostek • Ocean Beam Lines • Eisle • Golden Sun • Vertex • Kyocera • Nicolas Correa • Sanco • Equiptop • Ocean Machinery

PRODUCTS:
Production machinery for metal cutting and metal forming • High speed vertical and horizontal CNC lathes and single- and double column CNC machining centres • Universal milling and boring • Tool and cutter grinding for toolroom and production • Deep hole drilling, punching and forming of sheetmetal • Automatic sawing machines • Tube bending • Surface grinding • Cylindrical grinding • Slotting – manual and CNC • Beam lines • NC rotary tables

SERVICES:
Special suppliers to the general engineering, automotive and structural steel fabrication industry throughout South Africa and beyond

STANDARD MACHINE TOOLS cc

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Tel: (011) 824-0949/54/57
Fax: (011) 824-0990
e-mail: sales@stdmt.co.za
web: www.stdmt.co.za

Key Personnel
Managing Director: John Sierra

BRANCHES & AGENTS:
Willow Machine cc
2 Riana Street, Rock Drift, White River
PO Box 749, White River 1240
Tel: (013) 758-1516
Fax: (013) 758-1031
Key Personnel
Robbie van Niekerk

Plover Trading
Tel: (011) 682-3284
Fax: (011) 425-1677
Key Personnel
Maurice Swain

Bolt & Engineering Distributors
Web: www.bolteng.co.za

Gauteng
PO Box 14190
127 Snapper Road, Wadeville 1422
Tel: (011) 824-7500/6
Fax: (011) 827-2314

Platinum Province
PO Box 4260
8 Kgewbo Street, Mabe Business Park, Rustenburg 0300
Tel: (014) 597-7500
Fax: (014) 594-2181

AGENCIES:
Standard • ACL • TAH • Shining 3D • Bison • Standard E-Tech • TonTech CNC • Yunnan • Standard DRO • Dalian Lathes • Kunming • Everox • Marox • Elephant • DMTG • Sieg Drills • GMACC • Linmal • JSEDM • Farman Grinders • HDCNC • Q: Qhar • SMTW • Align Feed • Waytrain • Weida • Shachai • Huhot • Spark Lathes • Sigmanest • Teli • Fushan • Innovative • Yangzhou • Tarang
TH MACHINE TOOLS CC

102 Chopin Street, Melodie A/Holdings, Hartbeespoort
PO Box 536, Hartbeespoort 0216
Tel: (012) 259-1375/0122
Fax: (086) 636-5111
e-mail: sales@thmachinetools.co.za
web: www.thmachinetools.co.za

Key Personnel
Managing Director: Christo Hugo

PRODUCTS:
- Heavy duty vertical lathes
- 3D Scanners for CNC milling machines
- CNC vertical machines
- CNC pressbrakes
- CNC guillotines
- Mill drills
- Slotting attachments
- Feed motors
- Read out systems
- Toolposts
- Boring heads
- Machine vices
- Fanfold
- Automatic bandsaws
- Manual bandsaws
- Vertical bandsaws
- Guillotines – hydraulic and mechanical
- Jenny machines
- Box and pan folders
- Circle cutters
- Pressbrakes
- Slotting machines
- Pedestal grinders
- Cylindrical grinders
- Centre lathes
- Turret milling machines
- Universal milling machines
- Bed type milling machines
- CNC milling machines
- Spark eroders
- Wire cut
- Toolpost grinders
- Cut-off saws
- Eccentric presses
- Universal iron workers
- Mill drills
- Slotting attachments
- Feed motors
- Read out systems
- Toolposts
- Boring heads
- Machine vices
- Full range of machine tool accessories
- CNC sanders
- CNC pressbrakes
- CNC guillotines
- CNC spark eroders
- CNC wire cut machines
- CNC milling machines
- CNC vertical lathes
- CNC bridge type and very large type machining centres
- Drill cutters
- CNC plate Rolls
- Heavy duty centre lathes
- Heavy duty vertical lathe
- 3D Scanners for reverse engineering
- Floor borers

SERVICES:
- Spares, service back-up, transport and rigging

Head Office:
Cnr. Main Reef Road, & Press Avenue Crown Mines, Johannesburg
PO Box 5629, Johannesburg 2000

Tel: 0860 255433 / 0860 ALLIED
Fax: (011) 370-2727

TH MACHINE TOOLS CC

General Manager: Nico Hugo
Admin Manager: Carina Cronjé

PRODUCTS:
- Bending press – hydraulic horizontal
- Boring mill – horizontal
- Circle cutter
- CNC plasma
- CNC fiber laser
- Compressor – piston / screw
- Copy attachment
- Cropper – hydraulic / manual / mechanical
- Decoller
- Drilling machine – belt / geared head / magnetic / radial arm
- Engraving machine
- Flame cutter – straight line cutter
- Folder – box & pan / straight
- Forklift – electrical
- Grinder – bench / blade sharpener / centreless / cylindrical / internal & facing / pedestal / surface / tool & cutter / toolpost / wheel forming attachment
- Guillotine – foot / hand / hydraulic / motorised
- Jenny – motorised / manual
- Lathe – centre
- CNC / turret
- Lifting equipment
- Lockformer
- Milling machine – CNC / mill & drill / side & face / toolroom / turret / universal / vertical
- Nibbler
- Notching machine – air / foot / hand / hydraulic
- Phase converter / transformer
- Pipe bender – hydraulic / mandrel / manual
- Plasma – CNC / inverter
- Plate roll – hydraulic / manual / motorised
- Polisher
- Power pack
- Pressbrake – hydraulic / hydraulic universal
- Profile cutter
- Punching machine – hydraulic
- Sandblasting
- Sander – belt / disk / Saw – circular / horizontal bandsaw / powersaw / vertical bandsaw
- Section bender – hydraulic / motorised
- Slotting attachment
- Slotting machine
- Spark eroder
- Thread cutting
- Threadering machine
- Welding – arc / butt / mig / multi-process / spot / tig
- Wire cutter
- Woodworking

TOOLQUIP & ALLIED

Machinery & Accessories Market – August/September 2017
SPOTLIGHT ON THE TOOL MERCHANTS

AGENCIES:

Abrasives • Abrasive cut-off saws • Adaptor plates • Allen keys • Angle plates • Angle vices • Arbors • Arbor presses • Antivibration mounts • Automotive equipment • Bandsaw machines • Bar benders • Belt sanders • Bench grinders • Benders • Blade welders • Blades bandsaws • Boring bars • Boring cutters • Boring heads • Boring system • Box and pan folders • Broaches • Burnishing and recessing tools • Calipers • Centres • Chucks • Circular saw blades • Clamping elements • Clamping kits • Collets • Collet chucks • Compound tables • Compressors • Coolant hose • Coolant pumps • Counterbores • Counters • Countersinks • Cut-off saws • CNC indexing heads • CNC lathes • CNC machining centres • CNC milling, tooling and tapping chucks • CNC tables • Compressors • Deburring tools • Demagnetizers • Dial gauges • Digital readout systems • Die springs and nitrogen cylinders • Dividing heads • Drill stands • Drill bushes • Drill chucks • Drill sharpeners • Drilling machines • Drilling/milling machines • Engravers • ER collets • Expanding mandrels • Files • Fixturing elements • Floating holders • Floating reamers • Fly presses • Gauges • Gauge Block Sets • Gear hobs and cutters • Grinders bench • Guillotines • Hack saws • Hand tools • HSS and carbide • Hydraulic vices • Indexable inserts, milling heads

PRODUCTS:

and toolholders • Indexers • Inspection equipment • Keyless drill chucks • Knurling tools • Lamps • Lathes • Lathe chucks • Levels • Magnetic bases • Magnetic chucks • Magnetic drill stands • Magnetic vee blocks • Machine mounts • Machine vices • Measuring equipment • Measuring instruments • Micrometers • Mitre saws • Milling cutters • Milling machines • Milling toolholders and arbors • NC Tooling • Notchers • Outside micrometers • Piercing punches and dowl pins • Pipe benders • Pipe cutters • Portable pipe cutter • Power chucks • Power feed attachments • Power saws • Profile projectors • Probing systems • Punches and matrices • Quick change drill chucks • Quick change toolposts • Radial drilling machines • Reamers • Reverse counterbores • Revolution counters • Revolving centres • Rotary tables • Safety equipment • Sanders • Saw blades • Saws • Scrapers • Sharpeners • Shaping machines • Shears • Side and face cutters and slitting saws • Single blade reamers • Slip rolls • Slotting machines • Solid carbide and carbide tipped drills • Solid carbide milling cutters • Steel rules • Surface grinders • Surface plates • Table saws • Tachometers • Tap extractors • Tapping heads • Taps and dies • Technical training videos • Technical training systems • Telescopic gauges • Thread chasers and heads • Thread milling cutters • Thread rolling dies and heads • Threading inserts • Toggle clamps • Tool and cutter grinders • Tool bits • Tooling aids • Toolpost grinders • Toolposts • Treppaning tools • Tube benders • Tungsten carbide burrs • Turning, threading, boring and counterboring tools • Vices • Verniers • Vertical machining centres • VDI tooling • Welders • Welding machines

AGENCIES:

Abrasives • Abrasive cut-off saws • Adaptor plates • Allen keys • Angle plates • Angle vices • Arbors • Arbor presses • Antivibration mounts • Automotive equipment • Bandsaw machines • Bar benders • Belt sanders • Bench grinders • Benders • Blade welders • Blades bandsaws • Boring bars • Boring cutters • Boring heads • Boring system • Box and pan folders • Broaches • Burnishing and recessing tools • Calipers • Centres • Chucks • Circular saw blades • Clamping elements • Clamping kits • Collets • Collet chucks • Compound tables • Compressors • Coolant hose • Coolant pumps • Counterbores • Counters • Countersinks • Cut-off saws • CNC indexing heads • CNC lathes • CNC machining centres • CNC milling, tooling and tapping chucks • CNC tables • Compressors • Deburring tools • Demagnetizers • Dial gauges • Digital readout systems • Die springs and nitrogen cylinders • Dividing heads • Drill stands • Drill bushes • Drill chucks • Drill sharpeners • Drilling machines • Drilling/milling machines • Engravers • ER collets • Expanding mandrels • Files • Fixturing elements • Floating holders • Floating reamers • Fly presses • Gauges • Gauge Block Sets • Gear hobs and cutters • Grinders bench • Guillotines • Hack saws • Hand tools • HSS and carbide • Hydraulic vices • Indexable inserts, milling heads

