

impulse

Issue 2/2014

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Back to work for a break?

Dear Readers,



By the time you read this issue of "impulse", the summer holiday season will be behind us. What a pity, we all say, that the best time of the year has come to an end. If we are honest, is this really the best the year has to offer? It all sounds so idyllic: Holidaying in Greece with three small children. Sun, sea, relaxation, good food, time to read, time to spend with the children, time for a glass of wine and long talks with my wife. Great plan in theory ...

In reality though, it caught up with us already as we were packing. Stowing the bare minimum of essentials for a family of five into a few units weighing no more than 23 kg each seemed an impossible challenge. We did manage to persuade our three-year-old that the Liebherr crane could stay at home. But despite our best efforts, we paid a small fortune in excess baggage at the check-in desk. At security, we had to restrain the six-year-old from sending the baby through the X-ray machine. Once on board, the "oh how sweet" effect on the other passengers had worn off by the time we were up to altitude. Withering looks came from right and left every time the volume went up. Finally we were able to bribe the children into something like silence with tablets, books and drawing materials. Once we started the descent, we tried offering chewing gum to ease the pressure on their ears. Fine, except that the youngest swallowed it immediately and the yelling began. When I tried to get up and fetch more gum from the luggage compartment, the seat belt sign had already lit up. The row which then ensued following a failed attempt to snatch the sister's gum woke the baby, the baby's bawling woke the mother. Her

look expressed volumes on her view of my failure to keep the children quiet throughout what was, after all, just a short flight.

Things continued in a similarly turbulent manner. The book returned home half read, the cosy glass of wine with my wife frequently fell victim to our mutual exhaustion. But still – we had a wonderful holiday. After a few days we became a good team and relaxation kicked in. Plan fulfilled – almost.

When, to top it all off, my smartphone fell into the pool, even this loss failed to dampen the good spirits – quite the opposite in fact. Finally I found time for us as a family, far away from the hustle and bustle of everyday living.

Thinking about it though, it would be a shame indeed if we only really experienced enjoyment when we were on holiday. For me, being content with our everyday lives at home is something more worth striving for, rather than the desire to forget our normal existence by immersing ourselves in ever more spectacular holidays.

I hope you too had had an enjoyable summer. I would like to wish you every possible enjoyment in your lives at home and at work – until the next great escape.

Yours,

A handwritten signature in blue ink, appearing to read "R. Reber".

Roland Reber

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Ground-breaking ceremony

Ensinger extends Austrian branch

Over the coming year, Ensinger will be relocating the headquarters of its Austrian branch from Lenzing to nearby Seewalchen am Attersee. To provide the various departments with scope for expansion, Ensinger will be building new production and administrative facilities covering a total area of 4,000 square metres on the new site. On July 3rd, the official ground-breaking ceremony was held in Seewalchen.

The Austrian branch was founded twenty years ago in Lenzing, which is currently home to several business divisions:

- The Stock Shapes Division operates an on-site warehouse and cutting service. From this location in Lenzing, thermoplastic plates, rods and tubes are sold to industrial customers across the whole of Austria.
- The P84 polyimide powder manufactured in Lenzing is a proven material for finished parts exposed to high levels of stress used in all kinds of applications requiring low weight coupled with a low coefficient of friction without the use of lubricants.
- The subsidiary Ensinger Sintimid produces rods, plates and short tubes made of polyimide materials (TECASINT product line) with the aid of sintering techniques.
- The North Austria branch is also home to the Compounds Division sales team.



