Issue N°1/1

First issue MAPLAN Newsletter

Maplan News

The Elastomer Injection Technology Report

September 2013

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30 years of innovation and experience

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Editorial

Dear readers,

We are pleased to present you the first issue of "Maplan News". As the new management team, we are excited to update you about recent MAPLAN events with this newsletter that will be issued twice a year.

It is important for us to use this format to regularly inform you of our news and innovations, so you can always be on the pulse of "MAPLAN Time".
"Maplan News" will not only be a technical journal but will also be a platform to show our close working relationship with our customers and the people behind all of our successes.

We chose to focus on K 2013 in the first issue. We will again present new highlights at the fair. An insight into our innovations with images and interesting texts can be found on the next 4 pages.

We look forward to welcoming you personally at the K 2013 in advance and wish you a lot of fun reading the first issue of "Maplan News".

Wolfgang Meyer
CEO

Leopold Heidegger
CFO

Maplan's K 2013 highlights

Flexible solutions for your business needs

Generation 6 Control System

MAPLAN again sets new standards in the field of control technology with the new control unit C6000.web.

We are pleased to show you the exciting features of this control unit which will be available in 2014.

C6000.web control unit

Application Management

MAPLAN develops and produces innovative injection moulding machines and presses, individually tailored to your corporate structure and requirements, which will optimize your business productivity.

Cure² in Perfection

Together with PETA, CAS and TIG, MAPLAN will show "Cure²" optimized on a a vertical 160 ton "editionS" machine with CoolDriveII®.

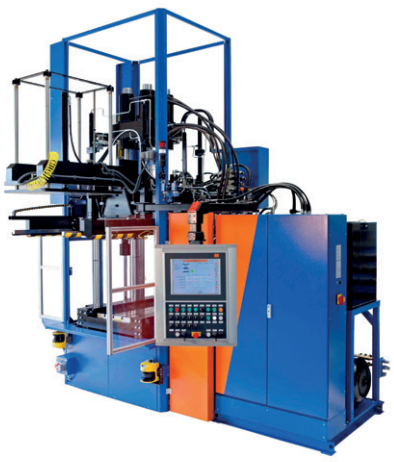
Get an insight into the potential savings by using the latest technologies in elastomer processing.

MTF750/160editionS

Client Application

Another new exhibit will be a vertical 580 ton, 3.5 litre "ergonomic" machine with double-CoolDriveII® and specific equipment.

This machine's specifications will show in detail the business success of VORWERK and is the result of a close working relationship with MAPLAN to meet our customer's requirements.



MTF3500/580

System Solution

The modern production of O-rings and the corresponding sealing gaskets will be shown on a horizontal 300 ton "editionS" machine with CoolDriveII® together with ORP and SYSTEM RUBBER.

Experience a state of the art automatized process chain which can be witnessed at several booths.
www.karousel.it

MHF700D/300editionS

Karousel
International Trade Fair No. 1 for Plastic and Rubber Worldwide
Düsseldorf - Germany 16 - 23 October K 2013

MAPLAN – the Control Unit Specialist

30 years of innovation and experience

From PC106 to C6000.web, MAPLAN´s control unit technology has always been setting standards in the injection moulding of elastomers and stands for the highest performance with an ergonomic platform.

At the advent of the first Programmable Logic Controllers (PLC) which began more than 30 years ago, a new era in the field of automation engineering was introduced and the control units became the focus of the plant or the machine. Based on this new control engineering, MAPLAN began with the development of a “Generation 1 Control Unit”, which was marketed under the name PC106, early in the 1980s. At that time, the collaboration with B&R as controller supplier began - now one of the world‘s leading manufacturers of control units – which made it possible for MAPLAN’s control units to always be one of the most modern available PLC systems.

“The Challenge: Powerful, yet Easy to Use”

The rapid advancement of visualization systems since the 90s eventually laid the foundation for truly user-friendly machine control units that are enormously powerful and yet easy to handle.

A typical example is the graphical configuration of cycles that allows for comfortable programming of complex machine processes and monitoring by means of a diagnostic system. Another milestone in the field of visualization and operation was the introduction of the first touch screens suitable for industrial purposes. In 2005, based on this technology, MAPLAN finally brought the PC5000touch control unit on the market. Even with the current development of the “Generation 6 Control Units”, MAPLAN stresses usability and intuitive operation, taking into account the special requirements of the elastomer industry, for example screen operability with gloves.