PRODUCTS:

and toolholders • Indexers • Inspection equipment • Keyless drill chucks • Knurling tools • Lamps • Lathes • Lathe chucks • Levels • Magnetic bases • Magnetic chucks • Magnetic drill stands • Magnetic vee blocks • Machine mounts • Machine vices • Measuring equipment • Measuring instruments • Micrometers • Mitre saws • Milling cutters • Milling machines • Milling toolholders and arbors • NC Tooling • Notchers • Outside micrometers • Piercing punches and dowl pins • Pipe benders • Pipe cutters • Portable pipe cutter • Power chucks • Power feed attachments • Power saws • Profile projectors • Probing systems • Punches and matrices • Quick change drill chucks • Quick change toolposts • Radial drilling machines • Reamers • Reverse counterbores • Revolution counters • Revolving centres • Rotary tables • Safety equipment • Sanders • Saw blades • Saws • Scrapers • Sharpeners • Shaping machines • Shears • Side and face cutters and slitting saws • Single blade reamers • Slip rolls • Slotting machines • Solid carbide and carbide tipped drills • Solid carbide milling cutters • Steel rules • Surface grinders • Surface plates • Table saws • Tachometers • Tap extractors • Tapping heads • Taps and dies • Technical training videos • Technical training systems • Telescopic gauges • Thread chasers and heads • Thread milling cutters • Thread rolling dies and heads • Threading inserts • Toggle clamps • Tool and cutter grinders • Tool bits • Tooling aids • Toolpost grinders • Toolposts • Treppaning tools • Tube benders • Tungsten carbide burrs • Turning, threading, boring and counterboring tools • Vices • Verniers • Vertical machining centres • VDI tooling • Welders • Welding machines

AGENCIES:

Abrasives • Abrasive cut-off saws • Adaptor plates • Allen keys • Angle plates • Angle vices • Arbors • Arbor presses • Antivibration mounts • Automotive equipment • Bandsaw machines • Bar benders • Belt sanders • Bench grinders • Benders • Blade welders • Blades bandsaws • Boring bars • Boring cutters • Boring heads • Boring system • Box and pan folders • Broaches • Burnishing and recessing tools • Calipers • Centres • Chucks • Circular saw blades • Clamping elements • Clamping kits • Collets • Collet chucks • Compound tables • Compressors • Coolant hose • Coolant pumps • Counterbores • Counters • Countersinks • Cut-off saws • CNC indexing heads • CNC lathes • CNC machining centres • CNC milling, tooling and tapping chucks • CNC tables • Compressors • Deburring tools • Demagnetizers • Dial gauges • Digital readout systems • Die springs and nitrogen cylinders • Dividing heads • Drill stands • Drill bushes • Drill chucks • Drill sharpeners • Drilling machines • Drilling/milling machines • Engravers • ER collets • Expanding mandrels • Files • Fixturing elements • Floating holders • Floating reamers • Fly presses • Gauges • Gauge Block Sets • Gear hobs and cutters • Grinders bench • Guillotines • Hack saws • Hand tools • HSS and carbide • Hydraulic vices • Indexable inserts, milling heads

PRODUCTS:

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THE DAYS OF THE TRADITIONAL MACHINE TOOL ARE NOT NUMBERED

Additive technologies as the icing on the cake at EMO Hannover 2017

The whole world is talking about 3D printing, additive manufacturing and generative multi-layer construction technologies. Nevertheless, this is a long way from meaning that the classical machine tool is going to be pensioned off. EMO Hannover 2017 will be showcasing an international banquet of production technology – with alternative processes as the highly auspicious icing on the cake.

Carl Fruth has meanwhile long since achieved his goal of transferring competences in the field of multi-layer technologies into product manufacturing: moreover, within the framework of a Technology Day featuring an in-house exhibition held in April 2017, FIT AG (Fruth Innovative Technologies) in the Upper Palatinate village of Lupburg, in addition to inaugurating a new office building also opened the first additive factory. The “FIT factory is even on an international comparison unique in terms of manufacturing capacity and automation technology, and is intended to serve as a template for further additive manufacturing facilities of the FIT Group,” to quote the firm’s founding father and Managing Board Chairman Fruth. He is a pioneer of additive manufacturing – and a visionary for whom ten years ago it was already a certainty that multi-layer construction technology would in future be the norm in everyday production operations and the sales of milling machines or injection moulding machines would inexorably decline.

But that is still a long way from meaning that the days of the mother of all machines (i.e. the traditional machine tool) are numbered. This is impressively confirmed by the innovations that will be showcased by the exhibitors at EMO Hannover 2017. One of the impediments to the widespread adoption of additive technology in individualized mass production was described several years ago by Fruth himself as the lack of production-suited manufacturing lines. This has changed in the meantime. Fruth puts it like this: "There are a large number of delicate seedlings: many of our customers would like to use additive technologies to manufacture replacements for existing components. But this is possible only in a very few cases. Usually, a new component has to be developed and very often the adjoining components of the system as well. Firstly, many companies are deterred by the outlay involved, and secondly, of course, you need specialized development competence for this new production technology."

When traditional design guidelines no longer apply, a new generation of design engineers is needed, keen to embrace function-driven thinking. According to Fruth, additive manufacturing means that in the design phase not only the geometry, but also the material properties and the component costs are essentially specified in full. This complexity necessitates specialized training and experience. Moreover, up to now there is no software tool in existence that provides all the requisite functions. So firms have to work with different, complex software tools. Very often, information is lost in transitioning from one tool to another. When you need up to eight iterations for developing a component, the substantial outlay involved is obvious."

"The competences required, moreover, are possessed not by a single design engineer, but only by a team. In traditional companies, furthermore, the competences concerned are divided up among different departments – a situation exacerbated by squabbles about prerogatives and uncertainty. Innovative companies, however, also see this as an opportunity: “we support our customers in this process, and train them component by component to achieve maximized performance in AM design. That’s why we also call these products ADM – Additive Design and Manufacturing”.

When the talk turns to additive manufacturing in an automated process chain (something he used to refer to as the Achilles’ heel), Fruth becomes veritably effusive, “this is my own particular hobbyhorse. We don’t have a digital specification of our products. This is why Industry 4.0 hasn’t taken off and also why automation isn’t working properly either. When everything has to be automated and optimized by hand, then the traditional forms
of mass production are – old hat!” Whether there’s a robot standing at the production line or a human employee turning the product, there are no fundamentally new approaches involved: “For as long as a drawing and thick ring binders of text are required for specifying a product, Industry 4.0 is never going to get off the ground. In this context, it’s immaterial whether there’s a PDF for the specification involved – we’re talking here about machine-readable specifications and their fully automated implementation.” Some former weak points, by contrast, he adds, like the reproducibility of the processes, quality assurance in mass production, or dependable simulation methods, have been almost eliminated. “Everyone involved has understood the problem and is working purposefully to solve it.”

More technologies are sharing the market

The inevitable question of whether the conventional machine tool will soon be out of a job receives a differentiated answer from the AM expert. “Components are manufactured in a process chain. That’s true today and will still be true tomorrow. Additively manufactured components, as is the case with other production technologies, too, require quality-testing – it’s immaterial in this context whether this means each individual component or every 50th one of identical components. So I don’t think existing technologies are going to be replaced.” CNC-driven processes, he adds, are all very flexible in use, and all have a market of their own. The question is rather, “what share can each technology have of the cake as a whole?” The slice for the various additive production technologies is currently so small that it can only increase. Fruth, however, also believes that the cake as a whole for CNC processes is becoming larger, at the expense of tool-linked production technologies and other highly personnel-intensive processes. We’re looking here at a combination of different CNC technologies.

At the upcoming EMO Hannover 2017, Fruth expects “to find the very latest CNC-based production technologies, plus innovative potential products in this category. A large number of equipment manufacturers for additive processes and material producers will be exhibiting at EMO Hannover. For us as users of this equipment, this adds a special interest to the fair.”

Harmonized software solutions for additive manufacturing

A new solution for additive manufacturing has recently been premiered by Siemens PLM Software, the Business Unit for Product Lifecycle Management (PLM), Cologne. It consists of an integrated software package for design, simulation, digital manufacturing, plus data and process management. This enables a generative design to be created automatically, on the basis of new functions for optimised topologies. This frequently results in organic shapes that a design engineer would be highly unlikely to think of himself, and that would be very complicated or even impossible to manufacture using conventional production methods. Possible user target groups include the automotive industry, the aviation sector or medical technology.

The revolutionary solution and its possible applications are explained by Peter Scheller, Marketing Director at Siemens PLM Software. “What’s special about it is that this is a consistently harmonized platform. On the basis of our Convergent Modelling technology, we incorporate within our NX software for integrated CAD all the relevant product development steps for 3D printing, from scanning to the actual printing. In the field of 3D printing, there are already a whole lot of individual solutions in various niches, either from printer manufacturers or other vendors. The important step we’re now taking is the integration of all process steps into a platform with a central user interface, on which both the geometry and the print path generation are stored in a secure data format.”

In addition, within the framework of this strategy, Siemens PLM Software has unveiled plans for a new online collaboration platform providing an option for worldwide cooperation in the manufacturing sector. The declared aim is to render on-demand product designs and 3D printing production operations more easily accessible to a global manufacturing industry. In mass production environments, “says Scheller, “3D printing has not yet arrived completely: it originated in prototyping and so far has been predominantly used for this purpose. But we’re approaching a threshold here: the process is emerging from this niche; many companies are currently thinking about using it for mass production and have already introduced it for this purpose.”

When you think about an additive production process on an industrial scale, “from our point of view a process-reliable data format is extremely important, as a basis for enabling components to be dependably manufactured again and again in the same quality. So far there hadn’t been a platform of this kind, which is why we’re now providing one for our customers.” For industrial production operations, in particular, it is very important to have an exhaustive description of your components on file in digital form. This is essential for accessing this digital twin in the event of queries or cases of damage and investigating the relevant causes.

Scheller sums up his expectations for EMO Hannover 2017 as follows: “Siemens will continue to invest in innovations and to work together with technology partners in order to develop new solutions designed to progress the efficacy of additive manufacturing and drive 3D printing forward still further. That’s why we’re looking forward to fruitful meetings at EMO Hannover 2017 and plenty of mutual feedback with customers and associates. The fair is a superlative platform for learning more about current challenges and customers’ wishes.”