Attending the ground-breaking ceremony on July 3rd at the new company site in Seewalchen (left to right): Rudolf Hainzl (Building contractor Goldbeck Rhomberg), Dr. Oliver Frey (Managing Director of Ensinger Sintimid and Division Manager of Ensinger Compounds), Dr. Heimo Bieringer (Managing Director of Ensinger Sintimid), Mag. Johann Reiter (Mayor of Seewalchen), Wilfried Ensinger (Chairman of the Supervisory Board) and Ferdinand Tiefnig (Member of the Federal Council)

The new company headquarters is due to open next summer. With the exception of P84 powder production, which is planned to continue in future on the company's Lenzing site, all other units of the Austrian branch will be relocated to Seewalchen. [JF]

New office in Taiwan

Alongside Japan and South Korea, Taiwan is one of the world's largest producers of semiconductor electronics. Ensinger has already been represented in Taiwan since the end of the nineties through specialist dealers. In order to step up the marketing of the growing product portfolio, Ensinger has this year set up its own office in Taiwan.

The three-person distribution team, headed up by Tim Chang, is able to draw on the infrastructure of Ensinger Asia Holding Pte Ltd. in Singapore advising the semiconductor manufacturers and suppliers. [JF]



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5S program rollout across the locations

Tidy house, tidy mind

by Anika Harbord and Markus Schröth

Ensinger has launched a 5S program with a view to achieving more sustainable standards for cleanliness and tidiness. Some of our divisions have already clocked up remarkable success at a number of kick-off workshops.

The end of May saw the launch of the first 5S events in both Nufringen and Ergenzingen. Following an all-day training event in which moderators became better acquainted with the method, on the second day all those involved “got down to work” in the Compounds Division.

The Production Manager Thomas Widmann and his team had volunteered to offer the moderators the chance to implement the 5S techniques they had learned in the producing divisions. The introduction comprised a theoretical part and a simulation with Lego bricks, which gave the participants the chance to relate what they had learned to their everyday situation. In other words, if everything is in its given location and described – clearly and concisely in words and pictures – there is never any need to waste resources on unnecessary long searching processes.

No stopping the enthusiasm

No sooner said than done, a plan was quickly drawn up of possibilities for improvement, and our colleagues from Compounds and the moderators began the process of de-cluttering, tidying, colour coding sequences and depicting the material flow. There was no stopping one group, which quickly dispatched the contents of a complete shelving area. This action offered two immediate benefits: Firstly it cleared a useful storage surface, and secondly it has prevented the unstructured storage of other items. The moderators were fully involved at all times, as evidenced by their sweat-drenched polo shirts.

In the afternoon everyone met up again to evaluate the five steps using a defined 5S checklist. What is the current standing of the division and how should it develop in the future? What needs to be done to prevent this being “nothing more” than a clean-up operation? What standards need to be defined and adhered to?



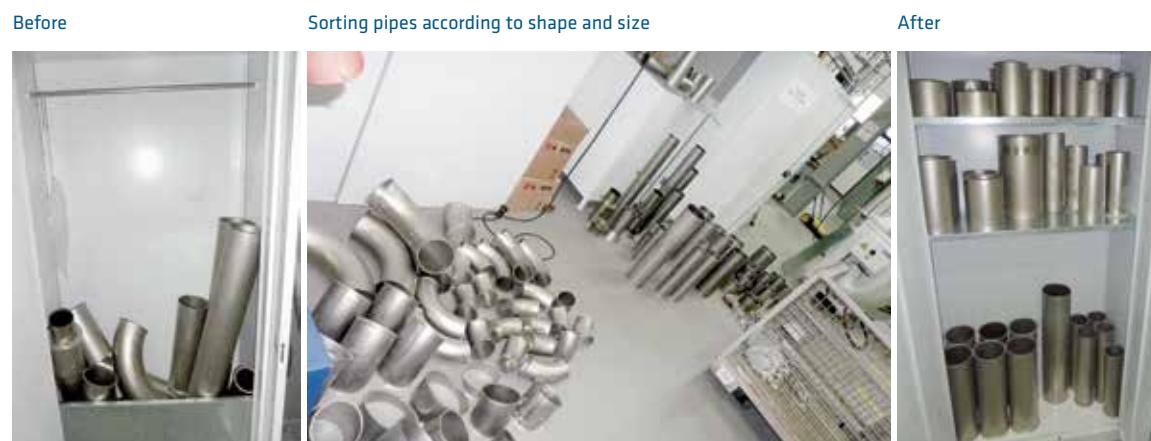
To ensure a solution which is fully sustainable, the management members and production employees of the Compounds Division will also enquire as to the 5S status during future regular meetings. Where required, the cross-shift teams will take corrective action and establish new standards.