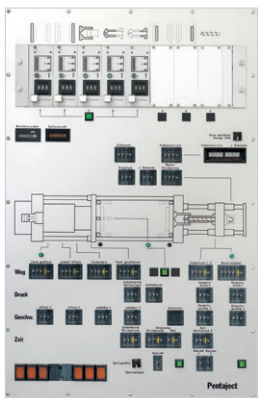
Communication: Open to All Sides

Retrieving data “from the machine” with the help of set parameters was already a challenge in our first control units. Today our technology allows us to exchange the data thanks to efficient network connections. Recording and parameter backup can be easily and safely carried out using the built-in network connection. This network accessibility also allows easy data exchange with higher-order guidance and planning systems. Another highlight of MAPLAN is the new C6000.web control unit, which allows communication and access to the machines remotely using the latest WEB technology.

PC5000touch

Partnership Success

The successful collaboration with both the control unit developers and especially with our clients has enabled MAPLAN to always have future-oriented developments in control engineering.



Generation 1 Control Unit

PC106
- 4 Bit processor technology
- 2 kByte program memory
- Thumbwheel switch
- Position sensing by linear position sensor

PC1006 (1986)
- Monochrome monitor
- 8 kByte program memory

1985

Generation 2 Control Unit

PC202
- 8 Bit microprocessor

PC2003 (1990)
- Colour display
- Possibility to save records onto a mini cassette
- B&R control components (Austrian control unit manufacturers)

1989

Generation 3 Control Unit

PC3004
- Industrial PC for visualisation

PC300 (1993)
- 8-line Display
- Economic alternative for the C-Frame series

1991

Generation 4 Control Unit

PC400
- Modular control unit
- multi-tasking Motorola-based system
- Constant program run time
- Higher accuracy and reproducibility
- Basic version with 8-line display

PC4000 (1995)
- Industrial PC-based TFT screen

1994

Generation 5 Control Unit

PC5000touch
- Touch-screen for data entry
- SPS software in conjunction with a Windows operating system

2005

New Generation Control Unit C6000.web

Using the latest available technology, MAPLAN engineers have developed a new generation of control units that sets new standards in the field of performance and usability.

The rapid development in all areas of electronics and software, as well as the inexorable advance of the Internet in all sectors of private and public life, also bring about new objectives for manufacturers of control unit components and software. Apart from the performance of the control units, other aspects such as usability (operability), global networking and optimal representation have become more and more important in elastomer machinery.

At the same time, technology like FULL HD display, multi-touch operation and the use of current web standards for entry visualization in modern control systems are retained.

Together with B&R as the control system manufacturer, MAPLAN is developing the trend-setting control engineering basics for the new "Generation 6 Control Units" for all of MAPLAN's elastomer injection moulding machines.

- Usability
- Cross-platform networking
- Using HTML5 web standards
- Full scalability

Generation 6 Control Units

Highlights

- **Large format:** 21" Full-HD touch-screen in portrait format sets new standards in operation and readability.
- **Intuitive:** Innovative operating concept for simple, ergonomic function control.
- **Unlimited:** Modern web technologies allow cross-platform display and multi-station operation.
- **Efficient:** Modern control unit engineering guarantees precision, reproducibility and scalability based on the latest Intel™ processor technology.

Did you know?

1495
Christopher Columbus discovered natural rubber in Haiti when he saw natives playing with a ball which came from the juice of the "Cauuchu" tree.

1839
Vulcanisation: the process of heating rubber which triggers a chemical reaction that imparts elasticity to the rubber was discovered by Charles Goodyear.

14 to 20 kg
rubber is required in a batch of car tyres

94%
of our rubber comes from Southeast Asia

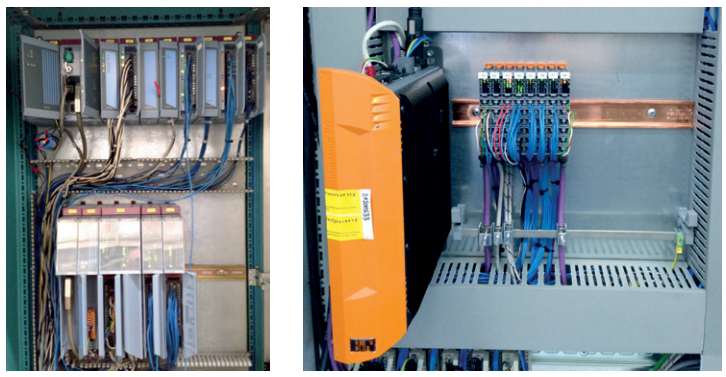
9 kg
An average rubber tree supplies 9 kg rubber per year

28 years
A rubber tree yields its valuable raw material for up to 28 years

70%
of rubber consumption in the world is used in the automotive industry

Upgrade to Controller PC5000touch

MAPLAN's control unit update offers our clients the following features and advantages:



Upgrade from a preceding model to a PC5000touch

Prolonging your Machine's Service Life

Our current PC5000touch controller has been available for at least 15 years and therefore covers the remaining lifetime of the machine completely, since the previous model was installed up to 2005. The upgrade provides a reduction in investment volume as compared to a new purchase at approximately the same performance.