By Walter Frick, specialist journalist from Weikersheim

Highly sophisticated integrated technologies for simulations and analyses enable a design’s behaviour to be calculated in advance. This new technology, with its high change-triggering potential, will encourage innovative design approaches. Photo: Siemens PLM
Governments and industry stakeholders are keenly following developments in the microelectronics industry, as these technologies could potentially disrupt and bolster the Internet of Things (IoT) Mega Trend. Microelectronics will support eco-friendliness, Innovating to Zero, smart and connected homes, cloud computing and miniaturization trends and influence the technological progress of a wide range of industries. This will open up opportunities across value chains and key industry participants are actively entering this technology space to gain an early mover advantage.

“One of the major selling points of microelectronics is its low power consumption. Industries recognize that the technology’s rapid charging, smart antenna, wireless charging and organic light-emitting diodes (OLEDs) make it extremely cost effective in the long term,” noted Frost & Sullivan TechVision Research Analyst Brinda Manivannan. “Furthermore, a small footprint makes microelectronics relevant in an era that is experiencing the accelerated adoption of wearables and smart devices. Wireless communication technologies and display technologies will be significantly affected by this trend.”

Top Technologies in Microelectronics, 2017 is part of Frost & Sullivan’s TechVision (Microelectronics) Growth Partnership Service programme. The study assesses the impact of the top emerging microelectronics technologies, the innovation strength of each region and the global market potential of the technology. It also covers the dynamic technologies that enable the convergence of Mega Trends such as smart cities, vehicle to X (V2X) systems, IoT and connected systems.

While the benefits of microelectronics are manifold, scientists and adopters are still challenged by the huge cost of research and development (R&D), capital-intensive manufacturing, scalability limitations, volume production and lack of a structured supply chain. However, technology developers are gradually addressing these roadblocks to adoption, with North America leading in technology advancements and Asia-Pacific in technology adoption.

“Microelectronics R&D will also get a boost with the impending bandwidth crunch due to the increased penetration of augmented reality and virtual reality devices. Microelectronics can be employed to develop faster data transmission technologies such as visible light communication (VLC) and advanced data storage techniques to power data-intensive applications,” noted Manivannan. “Meanwhile, the evolution of display technologies from conventional liquid crystal display to flexible and highly versatile OLED technology is also accelerating the need for microelectronics, ensuring a steady stream of innovations from visionary industry participants.”

About TechVision
Frost & Sullivan’s global TechVision practice is focused on innovation, disruption and convergence, and provides a variety of technology-based alerts, newsletters and research services as well as growth consulting services. Its premier offering, the TechVision programme, identifies and evaluates the most valuable emerging and disruptive technologies enabling products with near-term potential. A unique feature of the TechVision programme is an annual selection of 50 technologies that can generate convergence scenarios, possibly disrupt the innovation landscape, and drive transformational growth.
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COMPOSITES – AIRBUS CONTINUES TO SHAPE THE FUTURE

Composite materials have been called the shape of aerospace’s future. With their winning combination of high strength, low weight and durability, it’s easy to see why. For more than 30 years, Airbus has pioneered the use of such materials in its commercial jetliners, from the cornerstone A310’s vertical stabilizer to today’s A350 XWB – on which more than half of the aircraft’s structure is composite.

In essence, a composite material is made from two or more constituent materials with different physical or chemical properties. When combined, the composite material exhibits beneficial physical characteristics quite different from what the individual components alone can provide. Commonly-recognized composites in everyday life include plywood and reinforced concrete.

From nose to tail, Airbus utilizes advanced composites in its jetliner product line that have been at the forefront of materials science. One particular standout material is carbon-fibre reinforced plastic, or CFRP. Composed of carbon fibres locked into place with a plastic resin, CFRP offers a better strength-to-weight ratio than metals and has less sensitivity to fatigue and corrosion. In short, it’s lighter than aluminium, stronger than iron and more corrosion-resistant than both.

Like all composites, the strength of CFRP results from the interplay between its component materials. By themselves, neither the carbon fibres nor the resin is sufficient to create a product with the desired characteristics to be integrated on an aircraft. But once combined in multiple, integrated layers and bonded, the CFRP airframe component or aerostructure takes on the strength and load-bearing properties that make it ideal for aviation use.

The application of carbon-fibre reinforced plastic reached new proportions with the A350 XWB, which boasts a significant application of composites throughout. For example, most of the A350 XWB’s wing is comprised of the lightweight carbon composites, including its upper and lower covers. Measuring 32 metres long by six metres wide, these are among the largest single aviation parts ever made from carbon fibre.

With CFRP, not only is the jetliner’s airframe tougher and stronger, the reduction in weight enables it to carry more passengers, burn less fuel, fly farther...or combinations of the three.

While initially more expensive to produce than traditional metallic parts, CFRP components can save aircraft operators money on future maintenance costs since the material doesn’t rust or corrode. An A350 XWB, for example, requires 50% fewer structure maintenance tasks and the threshold for airframe checks is at 12 years compared to eight for the A380.

In CFRP production, thousands of microscopically thin carbon threads are bundled together to make each fibre, which joined in a matrix held together by a robust resin to achieve the required level of rigidity. The composite component is produced in precisely shaped sheets laid atop each other and then bonded, typically using heat and pressure in an oven called an autoclave, resulting in a high quality composite.

Parts such as fuselage and wings can make extensive use of composites as the required fibre loading – the way the fibres are laid up and cured in the autoclave – is simple. However, parts requiring complex loading will, for the foreseeable future, continue to use metal.

The two most commonly used types of CFRP are thermoset and thermoplastic. While thermoset CFRPs are currently more widespread in the aeronautics industry, thermoplastics are gaining popularity because of their recyclability – an important lifecycle consideration that has long been a factor against wider CFRP adoption.

A key difference between thermoset and thermoplastic materials is what happens during the curing process. When cured in the autoclave, thermoset material undergoes a chemical reaction that permanently changes its makeup. A thermoplastic part, though, can be re-melted and still maintain its composition.

That difference makes thermoplastics attractive since Airbus and its suppliers produce hundreds of tonnes of scrap composites each year. While scrap thermoset resin cannot be reused, thermoplastic scrap can be used in a variety of ways and in a number of sectors beyond aeronautics.

AIRBUS FOUNDATION BRINGS YOUTH DEVELOPMENT PROGRAMME TO AFRICA

The Airbus Foundation together with its partner The Little Engineer is rolling out the Airbus Little Engineer (ALE) robotics programme in Africa. The initiative aims at training thousands of students between 10 and 16 years old in the fields of Science, Technology, Engineering and Mathematics (STEM).

The goal is to encourage students to understand and embrace technology and ignite a passion that could grow into an exciting STEM career.

Africa has the fastest-growing and most youthful population in the world, its youth will be the driving force behind sustainable growth across the continent. Therefore, investment in education and training is essential in building an educated and skilled workforce and to encourage innovation. The goal of the ALE programme is to support the countries’ efforts in creating a sustainable pipeline of talent for Africa.

“Africa has developed an innovation culture that is growing fast with many social entrepreneurs, local non-profit organizations and we want to support and work with them,” said Andrea Debbane, Executive Director of the Airbus Foundation. “It is important that we all join efforts to facilitate the access to STEM skills. These skills play a key role because Science, Technology, Engineering and Mathematics related jobs are at the core of solving the complex problems of today’s world and its future.”

In the spirit of think global, act local, the Airbus Foundation is working with local organizations dedicated to promote science education in Africa. The first partners, Travelling Telescope and STEM METS Resources, respectively based in Kenya and Nigeria will be rolling out a series of ALE workshops in their home countries.

Since its launch in 2012, ALE programme successfully positioned itself as an effective vehicle for discovery-based learning, working to enlighten and empower youth in the areas of science and technology through robotics and aerospace. As of now, the programme has reached over 3,000 students.
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BMW GROUP ANNOUNCES NEXT STEP IN ELECTRIFICATION STRATEGY

Electrification is one of the central pillars of the BMW Group’s corporate strategy NUMBER ONE > NEXT and the company has announced that all brands and model series can be electrified, with a full-electric or plug-in hybrid drivetrain being offered in addition to the combustion engine option. Additional electrified models will be brought to market in the coming years and beyond 2020, the company’s next generation vehicle architecture will enable further fully-electric vehicles.

Recently, the BMW Group announced that the new battery-electric MINI will be a variant of the brand’s core 3 door model. This fully electric car will go into production in 2019, increasing the choice of MINI powertrains to include petrol and diesel internal combustion engines, a plug-in hybrid and a battery electric vehicle. The electric MINI’s electric drivetrain will be built at the BMW Group’s e-mobility centre at Plants Dingolfing and Landshut in Bavaria before being integrated into the car at Plant Oxford, which is the main production location for the MINI 3 door model.

Oliver Zipse, BMW AG Management Board member for Production said, “BMW Group Plants Dingolfing and Landshut play a leading role within our global production network as the company’s global competence centre for electric mobility. Our adaptable production system is innovative and able to react rapidly to changing customer demand. If required, we can increase production of electric drivetrain motor components quickly and efficiently, in line with market developments.”

By 2025, the BMW Group expects electrified vehicles to account for between 15-25% of sales. However, factors such as regulation, incentives and charging infrastructure will play a major role in determining the scale of electrification from market to market. In order to react quickly and appropriately to customer demand, the BMW Group has developed a uniquely flexible system across its global production network. In the future, the BMW Group production system will create structures that enable our production facilities to build models with a combustion engine, plug-in hybrid or fully electric drive train at the same time.

The BMW Group currently produces electrified models at ten plants worldwide; since 2013, all the significant elements of the electric drivetrain for these vehicles come from the company’s plants in Dingolfing and Landshut. Dingolfing additionally builds the plug-in hybrid versions of the BMW 5 Series and the BMW 7 Series and from 2021, it will build the BMW i NEXT. The BMW Group has invested a total of more than 100 million euros in electro-mobility at the Dingolfing site to date, with investment continuing as the BMW Group’s range of electrified vehicles further expands.

Electrification of all brands and model series continues

The new, fully-electric MINI is one of a series of electrified models to be launched by the BMW and MINI brands in the coming years. In 2018, the BMW i8 Roadster will become the newest member of the BMW i family. The all-electric BMW X3 has been announced for 2020 and the BMW iNEXT is due in 2021.