A good road map

During the final tour of inspection with all the workshop participants, there was enthusiastic praise for the results achieved from Head of Division Dr. Oliver Frey. Using a roadmap, it will now be possible to determine which divisions should be the subject of the next 5S workshops. Ensinger Compounds has set itself the target of making sure that the entire division is soon working according to 5S.



Job done: additional pallet storage locations have been marked and the relevant signage is in place.
Dirk Harter, Daniel Gorse, Thomas Widmann, Dr. Oliver Frey, Devrim Yüksel and Jochen Skarke (left to right) at the first 5S workshop in Nufringen



Workplace organization with a system

If we think about our day-to-day work, we assume that routine procedures are efficient. But if we take a closer look, we discover all sorts of possibilities for improvement: Some searching processes take too long, there is material in the way, and tools are not arranged ergonomically. To bring about sustained improvement to both our work environment and our work procedures, an increasing number of companies are now turning to the “5S” method.



These stand for:

- (1) Sort
- (2) Straighten
- (3) Shine
- (4) Standardize
- (5) Sustain

Employees assess the current status regularly together with their line managers with the aid of a 5S checklist which is displayed on the department notice board. The standards developed in the team and their visualization at the different workstations ensure that progress achieved is sustained in the long term.

The goal is to achieve a system where work is performed without wastage. The 5S concept can be applied as a methodical tool in every area of the company, both in production and in administrative departments. [JF]

EVI turns 5

Jubilee events in Nufringen and Cham



Since its launch in the spring of 2009, the Ensinger improvement instrument EVI has scored a number of landmark achievements with the help of our motivated staff. Initially it was predominantly about moving high volumes of material, however recently the workshops have concentrated on achieving smooth, efficient work processes. Over the past five years, almost 450 EVI workshops have been held in Ergenizingen and Nufringen alone. A retrospective of some of our past achievements:

2009 Dynamic kick-off

Laden with cardboard boxes stuffed with office materials – or piled high with stacks of folders – colleagues hurry past each other along the corridors of the admin building. In the production plants and workshops, the noise of clattering tools of all kinds fills the air as enthusiastic sorting and tidying takes place. After the initial level 1 workshops, the collections of ideas and plans of action are brimming just as full as the stores for redundant office furniture and folders.

2010 First tooling workshop

All the activities and distances covered during a typical tooling process in the injection moulding factory are logged, and the scope for optimization analysed by the machine setters and moderators using a graphic chart. By changing the work sequences, those involved succeed already on the second attempt in halving the tooling time and cutting the distances covered by two-thirds, from initially a total of 2,037 metres to just 655.

2011 Rising demands

The EVI program launches in the Cham factory. In the larger locations, the tendency is increasing towards the initiation of workshops to analyse work sequences in the

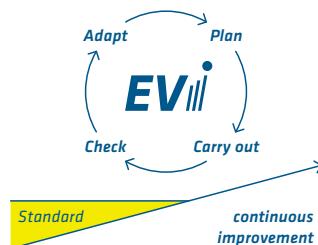
various departments or shifts and their respective interfaces. These are looking either at cooperation within a group (level 2) or overarching processes (level 3).

2012 BOOM!

The US subsidiary companies adopt the CIP program used at Ensinger GmbH and rename it "BOOM!" – Believe, Our Opinions Matter. This name clearly reflects that the North American locations have grasped the underlying EVI principle, with the focus on initiatives put forward by employees themselves.

2013 No progress without standards

Needless to say, a CIP program achieves sustainable progress not only when it comes to setting out standards. To ensure that the ideas developed in the workshops are implemented and turned into optimized procedures applied practically on a day-to-day basis, the steering group and moderators turn their attention again to focus on review deadlines and regular meetings. This is just one of the key areas in which the EVI concept offers plenty of, as yet untapped potential, demonstrated by the first cross-location workshops.