Augmenting the Processing Spectrum

It is possible to retrofit the entire current peripheral equipment - as long as it's mechanically possible on the machine.

Improving Machine Availability

The built-in components of PC5000touch are state-of-the-art components. Therefore, due to higher integration, they are significantly more reliable than the originally installed parts. Since the electric cabinet is completely replaced, all switching devices and safety equipment are up to date, and trouble-free operation is ensured.

Compatibility with New Machines

Interchangeability of records between the retrofitted PC5000touch controller and the currently delivered machine with PC5000touch control units allows for greater flexibility in production.

Retro fitting

The machine can be „upgraded by refitting" on-site or at our plant in Ternitz.

Refitting at the plant in Ternitz is particularly useful if the machine is to be overhauled hydraulically and mechanically as well.
Spare parts which are needed unexpectedly are always available in the plant and the work can therefore be carried out much more efficiently.

Precision Process in Sealing Engineering

The sealing specialist Kaco applies a new machine concept from MAPLAN

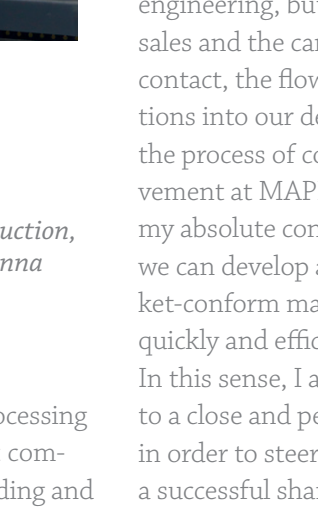
The new Kaco production line in China has been configured to manufacture transmission components. These components have a heat resistance of about 150 °C and a particular chemical resistance so that functionality is certainly ensured throughout the life cycle of the vehicle. The outer diameter of the components lies in the range of 100-300 mm. They are rubber-metal compounds which are partly formed by multiple injections from different materials. The demands on the machine posed by the wide range of products to be manufactured were not covered by other commercially available elastomer machines. The range of diameters was highly diverse and further added demands on high process reliability, process performance and the combination of 1K parts and 2K parts on a machine. To this end, Kaco looked for a specialist and that was MAPLAN.

MTF200HF200/320editionS

MAPLAN delivered a MTF200HF200/320-editionS PC5000touch controller which was specially configured by „MAPLAN's construction kit".

The MTF200HF200/320-editionS of MAPLAN consists of an injection unit with a volume of 200 ccm that injects from above and a horizontally arranged FIFO injection aggregate with a volume of 200 ccm and an injection pressure of 2,500 bar. The clamping force of the machine is 3,200kN.
Kaco's tool engineering for this machine is based on a fast synchronous change system of middle plates. In conjunction with hydraulic parallel movements, more than 10% of cycle time can be saved.

"Perfection is a Must-Have"



According to Simon Kayser, head of Kaco's department for technology projects and new techniques, „an absolutely true-to-size seal is enormously important for the perfect sealing function. Very tight tolerances are part of precision."

Review:

Open House at ST.A.TE Technologies in Italy

Last April, the Italian agency of MAPLAN, the company ST.A.TE Technologies, organized a 4-day Open House in Calvenzano-Bergamo, Italy.

More than 200 visitors were given this opportunity to look at the user-friendly MAPLAN injection moulding machines in production. The advantages of MAPLAN FIFO injection technology were also presented during the workshops.

Events to be Noted

Rubber Expo	Cleveland, USA	08 - 10 Oct 2013	Booth 1824
K 2013	Düsseldorf, Germany	16 - 23 Oct. 2013	Hall 16 Booth B47-3
Tire & Rubber	Moscow, Russia	22 - 25 April 2014	
Chinaplas	Shanghai, PR China	23 - 26 April 2014	
Expobor	Sao Paolo, Brazil	23 - 25 April 2014	
Platpol	Kielce, Poland	27 - 30 May 2014	

The New Maplan CEO: Wolfgang Meyer

- *Wolfgang Meyer*
- *Age: 44*
- *Married, 4 children*
- *Education: Machine construction, Technical University of Vienna*
- *Hobbies: Mountain biking, running, family*

Having worked in rubber processing for 14 years at the Semperit company (rubber injection moulding and plastic injection moulding, rubber extrusion) I look forward to the challenge of being able to apply my knowledge in an innovative engineering company. As a customer, I have known MAPLAN for a long time, and I am acquainted with both the strengths and the challenges of MAPLAN machines. Since I am responsible not only for engineering, but also for the entire sales and the caring for close client contact, the flow of your suggestions into our developments and the process of continuous improvement at MAPLAN in the future is my absolute concern. I believe that we can develop and distribute market-conform machinery even more quickly and efficiently in this way. In this sense, I am looking forward to a close and personal cooperation in order to steer MAPLAN towards a successful shared future.

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