Today, the BMW Group offers the widest range of electrified vehicles of any car manufacturer in the world, with nine models already on the market. These range from the fully-electric BMW i3 to the company’s newest electrified model, the MINI Cooper S E Countryman ALL4, a plug-in hybrid version of the MINI Countryman, which is produced by VDL Nedcar in the Netherlands. The company has committed to selling 100,000 electrified vehicles in 2017 and will have a total of 200,000 electrified vehicles on the roads by the end of the year.

The BMW Group has benefited from its early start on the road to electrification. Indeed, the company’s pioneering, large scale electric vehicle trial began world-wide in 2008 with the MINI E. Learnings from this project played a crucial role in the subsequent development of the BMW i3 and BMW i8, technology pioneers which themselves informed the company’s current range of plug-in hybrid vehicles.

VOLVO CARS TO GO ALL ELECTRIC

Volvo Cars, the premium car maker, has announced that every Volvo it launches from 2019 will have an electric motor, marking the historic end of cars that only have an internal combustion engine (ICE) and placing electrification at the core of its future business.

The announcement represents one of the most significant moves by any car maker to embrace electrification and highlights how over a century after the invention of the internal combustion engine electrification is paving the way for a new chapter in automotive history.

“This is about the customer,” said Håkan Samuelsson, President and Chief Executive Officer Volvo Cars. “People increasingly demand electrified cars and we want to respond to our customers’ current and future needs. You can now pick and choose whichever electrified Volvo you wish.”

Volvo Cars will introduce a portfolio of electrified cars across its model range, embracing fully electric cars, plug in hybrid cars and mild hybrid cars.

It will launch five fully electric cars between 2019 and 2021, three of which will be Volvo models and two of which will be high performance electrified cars from Polestar, Volvo Cars’ performance car arm. Full details of these models will be announced at a later date.

These five cars will be supplemented by a range of petrol and diesel plug in hybrid and mild hybrid 48 volt options on all models, representing one of the broadest electrified car offerings of any car maker.

This means that there will in future be no Volvo cars without an electric motor, as pure ICE cars are gradually phased out and replaced by ICE cars that are enhanced with electrified options.

“This announcement marks the end of the sole combustion engine-powered car,” said Samuelsson. “Volvo Cars has stated that it plans to have sold a total of 1m electrified cars by 2025. When we said it we meant it. This is how we are going to do it.”

The announcement underlines Volvo Cars’ commitment to minimizing its environmental impact and making the cities of the future cleaner. Volvo Cars is focused on reducing the carbon emissions of both its products as well as its operations. It aims to have climate neutral manufacturing operations by 2025.

The decision also follows the recent announcement that Volvo Cars will turn Polestar into a new separately branded electrified global high performance car company. Thomas Ingenlath, Senior Vice President Design at Volvo Cars, will lead Polestar as Chief Executive Officer.
BOSCH AND DAIMLER DEMONSTRATE DRIVERLESS PARKING IN REAL-LIFE TRAFFIC

Leave your vehicle to park itself. Daimler and Bosch have teamed up to realise driverless parking (Automated Valet Parking) in the multi-storey car park at the Mercedes-Benz Museum in Stuttgart. Cars now proceed without a driver to their assigned parking space in response to a command issued by smartphone, without any need for the driver to supervise the manoeuvre. Automated valet parking marks an important milestone on the way to autonomous driving. The pilot solution at the multi-storey car park of the Mercedes-Benz Museum represents the world’s first infrastructure-supported solution for an automated drive-up and parking service in real-life dual operating mode. From the beginning of 2018, visitors to the museum’s multi-storey car park will be able to experience the convenient service at first hand and avoid spending time parking their cars.

“We are approaching autonomous driving faster than many people suspect. The driverless parking solution at the Mercedes-Benz Museum demonstrates in impressive fashion just how far the technology has come,” said Dr Michael Hafner, Head of Automated Driving and Active Safety at Mercedes-Benz Cars Development. “Parking will be an automated process in the future. By applying an intelligent multi-storey car park infrastructure and networking it with vehicles, we have managed to realise driverless parking substantially earlier than planned,” said Gerhard Steiger, Director of the Chassis Systems Control unit at Bosch.

To the parking space and back – fully automatically

Anyone can reserve a car using a smartphone app. The vehicle rolls into the pick-up area autonomously to start the journey. The return procedure is equally convenient: the customer parks the vehicle in the car park’s drop-off area and hands it back by smartphone app. After being registered by the intelligent system installed at the multi-storey car park, the car is started and guided to an assigned parking space.

Driverless parking is made possible by an intelligent multi-storey car park infrastructure from Bosch in conjunction with the vehicle technology from Mercedes-Benz. Sensors installed in the car park monitor the driving corridor and its surroundings and steer the vehicle. The technology on board the car performs safe driving manoeuvres in response to the commands from the car park infrastructure and stops the vehicle in good time when necessary. The sensors for the multi-storey car park infrastructure and the communications technology come from Bosch. Daimler is providing the private museum car park and pilot vehicles, defining the interface between infrastructure and vehicle together with Bosch and adapting the sensor technology and software in the vehicles accordingly.

First operating licence worldwide for driverless parking

The premiere on 24 July 2017 is to be followed by an extensive trial and commissioning phase. The project has been overseen from the outset by local authorities – Stuttgart regional council and the federal state transport ministry – and by appraisers from the TÜV Rheinland technical inspection authority with the aim of assessing the safe operation of the vehicle and car park technology. Before the driverless customer service goes into operation at the beginning of 2018 – as the first such application worldwide – final approval will be required from the licensing authority.

Everything will then be in place to enable automated valet parking to be made available to everyone at the Mercedes-Benz Museum’s multi-storey car park from the beginning of 2018. Bosch and Mercedes-Benz intend to use this project to acquire experience regarding users’ handling of automated valet parking. Other existing multi-storey car parks can be retrofitted with the infrastructure technology. For the operators of multi-storey car parks, driverless parking means more efficient use of the available parking space: up to 20 percent more vehicles fit into the same space.

MACH 2018 – LESS THAN A QUARTER OF EXHIBITOR SPACE STILL AVAILABLE

Sales for MACH 2018 are being described as a very encouraging sign for the industry by MTA CEO James Selka. Over 75% of the exhibition’s space has already been sold, with just under a year to go before the show opens.

MACH 2018 takes place at the NEC in Birmingham from 9th – 13th April and is on course to be another bumper show. Following on from the sold-out success of MACH 2016, the MTA CEO commented, “with new halls and extra space to sell, we are seeing premium spots being snapped up by exhibitors at a good rate, leaving us with a little under a quarter of the show left to sell, which is a very encouraging sign for the industry at this stage. So we’d encourage all companies wishing to book a stand for MACH 2018 to act quickly to secure their space at the UK’s premier manufacturing technologies showcase."

After a hugely successful 2016 edition of the Exhibition, which boasted sold-out exhibitor space, a 10% increase in visitors on 2014 and over £150 million worth of business attributed to the show, things are looking good for a repeat of this in 2018.

MACH 2018 will take place on the atrium side of the NEC, in Halls 17, 18, 19, 20, 6 and 7. This is the first move of the show since relocating to the NEC when it opened in 1976 and reflects the changing technologies the show covers. The new layout of the show is all on one level, enhancing both the visitor and exhibitor experience.

The show is the UK’s premier manufacturing technology showcase and will take an in-depth look at the latest technological advances in and around the advanced manufacturing sector. Hot topics for discussion at the show will include Industry 4.0 and the interconnectivity of machines, Additive Manufacturing and cyber security, to name but a few.
Tongtai Machine & Tool Co., Ltd brings the first metal powder direct energy deposition and subtractive manufacturing machine, AMH-350. It is a successful collaborative product developed by Optomec and Tongtai. AMH-350 is a hybrid additive and subtractive machining equipment which fulfills 3D printing, parts repairing, laser deposition and 5-axis machining functions. These processing methods can all be satisfied in only one machine as one-stop machining center to shorten production time and decrease material cost.

PCI’s new Twin Spindle Météor is the result of years of experience in the automotive industry and high level technologies, possible with fully independent 5-axis double machining. Designed following high efficiency standards of automotive applications, this new machine answers OEM’s most challenging project’s requirements.

Reliability and high dynamics are the key word to define this new machining center, coming alongside with a full new range of high-end horizontal machining centers. Gantry loaded or with automated pallet changer this new Météor TS630V will fit a full range of applications and offer flexibility between all possible 4 and 5 axis configurations.

Based on the development of Industry 4.0, TTGroup, the leading manufacturing solution companies, creates new opportunities in terms of intelligent strengthening of production efficiency and automated flexibility of machining equipment. By offering a set of spectacular new equipment with more axes, more spindles and multi-function, it can help you to obtain a maximum effectiveness in the customized manufacturing business model.

Three innovative technologies will be presented by TTGroup at EMO 2017. The first one is ANGER MACHINING’s 2PLUS solution that opens new possibilities for different precision workpiece machining in 5-axis in volume production. The ANGER 2 PLUS is a new fully automated system, which enables the customer to achieve considerably greater variability with higher efficiency. It allows for the production in chaotic work-piece sequence, with zero second conversion time and without any intervention of an operator. This solution is of interest to manufacturing companies who have to produce the undefined quantities of completely different parts with a powerful volume machine. With 2PLUS and the newly patented clamping method SmartFix, which connects the fixtures directly to the loading robot this can be done without manual retooling.

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EXPANSION IN U.S. MANUFACTURING TECHNOLOGY ORDERS ACCELERATING

June manufacturing technology orders climbed 6.5 percent over May, according to a report released by AMT – The Association For Manufacturing Technology. The latest U.S. Manufacturing Technology Orders (USMTO) report also shows a year-over-year increase of more than 10 percent, the fifth consecutive month posting a year-over-year gain.

The U.S. manufacturing technology market has been weak since oil prices began to drop dramatically in June 2014. Orders peaked on a monthly basis that September at $643 million and bottomed out at $260 million in June 2016. IMTS – The International Manufacturing Technology Show, held in September 2016, rekindled the market, but it was not until March 2017 that year-over-year numbers began to consistently show a positive, accelerating trend upwards. Now, three months later, June figures are up 10 percent over June 2016 and represent the volume and growth that supports an announcement that the manufacturing technology market is officially expanding.