2014 Jubilee event

Five years of EVI – another great reason to celebrate. At the jubilee events held in Nufringen (on 23/24 October) and in Cham (6/7 November) employees and moderators proudly present some impressive results of the CIP program. There are small surprises for the visitors – and it would not be a real jubilee celebration without a birthday cake. [JF]

Excursion to the injection moulding plant

Students from Aachen in Ergenzingen

30 students from the “Institut für Kunststoffverarbeitung” (IKV, Aachen) visited the injection moulding factory in Rottenburg-Ergenzingen as part of an excursion. The factory tour was, as always, a team effort: Dr. Christoph Krohmer, Head of the PV Service Center, gave an introduction to the company and showed the visitors a cross section of the product range. Claudia Müller and Mandy Belitz from the Human Resources department explained the typical fields that young engineers work in. The tour of the production department was performed by the managers and employees of the Injection Moulding division. Marina Petrusseva (at the front of the picture) and Bernd Helle (Head of Project Management, left) explained to the students how ABS-plungers can be checked under the microscope for quality control purposes. [JF]



Memorial

Art project reminds us of a dark chapter in history



For four years now, a memorial has been keeping the history of the satellite concentration camp in Hailfingen/Tailfingen alive. In the winter of 1944/45, 601 Jewish inmates had to carry out hard physical work in brutal conditions to convert an airfield for use by fighter planes. Many of the inmates died of malnutrition and from disease. Some were shot by the guards.

This summer, twenty pupils from the surrounding communities spent time looking at the fate of these forced labourers. At the concentration camp memorial's documentation centre, at the monument on the site of the former satellite camp and in the surrounding quarries, the teenagers collected quotations, took photos and drew sketches. Under the guidance of artists from the region, exceptional works of art were created over the course of three days. These included paintings, pieces of written work and one installation: together with sculptor Lutz Ackermann, from the district of Neibringen, pupils from both of the Herrenberg grammar schools did outlines of their bodies on a large lorry tarpaulin. The silhouettes represented lifeless bodies. The object was installed on three pillars, the remains of an aircraft repair hangar.

Ensinger provided financial support to this creative project by the Hailfingen/Tailfingen concentration camp memorial association together with additional sponsors. [JF]

More information:

www.kz-gedenkstaette-hailfingen-tailfingen.de

Employees



New works councils

The constitutive meetings marked the start of the work by the newly elected works councils in Nufringen, Ergenzingen and Cham. Here is a brief introduction to our colleagues and their new positions.

Works council Nufringen / Ergenzingen (from left to right): Anika Harbord, Graciela Enss, Jasmin Arndt (Deputy Works Council Chairperson, Secretary and Member of the General Works Council of Ensinger GmbH), Ioannis Argiriadis (Works Council Chairperson, Occupational Safety Committee and Member of the General Works Council), Steffen Mai, Dieter Arndt (Occupational Safety Committee), Metin Özgül, Nicole Möß and Michael Wieland. Works Council members Ramona Jamnizky and Constantin Pauli are not shown in the photo.



Works Council Cham (from left to right): Günther Merthan (Secretary), Christian Denk, Werner Bachl (Works Council Chairperson and Member of the General Works Council of Ensinger GmbH), Martin Heyes, Xaver Wagner (Deputy Secretary), Herbert Amann, Erwin Schmidhuber, Peter Sponfeldner, Armin Lankes (Deputy Chairperson), Herbert Wache and Markus Wutz

Wilfried-Ensinger Prizes awarded in Nufringen ...

Alexander Baur (right) has been awarded the Wilfried Ensinger Prize in recognition of his excellent training achievements. The company founder (left) presented the certificate and the cash prize in Nufringen. Completion of his training as a process mechanic at Ensinger marks the third vocational qualification of Alexander Baur's career.

After starting out as a graphic designer, he had already worked as a trained plant and machine operator in a small industrial firm. Alexander Baur is now employed as a machine setter in the injection moulding factory in Ergenzingen.