“If the USMTO numbers aren’t convincing enough that a recovery is underway, certainly the buzz among our members underscores that a recovery is indeed underway,” said AMT President Doug Woods. “Members have shared that the aerospace supply chain in the Midwest is hot, auto orders doubled between May and June and sales in the Southeast exploded. Over the next six months, they look forward to a broadening of the recovery into areas like agricultural, construction, power generation and off-road machinery industries.”

The USMTO data supports the anecdotal evidence from AMT members. Automotive-related orders were up 109 percent from May and the aerospace industry’s bookings of new production technology were up 47 percent. While the largest growth by any region is the 42 percent increase in orders originating in the states from Tennessee north to Michigan, the Southeast and West are posting the fastest growth rates year-to-date in manufacturing technology orders.

Key indicators that businesses in the manufacturing technology sector rely on have been improving steadily. Housing starts are an important indicator of trends as every new house has at least seven new appliances, a car in the driveway, and a consumer or two with disposable income.

In June, housing starts topped 1.2 million which isn’t at peak levels but continues an upward trend in the indicator. The increase goes hand-in-hand with the continuing strength of consumer confidence which, according to the University of Michigan’s Consumer Confidence, has been over 90 since September 2016.

It isn’t only the consumer that is fostering growth in the need for additional manufacturing capacity. USMTO tracks well with the Purchasing Managers’ Index (PMI) produced by the Institute of Supply Management. Any mark over 50 represents an expansion and the index is 56.3 in July, up from the June level. Business’ profitability over the past three quarters primes the pump for expansion on corporate investment in new durable goods and production equipment.

Mark Killion, Director of U.S. Industries for Oxford Economics, noted, “Recent increases in new orders for machine tools are supported by a better environment for business investments in the U.S. and globally, especially in the sectors for metals products, electrical and industrial machinery.”

AMT has recently replaced one of its key indicators with the Gardner Business Index (GBI) which tracks well with USMTO and turned upwards markedly in December 2016, about 90 days before the recognizable upturn in USMTO.

“As we expected, machine tool orders have performed well in recent months. The backlog index from the GBI: Metalworking bottomed out in January 2016. The backlog index tends to lead machine tool consumption by 14 to 20 months. Since the backlog is still growing at an accelerating rate, we expect solid growth in machine tool orders through at least the end of 2017,” commented Steve Kline, Director of Market Intelligence, Gardner Business Media and creator of the GBI.
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Export Competitiveness in the Metals and Engineering Sector is Pivotal for Economic Growth

Our review of the State of the Metals and Engineering sector in the first quarter of 2017 reaffirmed the low-growth scenario, which saw a second consecutive contraction in GDP technically catapulting the South African economy into a recession. However, the latest prediction by the Steel and Engineering Industries Federation of Southern Africa (SEIFSA) captures an adjusted annual economic growth trajectory, highlighting a moderate turnaround in GDP growth this year of 0.8%, which is generally congruent with a global positive outlook.

The recovery – albeit slowly – of some economic fundamentals provides some comfort and basis to argue that the South African economy is gradually weathering the depression. Indications are that the trough in the current business cycle may have finally been reached and a rebound is eminent.

There is optimism that second-quarter GDP figures will provide a mild impetus for slightly robust growth from the second half of 2017 onwards. This is possible given the generally improving international economic environment, underpinned by moderate recovery of investment and exports.

Moreover, developments in key external markets – such as the SADC, the rest of the African continent, Europe, Asia (particularly China) and the USA – for locally-manufactured products are important in gradually improving demand conditions regionally and globally. These should be beneficial to local exporters over the medium to long term.

Also, it is expected that an improvement in the current socio-political environment (including a clearer government economic policy stance) and international commodity prices will translate into better business opportunities and improve the financial positions and performances of local companies. This is potentially good news for the manufacturing industry at large and the metals and engineering (M&E) sub-industries in particular.

SEIFSA’s first-quarter revised growth outlook for 2017 specifically simulates the M&E sub-sectors benefiting from these developments and expanding by 0.9% in the second quarter, thereby contributing to a revised predicted annual outlook of 1.2%. This figure was revised downward from 1.4% due to the weaker-than-anticipated first-quarter results and deterioration of the outlook in 60% of the sub-industries.

Although there is confidence for medium-to-long-term economic activities in the M&E sub-sectors, the short-term figures are cause for concern. SEIFSA is of the view that increasing pessimism about current business conditions and poor performance of key economic indicators does not presently bode well for production activity. Both the ABSA Purchasing Managers Index (PMI) and the Producer Price Index (PPI) reduced by 4.8% and 1% respectively from May 2017 to June 2017. This was accompanied by a reduction in the Unit Value Index for exported commodities from 2.2% in April to -2.8% in May 2017.

Additionally, an oscillating rand does not provide confidence to businesses. A weak rand translates to high cost of exchanging currencies, resulting in increasing import costs (including costs of inputs). Input costs are a fundamental component of manufacturing input cost inflation and a trade-off between rising input cost inflation and the reducing PPI (including the PPI of stage of processing) impacts negatively on the margins of companies. SEIFSA closely monitors these indicators as their performance at the moment is cause for concern to the M&E sub-sectors.

A consistently poor performance may dampen the outlook and present a basis for further revision of our estimates. Contemporaneous to the need for improved economic indicators towards economic growth is exports competitiveness in the M&E industry. SEIFSA strongly believes that export competitiveness will ensure that output growth is consistent and sustainable, generally translating to better employment opportunities as companies rally to boost productive capacity in anticipation of higher-than-expected demand for their products.

Indeed, an imperative need exists for all companies in the M&E sub-sectors to be both inward looking (that is, sell within SA, in addition to intra-company transactions to upstream local companies) and outward looking (that is, sell beyond our borders and reduce dependence on the local economy) in order to benefit from an expectant economically buoyant aura.

In our first-quarter review of the State of the Metals and Engineering sector, we noted that the M&E production capacity expanded by 0.5% in Q1 2017, against our forecast of 1.3%. Total exports decreased by 8.4% in real terms. Despite a stronger rand in Q1, imports also decreased by 7.9% (real), which is indicative of a weak domestic economic environment. The table of export-to-output ratios of the metals and engineering sub-industries shows that 87% of demand for plastics, 77.5% of demand for electrical machinery and 67% of demand for metal products is derived domestically.

An interesting observation is that those sub-industries with the most significant exposure to the domestic economy experienced the most severe contraction in output, while the opposite mostly held for the sub-industries with higher export-to-output ratios. In addition, the sub-industries contracted the most in Q1 2017, confirming a cyclical output pattern to that of the domestic economy.

A paradigm shift and new strategy is needed in doing business in the M&E sub-industries. Rather than conducting business as usual, a focus on improving export competitiveness is needed in order to enhance profits and act as a buffer during difficult times and sustained economic downswings.

Indeed, export competitiveness is pivotal if M&E companies want to benefit from expected domestic green shoots (given the current expansionary monetary policy stance) and increasingly optimistic global outlook. It is necessary to ignite and sustain economic growth as South Africa seeks to benefit from the broadest synchronized upswing the world economy has experienced in the last decade.
WEAKER RAND WILL FURTHER REDUCE MARGINS OF METAL AND ENGINEERING COMPANIES

Manufacturers continue to face serious headwinds despite the recent decision by the South African Reserve Bank to cut the repo rate by 25 basis points, which was an expansionary monetary policy move to reduce costs and stimulate demand, Steel and Engineering Industries Federation of Southern Africa (SEIFSA) Chief Economist Michael Ade said recently.

Ade was commenting on the latest seasonally adjusted Absa Purchasing Managers’ Index (PMI) which declined by 3.8 points to 42.9 in July 2017, with all five of the PMI sub-indices performing poorly. This is a second consecutive monthly decline from 46.7 in June, and also the weakest since the second half of 2009. The seasonally adjusted business activity sub-index performed the worst, declining to a low 39.3.

SEIFSA Economist Marique-Mari Kruger said the PMI reading, which came well below the 50 mark, signaled a contraction in the manufacturing sector. “This is disappointing when compared to the performance of our important trading partners in the Eurozone and the US, with the countries generally scoring PMI indices of above 50,” she said.

However, Kruger said there was still hope because, while the PMI index dropped in July 2017, compared to June 2017, the movement was better than the downward 4.8 index points recorded from May 2017 to June 2017.

Ade and Kruger said next month’s data could improve, provided there was increased focus on the Government’s economic policy implementation, improved business and market sentiment, continued positive inflation outlook and a speedy resolution to the wage disputes in the metals and engineering industry.

“A further consequence of the generally low confidence is a depreciation of the rand against the dollar, despite a strong performance in July,” he said.

Ade said the poor PMI data and the weakening of the rand against the dollar would increase input costs and add pressure on the bottom line of companies in the metals and engineering (M&E) sub-component.

“This does not augur well for business, especially given that the M&E sub-industry is at a crucial phase of wage negotiations. Businesses are in a very dynamic environment of increasing costs and diminishing returns, which heightens the level of uneasiness,” he said.

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“The data point is largely driven by souring of sentiment, including low executive, business and consumer confidence. These feed into poor month-to-month changes in demand and factory activity. A further consequence of the generally low confidence is a depreciation of the rand against the dollar, despite a strong performance in July,” he said.

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7TH MEETING OF THE BRICS TRADE MINISTERS

Minister of Trade and Industry, Dr Rob Davies, recently participated in the 7th meeting of the BRICS Ministers of Trade in Shanghai, People’s Republic of China.

South Africa has strong and growing trade and investment ties with the other BRICS members, particularly China and India. As a single country, China has been South Africa’s top ranking export destination as well as import supplier since 2009. In 2016, intra-BRICS exports amounted to the equivalent of R4 trillion. China accounted for 40%, India for 27%, Russia for 16%, Brazil for 10%, and South Africa for 7% of this.

In 2016, South Africa’s exports destined to BRICS countries amounted to R156 billion, while its imports from these four partners came to R273 billion. In 2015/16, intra-BRICS investment amounted to R554 billion. South Africa received R34.5 billion from investors in these countries, while making investment there to the amount of R22.6 billion.

The Trade Ministers discussed a number of issues relating to trade and investment promotion. The Trade Ministers established collaborative mechanisms among BRICS countries which are aimed at encouraging information sharing and capacity building, through activities such as expert dialogues and workshops and build a common understanding on among others e-port network, investment facilitation, trade in services, e-commerce, intellectual property rights. The key objective is to promote a better understanding of the regulatory framework, share best practices and promote practical cooperation with a view to enhance trade and investment.

Davies says cooperation will be strengthened between Investment Promotion Agencies so as to promote exchange of information on investment facilitation measures to encourage peer learning. Consideration will be given to organizing investment promotion activities on the sidelines of BRICS Summit with a view to enhance intra-BRICS investments. In the context of investment facilitation, Davies elaborated on South Africa’s approach to investment protection and dispute settlement, as embodied in the Protection of Investment Act. He indicated the role of Invest South Africa, the investment one stop shop at the Department of Trade and Industry in assisting investors in the country.

BRICS countries have also agreed to promote technical cooperation and capacity building, and BRICS cooperation in multilateral forums such as the World Trade Organization.

Davies, in his interventions, emphasized the need for practical cooperation among BRICS countries, rather than rule-making. "Cooperation among BRICS countries must be underpinned by development and the need to promote inclusive growth” said Davies.

Davies also emphasized the need to promote complementary value-added trade so as to ensure that BRICS cooperation contributes to the industrial development agenda of its members. “I believe that our cooperation must be underpinned by promotion of inclusive growth and job creation; technology transfer, technology development and the ability of BRICS countries to leverage the fourth industrial revolution” added Davies.

South Africa will be chairing BRICS in 2018. Davies emphasized the need to take stock of trade and investment related initiatives in the recent years and ensuring that there is follow-through on those.

On the sidelines of the 7th BRICS Trade Ministers meeting, Davies met with his Chinese counterpart Mr Zhong Shan and agreed to enhance bilateral trade relation between the two countries, including promoting value-added trade as well as promote Chinese investments in South Africa’s industrial sector.

Volkswagen Group South Africa, the country’s leading passenger car manufacturer continues to grow market share, despite the tough economic climate and a declining new vehicle passenger car market.

Volkswagen has been the passenger car market leader for the last 7 consecutive years and continues to lead the market in 2017. Overall the Volkswagen Group has a market share year to date of 22.8%, with Volkswagen alone enjoying 19.8% of the local passenger market and Audi accounting for the other 3%. The two locally produced cars from its Uitenhage factory, have been instrumental in this success, with the Polo Vivo consistently being the best-selling car in the country which is closely followed by the Polo in second place since their launch in 2010.

"This means that nearly a quarter of all cars sold in South Africa come from our stable, something we are very proud of and plan to continually build on” said Chairman and Managing Director Thomas Schaefer. "This success does not come on its own, but is due to having the right products built by a great workforce, a loyal and dedicated dealer network providing outstanding sales and aftersales back up, good residual values, outstanding advertising and a compelling cost of ownership proposition,” added Schaefer.

2017 has also been a watershed year for Volkswagen Group South Africa with the local company being named as responsible for the 4th fully fledged region in the Volkswagen World, namely Sub Saharan Africa. This comes hot on the heels of the opening of the first assembly operation outside of South Africa in Kenya in December last year.

“We are now working on an integrated mobility solution which we will pilot in Rwanda, this would include an assembly operation together with car sharing offerings exclusively from Volkswagen. This would be the next step in our expansion into Africa” commented Thomas Schaefer.

Volkswagen believes that there is great potential in Africa going forward. The middle class is growing at a fast pace as many of the economies in Africa start to grow and the need for mobility will increase dramatically in the coming years. This presents a great opportunity for Volkswagen South Africa to develop its own markets and reduce its dependence on the local market and the current right hand drive export markets.

Some 18 months ago Volkswagen announced a R4.5 Billion investment in new product and technology and this investment is now nearing completion, with the already state of the art factory in Uitenhage being transformed into arguably the most modern and efficient motor assembly plant in sub Saharan Africa. Customers both in South Africa and internationally will see the benefits of this investment in early 2018.
Mention this advertisement to claim your **10% discount** on Hypertherm consumables.

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0200

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Facebook
The new tools focus on increased productivity and the theme of Machining Intelligently will be emphasized at ISCAR’s INDUSTRY 4.0-standard tools help customers adapt to high speed and high feed machining. Minimum quantity lubrication (MQL) and other modern machining strategies which comply with the user/machine connectivity demands of the Internet of things.

ISCAR continues to expand its existing array of products, which have established many benchmarks in the global metalworking industry. In today’s economy with tight resources, lean operations and challenging demands, manufacturers need more support from their supply partners. ISCAR’s new innovative tool families assist users to increase profitability by employing leading-edge engineering solutions. These new ISCAR tools will enable manufacturers to continue to improve their efficiency in metalworking by using modern machining strategies.

The new tools focus on increased productivity with smart insert locking mechanisms to create a more stable machining process. ISCAR has responded to the latest market demands, which have grown from the all-pervasive trend toward high-speed machining and mill-turn machining centers, with a range of upgrades in both tools and insert geometries, leading to less machine downtime and less labor.

Some of the products that will be on display are:

**DOVE-IQ TURN:** An innovative dovetail pocket combined with a lever clamping mechanism provides very firm and rigid insert clamping for heavy turning.

**WHISPERLINE:** ISCAR’s anti-vibration tools for turning and grooving feature new tool mechanisms to decrease vibrations, improve surface quality and increase insert tool life.

**DOVE-IQ GRIP:** This line of tools has a unique frontal locking mechanism designed for deep heavy grooving applications with unobstructed chip flow.

**PENTA-IQ GRIP:** This remarkable design of small pentagonal inserts with 5 cutting edges is intended for deeper and more accurate grooving and parting applications.

**HELI-IQ MILL 390:** Milling inserts with 3 cutting edges and advanced tool geometries function with reduced cutting forces and lower power consumption. This is an economical advantage over inserts with 2 edges.

**MILL4FEED:** A new family of FEEDMILL tools that carry square single-sided inserts with 4 cutting edges, designed for reducing cutting forces when used on low power machines or long overhang applications.

**DOVE-IQ MILL:** Milling insert featuring a unique design with 8 cutting edges for a wide range of 45° face milling applications, roughing and finishing operations on a wide range of materials.

**FLASHTURN:** A wide range of ISOTURN small size inserts that provide an economical advantage considering cost per cutting edge. They are available in a wide range of geometries, corner radii, chipformers and the most advanced carbide grades.

**DECA IQ THREAD:** This unique geometry is a 16mm round insert with 5 double-sided corners that provide 10 cutting corners. The new geometry provides the most economical price per threading corner compared to 3 cornered laydown inserts.

**DO-GRIP JET LINE:** The coolant stream of the JHP (high-pressure) tools is directed precisely between the insert rake face and the flowing chip. This results in superb chip evacuation which provides extended tool life.

**CHAM-IQ-DRILL 700:** Features a unique design, utilizing the carbide flexibility for self-locking – eliminating the need for clamping accessories. Extremely accurate and provides high cylindricity due to an advanced self-centering edge geometry.

**SUMOCHAM IQ:** Expanded SUMOCHAM drilling head options, featuring a revolutionary drilling head geometry that features concave cutting edges which substantially enhance the self-centering capability of the drill. No pilot hole is necessary.

**SUMOGUN:** Based on the SUMOCHAM insert geometry, for deep drilling applications of a diameter range of 10 to 25.9mm (total length of up to 800mm). SUMOGUN enables replacement of the drilling head inside the machine – no need to remove the drill for head indexing.

**TANG-GRIP IQ:** Single-ended parting inserts with an unbeatable clamping method; features a flat blade, thus eliminating chip obstruction.

**SWISSCUT INNOVAL:** Upgraded SWISSCUT line with new inserts that feature an innovative oval-shaped hole. The new clamping design uses a special screw that can be accessed and operated from both tool sides, preventing risk of falling parts.

**MILLSHRED P290:** The ideal solution for machining very high shoulders. The tools and wavy edge inserts reduce chatter and enable optimal machining for a large variety of materials.

**HELIDR 690 LINE:** New family of tools for 90° milling. The H690 features a triangular insert with 6 helical right-hand cutting edges. The helical design provides extremely high durability and very stable performance.

**SPINJET:** Coolant-driven HSM Spindles 20K, 30K, 40K, RPM for small diameter tools.

ISCAR strives to work closely with customers, not only to develop new technologies that meet emerging needs, but also to maximize the value of investments in modern machinery by increasing equipment utilization and optimizing performance. ISCAR’s tools and inserts are well-suited for the new generation of machining centers, enabling high feeds and speeds for highly productive machining operations as well as intelligent data sharing. These tools are a part of ISCAR’s commitment to the ongoing success of its customers and to the increasingly relevant standards of INDUSTRY 4.0.
Extra Strong Tangential Inserts for Deep Milling
Small Chips
No Vibrations!

- Straight Cutting Edge
- Serrated Cutting Edges

ISCAR SOUTH AFRICA (PTY) LTD  TEL: (011) 997-2700  |  FAX: (011) 388-6820

www.iscar.co.za
EXPANSION OF THE HELI IQ MILL 390 LINE WITH NEW TOOLS AND INSERTS

ISCAR is expanding its range of HELI IQ MILL standard tools and inserts by extending their application options.

Following excellent market response to the HELI IQ MILL 390 Line, ISCAR is expanding the family to meet the growing requirements of efficient milling in various industrial sectors by adding a wide range of products for a variety of applications and metals.

The newly introduced HELI IQ MILL 390 Family cutting geometries offer distinct technical advantages and new levels of productivity as well as reduction of cost per edge in square shoulder milling, providing customers with an attractively-priced and productive solution in a broad spectrum of milling applications.