A warm welcome ...

Employees who have joined Ensinger:

Nufringen

Semi-finished products

Emanuele Cammalleri
Anita Dürr
Alexej Fuhrmann
Andreas Kast
Oliver Krüger
Janik Leimbrink
Engin Maraklı
Carmelo Monarca
Maurizio Tuvoni
Robin Woisetschläger

Industrial Profiles & Tubes

Alexander Hamburg
Lukas Nowak

insulbar®

Severin Hoppmann
Sabine Penner
Karin Skrodzki

IT

Jochen Genterczewsky
Gerd Johannsen
Jochen Maurer

Human Resources

Tanja Raisch

Product Compliance

Kareen Meusel

Quality Management

Christian Wöldecke

Apprenticeships / Studies

Fachkraft für Lagerlogistik:
Lisa Marie König

Fachinformatiker für

Systemintegration:

Frank Buchmüller

Industriekauffrau:

Nikolina Hrnjkaš

Julia Maier

Verfahrensmechaniker:

Felix Löffler

Julija Mull

Axel Philippin

Onur Sülük

Werkzeugmechaniker:

Tobias Lehrer

David Renz

Julian Vetter

Bachelor of Eng. (DH)

Maschinenbau /

Kunststofftechnik:

Lukas Braun

Viktor Ditte

Bachelor of Eng. (DH)

Wirtschaftsingenieurwesen:

Maximilian Attenberger

Ergenzingen

Injection moulding

Richard Evans
Joaquim Ameixa
Alexander Baur
Johanna Bort

Cham

insulbar®

Sven Drathring
Christian Huber
Elena Hubert
Johann Knott
Alexander Köppel
Daniel Liebl
Ulf Maurus
Katrin Nebel
Nima Parnian
Melanie Roith
Daniel Schlegl
Freddy Schmid
Igor Schreider
Wolfgang Teuber
Sebastian Unger
Joachim Winter
Kevin Wolf
Sebastian Ziesler

Thermix®

Tobias Decker

Machined Parts

Thomas Held
Markus Dendorfer
Michael Haller
Daniel Müller
Christian Nass

Technical Services

Markus Zimmermann

Administration

Stefanie Breu
Michaela Marx

Apprenticeships

Verfahrensmechaniker:
Kerstin Janker
Stefan Schichtl
Marco Steudle
David Wittmann

... and Cham



In Cham, five former apprentices have been awarded Wilfried Ensinger Prizes. The local press had been invited to be present at the final certificate presentation and prize-giving ceremony. In the picture: Left to right Maria Baur (HR officer), Michael Jokisch (Industrial instructor), Xaver Wagner (Works Council), Christian Nass (Tooling mechanics), Michael Haller (Tooling mechanic) Thomas Held (Process mechanic), Daniel Schlegl (Process mechanic), Markus Dendorfer (Process mechanic), Daniel Müller (Tooling mechanic) und Andreas Alsfasser (Head of Technology Service-Center). [JF]

International Workshop in Nufringen

Bob Racchini enters retirement

In May, CFO Dr. Anton Ritter invited all the employees from the international controlling departments to Nufringen. For Robert L. Racchini (front row, centre right), the workshop with its 30 participants was the last big meeting before he retired. Asked about the future, the former CFO has said that “the only thing on my bucket list is to visit as many baseball stadiums as possible”. Since the professional leagues’ grounds are scattered widely across the United States, he can combine his interest in sport with his equally pronounced passion for travelling. Racchini’s enthusiasm for baseball, basketball and ice hockey was also something that the international controllers experienced regularly when he introduced them to the



US national sports during visits to the stadiums.