The HELI IQ MILL 390 family includes:

- **HM390 TCCT 0703PCR**: Peripherally ground inserts with a sharp cutting edge used for semi-finishing and finishing applications. The insert enables smooth machining exerting low cutting forces and is specially designed for milling various high-temperature alloys.
- **HM390 TPKT 1003 PDR**: Expands the radius variety of HM390 TPKT 1003…PDR inserts with the following full corner radii: 0.4, 1.0, 1.2, 1.6 and 2.0mm.
- **HM390 TPKT 100304R-GW 30N**: Inserts made from cermet grade IC30N for general-use applications.
- **HM390 TPKR 100304 PDRHM**: Super positive inserts, used for machining aluminium, stainless steel and high-temperature alloys.
- **HM390 TPCT 1003PDR**: Peripherally ground inserts with a special chipformer that achieves excellent surface finish and precision. The insert enables smooth machining exerting low cutting forces and is specially designed for milling various high-temperature alloys (HTSA), widely used in the aerospace and power generation industries.
- **HM390 TPCR 1003PDFR-P IC28**: Peripherally ground inserts with a polished rake surface and highly positive cutting geometry. Intended for machining aluminium and also suitable for cutting titanium and magnesium.
- **HM390 TDCR 1505 PDFR-P28**: Peripherally ground flank inserts with polished rake surfaces. The insert’s super positive cutting geometry and sharp cutting edges ensure highly efficient milling of aluminium alloys.
- **HM390 TDKT 1505PDR-HS**: Inserts with a serrated cutting edge for chip splitting. The chip splitter design generates low cutting forces enabling increased feed rates resulting in higher machining productivity.
- **HM390 TDKR 150508PDR HM**: Super positive inserts for machining aluminium, stainless steel and high-temperature alloys.
- **HM390 ETC**: Endmills carrying the triangular HM390 TCKT 0703PCTR inserts in a diameter range of 20 to 32mm with cylindrical shanks for CNC-lathe machines.
- **HM390 FTP**: Face mills carrying the triangular HM390 TPKT 1003PDR inserts in a diameter range of 80 and 100mm.

For more information, please contact Iscar South Africa - Tel: 011 997-2700.
MAKINO DA300 VMC
REDUCES MACHINING TIME FOR COMPLEX ALUMINIUM COMPONENTS

Making its latest full 5-axis machine solution, the DA300 vertical machining center, provides the ideal blend of speed, precision and flexibility for complex part applications. Inspired by the best design characteristics from both vertical and horizontal machine platforms, the DA300 delivers the highest productive capabilities for multi-axis workpieces in the smallest of machine footprints.

“The DA300 integrates numerous features that increase productivity and efficiency by providing significant reductions in non-cut time,” said Bill Howard, VMC product manager at Makino. “The machine provides a 50 percent reduction in spindle acceleration time, 15 percent reduction in positioning time, 40 percent reduction in tool-change chip-to-chip time and includes a standard vision-type broken-tool sensor [Vision B.T.S.] that optically checks tools outside the work zone to ensure tool consistency and part quality while simultaneously reducing non-cut time during tool changes by 80 percent. Individually, each element reduces part cycle time and increases productivity; however, when all of these time savings are combined, the result is a dramatic advantage in reduced part-production times and increased profitability.”

The DA300 worktable is an integral, 340mm by 300mm table, accommodating workpiece sizes up to 450mm in diameter, 400mm tall and weighing 250 kg. The machine provides X-, Y- and Z-axis travels of 450mm, 620mm and 500mm, respectively, at feed rates of up to 60,000mm per minute. The direct-drive, motor-driven A-axis table offers 150 degrees (+30 to -120) of tilt capability at 100 rpm. The rotary C-axis has full 360-degree rotational positioning at 150 rpm. Combined, these rotational axes have the range and speed necessary to achieve the highest productivity in complex five-face or full 5-axis machining application. Equipped with scale feedback on all axes, the DA300 also offers a rare blend of speed and precision.

The DA300 comes equipped with a 20,000-rpm HSK-A63 spindle, delivering the speed and flexibility to tackle high-speed, highly productive machining of various workpiece materials, including aluminum, die-cast, steel and titanium. Acceleration and deceleration to and from full speed can be accomplished in a mere 1.5 seconds, reducing chip-to-chip times. Additionally, the machine’s standard configuration includes a 60-position ring-type tool magazine with capacity for a wide variety of tooling as well as a Vision B.T.S. to verify the integrity of the tooling prior to use.

With a perfect blend of the proven stability of the FANUC hardware and Microsoft Windows Embedded Standard 7OS, the state-of-the-art Professional 6iPro6 control helps move operators fluidly through machine setup, empower them with easily accessible information and protect them with enhanced safety. Cycle-time saving and dynamic-control capabilities have been added to the control’s GI functions to help lower costs per part.

Included is GI Drilling, a unique G-code drilling cycle that enables the spindle and tool to arc from hole to hole instead of following a square path. This simple change reduces non-cut time by as much as 15 percent on common hole-pattern drilling.

On complex 2-D paths, testing has reduced cut time up to 35 percent. While not every tool can make use of these functions, advanced motion control GI is proven to reduce overall cycle time by 3 to 8 percent in typical production components. This reduction saves substantial cost in both high-volume and low-volume production environments by reducing the number of spindles required and freeing up machine availability to take on more work.

Other intelligent machine functions include Inertia Active Control (IAC) designed to further speed up machine motions based upon system dynamic attributes and Collision Safe Guard (CSG), a real-time crash-avoidance feature that has a look-ahead function and takes real machining conditions into consideration to prevent collisions.

Designed to eliminate interferences in accessing the pallet, the DA300 can be configured using several approaches, including direct part handling as a stand-alone machine, manual handling using a table chuck and pallet, one of the workpiece pallet systems (WPS) or third-party automation using an EROWA chuck and pallet system. The DA300 can be field modified to add multiple pallet magazines, starting with a seven-pallet workpiece pallet system (WPS-7), and up to a 19-pallet workpiece pallet system (WPS-19). These configurations deliver the highest productive capabilities using minimal floor space.

With Makino automation integration services manufacturers are able to combat fierce pricing pressures from low-labor-cost countries by providing complete automated cells and systems. Whether demands call for simple machine tending or complex, high-volume robotic cells, Makino’s automation integration services offer the equipment, skills and manpower necessary to reduce labor costs, increase throughput, ensure and enhance part quality, all while retaining the flexibility to adapt quickly to changing volumes or new parts.
MAKINO SGI.5 SHORTENS MACHINING CYCLE TIMES WHILE MAINTAINING PRECISE SURFACE FINISHES

Makino introduces SGI.5, its latest version of Super Geometric Intelligence software for high-feedrate, tight-tolerance machining of complex three-dimensional contoured shapes. “SGI.5 is the next-generation Makino advancement, culminating a decade of leadership in high-speed, high-accuracy motion control in complex 3D contouring applications,” said Bill Howard, vertical machining product manager at Makino. “Continuous product development and technology innovations and advancements in Makino proprietary software and motion control/servo technology have altered the traditional speeds and feeds typically used to manufacture these types of parts.”

The technology facilitates previously unachievable levels of accuracy and unprecedented reductions in cycle time. Depending upon the specific geometry of the application, SGI.5 can provide 20 to 60 percent faster cycle times while maintaining accuracy and surface finishes.

E-TURN: IN-PROCESS RIGHT-HAND AND LEFT-HAND BENDING

E-TURN is the BLM GROUP family of all-electric tube bending systems known for their flexibility, speed and accuracy in making complex shaped parts. The family of machines comes in four models, for tubes up to 30, 35, 40 and 52 millimetres in diameter and in-process right-hand and left-hand bending: the systems are all-electric with fixed and variable multi-radius capabilities and integrated loading and unloading systems.

The E-TURN stands out among the BLM GROUP bending systems for the variety of applications it can successfully tackle to bend complex parts fast and accurately. In-process right-hand and left-hand bending, 15 All-Electric axes, integrated to automatic loading and unloading systems, the VGP3D programming system and the B_Tools and B_Right functions to get it right from the first part. These are the strengths of a system which can often succeed when the others simply give up.

Each of the two bend heads for in-process right-hand and left-hand operation can mount up to four tools for creating various fixed and variable bending radii. In many cases, this means that a variety of jobs can be performed without the need to change the tools between each one.

The clever bend head design is capable of applying up to 2000 kilograms of pressure making it possible to bend complex radii less than 1D, on tubes ranging from 6 to 52 millimetres in diameter. Being able to modulate the torque during bending according to the clamping force means creating unblemished parts with perfect quality.

All machine movements, including the clamps, are controlled via CNC by means of electric axes to guarantee accuracy and repeatability. The tools are calibrated automatically using pre-stored parameters. This drastically saves setup and job changeover times.

The powerful 3D visual graphic programming system, VGP3D, is a key element of the E-TURN and, all BLM bending systems. The programmer can see the 3D simulation of the part being created simply by entering the bent tube’s geometric data. Once the data is entered, the part can be simulated to calculate real processing times and accurately check for collisions prior to bending the first part. The B_Impoert option can be used to directly import 3D models in IGES or STEP format.

No rejects – the first part is good. With the B_Tools option the E-TURN system can store the elastic characteristics of a material to compensate for spring back and tube elongation automatically ensuring that the part is right from the first go. B_Right is a tool for automatically measuring spring back and tube elongation while processing. These values are stored and applied to the tube being processed.

The E-TURN bending system can be integrated in an All-In-One process with a Lasertube system to generate accurate laser cut and bent parts. Data is exchanged between the systems to resolve and correct for the issues inherent to each technology such as tube elongation caused by bending.

Automatic tube loading and unloading are functions included in the E-TURN system operating logic. Loading or feeding systems can be positioned to either the right or left side of the machine. Finished parts can be unloaded by releasing them onto an exit conveyor.

The environment impact is very low. The E-TURN electrical consumption is less than one tenth of a conventional hydraulic bender. It only draws electricity when the axes are actually in use. The elimination of the hydraulic system means no need to dispose of waste oil and ensures very quiet operation.

High performance, extreme flexibility and high accuracy means that E-TURN can satisfy the demanding bending needs of a variety of industries: metal furniture components, complex automotive parts (such as exhaust manifolds), system components, bicycles, motorcycles and all sectors in general.
A battery that can be charged in seconds, has a large capacity and lasts ten to twelve years? Certainly, many have wanted such a thing. Now the FastStorageBW II project – which includes Fraunhofer – is working on making it a reality. Fraunhofer researchers are using pre-production to optimize large-scale production and ensure it follows the principles of Industrie 4.0 from the outset.

Imagine you’ve had a hectic day and then, to cap it all, you find that the battery of your electric vehicle is virtually empty. This means you’ll have to take a long break while it charges fully. It’s a completely different story with capacitors, which charge in seconds. However, they have a different drawback: they store very little energy.

In the FastStorageBW II project, researchers from the Fraunhofer Institute for Manufacturing Engineering and Automation IPA in Stuttgart, together with colleagues from the battery manufacturer VARTA AG and other partners, are developing a powerful hybrid storage system that combines the advantages of lithium-ion batteries and supercapacitors. “The PowerCaps have a specific capacity as high as lead batteries, a long life of ten to twelve years and charge in a matter of seconds like a supercapacitor,” explains Joachim Montnacher, Head of the Energy business unit at Fraunhofer IPA. What’s more, Power-Caps can operate at temperatures of up to 85 degree Celsius. They withstand a hundred times more charge cycles than conventional battery systems and retain their charge over several weeks without any significant losses due to self-discharge.

Large-scale production with minimum risk

The Fraunhofer IPA researchers’ main concern is with manufacturing: to set up new battery production, it is essential to implement the relevant process knowledge in the best possible way. After all, it costs millions of euros to build a complete manufacturing unit. “We make it possible for battery manufacturers to install an intermediate step – a small-scale production of sorts – between laboratory production and large-scale production,” says Montnacher. “This way, we can create ideal conditions for large-scale production, optimize processes and ensure production follows the principles of Industrie 4.0 from the outset. Because in the end, that will give companies a competitive advantage.” Another advantage is that this cuts the time it takes to ramp up production by more than 50 percent.

Making large-scale production compatible with Industrie 4.0

As far as software is concerned, the systems are thoroughly connected. As with process clusters, they are also equipped with numerous sensors, which show the clusters what data to capture for each of the process steps. They communicate with one another and store the results in a cloud. Researchers and entrepreneurs can then use this data to quickly analyze which factors influence the quality of the product – does it have Industrie 4.0 capability? Were the right sensors selected? Do they deliver the desired data? Where are adjustments required?

Fraunhofer IPA are also applying their expertise beyond the area of production technology: they are developing business models for the marketing of battery cells, they are analyzing resource availability and they are optimizing the subsequent recycling of PowerCaps.
AUSTRIA

2018

INTERTOOL
15 - 18 May
Intertool is Austria’s only trade fair for manufacturing technology in the metal processing sector. It focuses on machine tools and precision tools for separating and forming work piece processing, as well as fixtures and fittings, techniques, technologies and systems along the entire process chain.
Messe Wien www.intertool.at

CHINA

2017

CCIMT (China Chongqing International Machine Tool Show)
13 - 16 November
CCIMT will showcase the latest in manufacturing technology and bring buyers and sellers together from all over the world to the dynamic market of Chongqing and southwest China.
Chongqing International Expo Center www.jmtba.or.jp

CZECH REPUBLIC

2017

MSV
9 - 13 October
International Engineering Fair.
Brno Exhibition Centre www.bv.cz

FINLAND

2017

FINNTEC, TOOLTEC and JOINTEC
10 - 12 October
Trade Fair for the Metal and Engineering Industries.
Helsinki Exhibition & Convention Centre www.expobase.com

FRANCE

2018

MICRONORA
25 - 28 September
Biennial microtechnology and precision trade fair for cutting edge technology.
Besançon - France www.micronora.com

GERMANY

2017

EMO HANNOVER
18 - 23 September
EMO Hannover – the world’s premier trade fair for the metalworking sector.
Hannover Fairground www.emo-hanover.de
BLECH & SCHWEISSTECH
7 - 10 November
13th Blechexpo - International Trade Fair for sheet metal working. The practical trade fair duo of Blechexpo and Schweisstec takes place on a two-year cycle in the state trade fair centre in Stuttgart and is the only event in the world that deals with the complementary technologies of sheet metal processing and joining technology.
Stuttgart New Exhibition Centre www.blechexpo-messe.de

2018

METAV 2018
20 - 24 February
The 20th International Exhibition for Metalworking Technologies.
Düsseldorf Exhibition Centre www.metav.com

NORTEC
23 - 26 February
Where decision-makers in manufacturing technology and mechanical engineering meet.
Hamburg Fair Grounds www.nortec-hamburg.de

GRINDTEC
14 - 17 March
International Trade Fair for Grinding Technology.
Messe Augsburg, Germany www.grindtec.de

wire DÜSSELDORF
16 - 20 April
The most important exhibition for wire manufacturers and processors.
Düsseldorf Exhibition Centre www.wire.de

TUBE DÜSSELDORF
16 - 20 April
International Tube and Pipe Fair.
Düsseldorf Exhibition Centre www.mdna.com

LASYS
5 - 7 June
International Trade Fair for laser material processing.
Messe Stuttgart www.messe-stuttgart.de

AMB
18 - 22 September
AMB, the international exhibition for metalworking, is the leading industry trade fair and is one of the top five trade fairs worldwide for metal-cutting technology.
New Stuttgart Trade Fair Centre www.messe-stuttgart.de

ALUMINIUM 2018
9 - 11 October
Aluminium is the world’s leading B2B tradeshow for the aluminium industry and its key application areas. The show unites manufacturers, technology suppliers and end users through the entire production chain from raw material to finished products.
Messe Düsseldorf, Germany www.aluminium-messe.com

EURO BLECH
23 - 26 October
The 25th International Sheet Metal Working Technology Exhibition will open its doors again in Hanover, Germany. As the world’s leading exhibition for the sheet metal working industry EuroBlech offers a global platform for the presentation of the latest technology to a specialized audience of the industry’s key purchasers and decision makers.
Exhibition Grounds, Hanover Germany www.eurolech.com

2018

2018

2018

2018
### TRADE FAIR CALENDAR

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<th>Country</th>
<th>Event</th>
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<td></td>
<td><strong>Bangalore International Exhibition Centre</strong></td>
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<td><strong>ITALY</strong></td>
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<td></td>
<td><strong>BI-MU</strong></td>
<td>9 - 13 October</td>
<td>International exhibition dedicated to the Italian machine tools, robot, automation systems and ancillary products industry.</td>
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<td><strong>Exhibition Grounds, Fieramilano, Italy</strong></td>
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<td><strong>MALAYSIA</strong></td>
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<td></td>
<td><strong>METALTECH</strong></td>
<td>23 - 26 May</td>
<td>Malaysia’s main trade event for metalworking and machine tool industries.</td>
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<td><strong>Putra World Trade Centre, Kuala Lumpur, Malaysia</strong></td>
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<td><strong>SOUTH AFRICA</strong></td>
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<td><strong>INFRASTRUCTURE AFRICA BUSINESS FORUM</strong></td>
<td>21 - 22 August</td>
<td>Presents stakeholders with an opportunity to unpack the enormous growth potential in addressing Africa’s infrastructure needs.</td>
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<td><strong>Sandton Convention Centre</strong></td>
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<td><strong>ELECTRA MINING AFRICA 2018</strong></td>
<td>10 - 14 September</td>
<td>Ranked as the second largest mining show in the world and with global recognition for its broad reach across mining, construction, industrial and power generation industry sectors, Electra Mining Africa once again proves its status as a world class event attracting high numbers of quality exhibitors and visitors.</td>
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<td><strong>SIMTOS</strong></td>
<td>3 - 7 April</td>
<td>Capture the future: 4th Industrial Revolution Simtos (Seoul International Machine Tool Show) is held bi-annually attracting decision makers of the automobile, shipbuilding, semiconductor, metal molding industry and other sectors in which machine tools are used. Represented products include all kinds of industrial machines as well as industrial robots, machine components, measuring instruments, machine controls etc.</td>
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<td><strong>Kintex 1-2, Goyang, South Korea</strong></td>
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<td><strong>30 BIEMH</strong></td>
<td>28 May - 1 June</td>
<td>The participation of the world’s leading machine tool manufacturers makes this event practically unique in its field. The BIEMH is a market driver event that shows off the latest trends and needs of industries and brings visitors up to date in the field of manufacturing.</td>
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<td><strong>PRODEX</strong></td>
<td>20 - 23 November</td>
<td>International Exhibition for machine tools, tools and production measurement.</td>
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<td><strong>Messe Basel, Switzerland</strong></td>
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<td><strong>MTA 2018</strong></td>
<td>16 - 19 May</td>
<td>The International Precision Engineering Machine Tool and Metalworking Exhibition and Conference.</td>
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<td><strong>Bangkok International Trade &amp; Exhibition Center (BITEC)</strong></td>
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<td><strong>UNITED KINGDOM</strong></td>
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<td><strong>MACH 2018</strong></td>
<td>9 - 13 April</td>
<td>MACH is the UK’s premier event for engineering-based manufacturing technologies. Taking place from 9-13 April 2018, MACH is poised to be the destination of choice for engineers and manufacturers, bringing together the best of UK manufacturing under one roof. With over 25 000 visitors across a 5 day period, a vibrant seminar programme and unrivalled networking opportunities MACH showcases the heart of UK advanced engineering.</td>
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<td><strong>NEC Birmingham UK</strong></td>
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<td><strong><a href="http://www.machexhibition.com">www.machexhibition.com</a></strong></td>
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<td><strong>UNITED STATES OF AMERICA</strong></td>
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<td><strong>IMTS 2018</strong></td>
<td>10 - 15 September</td>
<td>International Manufacturing Technology Show. Industrial decision-makers attend the International Manufacturing Technology Show (IMTS) to get ideas and find answers to their manufacturing problems.</td>
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<td><strong>McCormick Place Convention Center, Chicago</strong></td>
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<td><strong><a href="http://www.imts.com">www.imts.com</a></strong></td>
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PRIME OFFICE SPACE
IN FAIRLAND - JHB

NO POWER OUTAGES - 250kVA Generator Available!

In close proximity to:
Fairland Spar 350 m
Total Petrol Station 75 m
SASOL Petrol Station 290 m
Fairland Police Station 1.9 km

Distance to:
Cresta Shopping Centre 4.25 km
Beyers Naude On/Off-ramp 2.7 km
14th Ave On/Off-ramp 4.0 km

EXCELLENT SECURITY

Fairland House, 193 Smit Street, Fairland - JHB Gauteng

Tel: (011) 476-3211
(011) 476-3213
or (011) 476-3240
Simple and safe operation, standard range for loads up to 100 metric tons, special designs for specific lifting and transport problems made to order, sturdy castors for any application, adjustable and steerable castor - trolleys for transport in workshop facilities, revolving transport trolleys.
TONGTAI MONITORING SYSTEM

- Real time machine monitoring
- Collecting critical machine data
- Utilization reporting
- View machine status in real time
- Functional user interface

SERVER TO DEVICE

- Accurately measuring Overall Equipment Effectiveness (OEE)
- Tool life management
- Alarm history
- Remote diagnosis for troubleshooting

COMPLETE MACHINE TOOL SOLUTIONS