Robert “Bob” Racchini, who joined the company in 1998 as a controller, was on the executive committee of Ensinger Inc. for several years in his capacity as CFO. As well as being responsible for the trading results of the branches in North and South

America, he worked with Dr. Anton Ritter to ensure there was regular, in-depth communication between all financial experts in the corporate group. Bob feels that the most important part of business is building relationships with his fellow workers. Some of his tasks will be now performed by Peter Fowler. He will be responsible for the Corporate Controlling and Treasury divisions in the future. [JF]



Young football players in Ergenzingen

The “TuS Ergenzingen” is one of the local sports clubs supported by Ensinger through perimeter advertising. Rainer Sabitzer (far right), responsible for the calculation of projects at the injection moulding plant, trains the junior A team footballers in his spare time. In addition to his son Tim (9th from the right), apprentice Nikolaj Weimer (8th from the left) is also on the team.

At the international Whitsun tournament of the U19 juniors in Ergenzingen, the Ergenzingen players were able to compete with the youth teams of professional clubs: Karlsruher SC, FSV Mainz 05, FC Zurich and Fenerbahçe Istanbul. The home team achieved a decent result with a 0:0 against the team from Zurich, who later won the tournament.

Rainer Sabitzer expressed his thanks with this photo on behalf of the TuS Ergenzingen: “Through the sponsoring, Ensinger is helping make experiences like this an actual possibility for the young people.” [JF]

An alternative to foam

insulbar® LEF: heat-reflecting film

With a view to improving thermal insulation properties, Ensinger has advanced the design of its proven insulbar insulation profiles with a ground-breaking new technology. The use of Low-E Film (LEF) is reflected in the name of the new product: insulbar® LEF. Applied to the flag of the thermal insulation profile, this film reflects the thermal radiation between the inner and outer shell of the aluminum frames used in windows, doors and facades. The functional principle is similar to that used in a thermos flask, whose mirror-finish inner coating maintains the temperature over long periods as a result of reflection. When using insulbar® LEF, the Uf values achieved are equivalent to those of thermal insulation profiles with foam – and in many cases even better.

Simplified processing

Frame system manufacturers can optionally use the Low-E film on all existing and new insulbar profiles with flag. The benefit: Only a single standardized profile design needs to be used. This eliminates the costs for additional extrusion tools.

insulbar® LEF is supplied with a foil-covered flag and, unlike foam, can be directly further processed. Heat resistant up to 200 °C, insulbar® is able to withstand this temperature for up to 20 minutes and so permits powder coating in the finished assembly. [oha/BPM]

For more information in the internet, go to
www.insulbar.de/en

Environmental Product Declaration (EPD) - insulbar® RE improves eco balance



insulbar® RE has now been on the market for several months. What makes it special: The insulation profile is made of 100% unmixed recycled PA 66, making this a truly resource-saving option. Ensinger processes this material using an upcycling process which renders its properties directly comparable to those of new material.

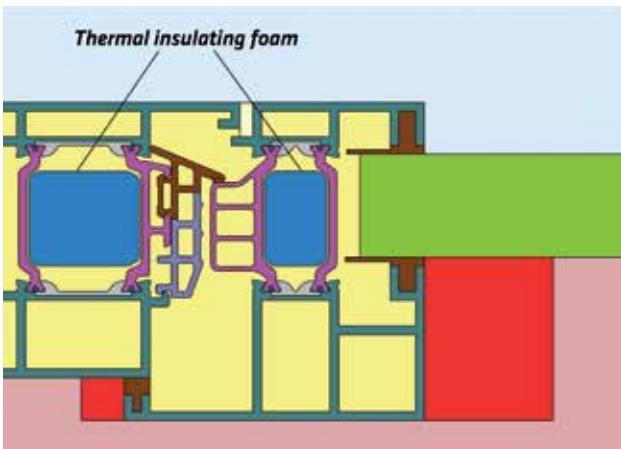
During the manufacturing phase, it generates 85 % fewer greenhouse gases, as well as using 89 % fewer fossil-based resources. This claim has now been backed by the Institute for Window Technology (ift) in Rosenheim, which has issued an Environmental Product Declaration (EPD).

The EPD forms the basis for ecological building assessment. In accordance with the international standards, it encompasses all the relevant information about the environmental impact of a product over the entire life cycle. [oha/BPM]

For more information in the internet, go to
www.insulbar-re.de/en



insulbar® LEF: The thermal insulation profile uses Low-E film which reflects thermal radiation. This provides an optimum thermal separation of the outside and inside shells of metal frames for windows, doors and facades.



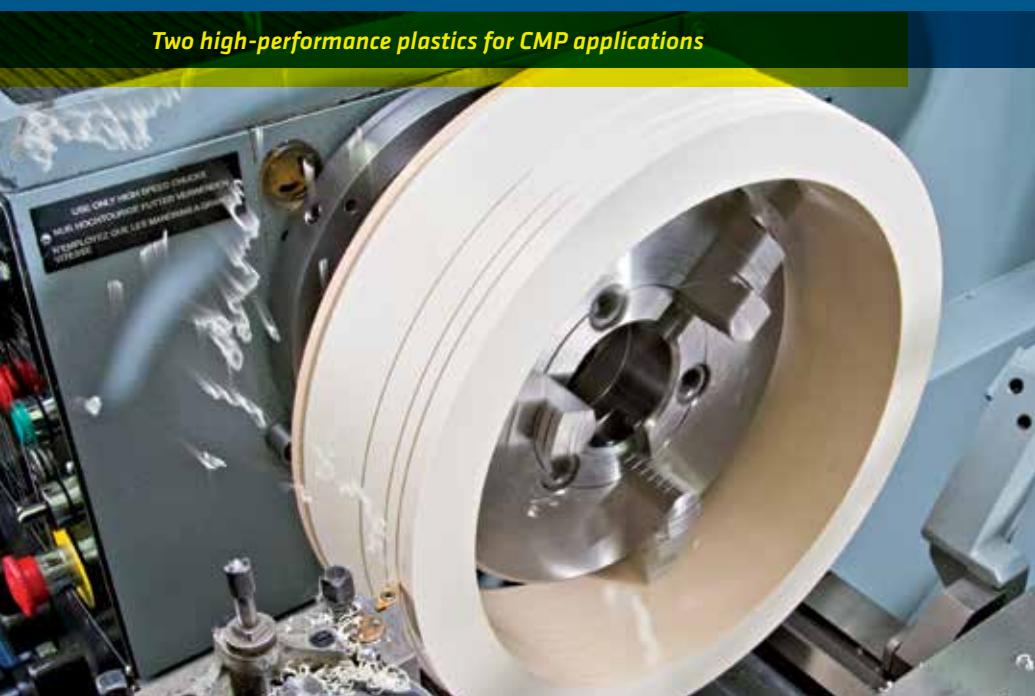
$U_f = 1.8 \text{ W/m}^2 \cdot \text{K}$: insulbar thermal insulation profile with foam (marked in blue)



$U_f = 1.7 \text{ W/m}^2 \cdot \text{K}$: insulbar thermal insulation profile with Low-E film (marked in grey), $\epsilon = 0.03$

Wafer production: New materials drive down the costs

Two high-performance plastics for CMP applications



The new engineering plastics TECATRON CMP and TECAPEEK CMP offer outstanding machinability. The photo shows the manufacture of a retaining ring of the kind used in the CMP process. With their lower wear properties, these high-quality high-performance plastics effectively drive down the costs per wafer.

The TECATRON CMP and TECAPEEK CMP product lines have been developed specifically for components used in the chemical mechanical planarization process (CMP). One of the key steps used in silicone wafer production, CMP imposes stringent demands on the mechanical properties and chemical resistance of high-performance plastics.

The CMP process involves the use of different slurries which take a heavy toll also on the handling components used. The PPS material TECATRON CMP demonstrates higher abrasion and wear resistance compared to the predecessor product. In combination with material-specific resistance to chemicals and solvents, these improved tribological properties help extend the service life of the plastic components used, with reduced placement and downtimes resulting in lower costs per wafer.

The use of special slurries can bring about extreme mechanical loads. Under these tough conditions, TECAPEEK CMP provides the ideal material. This PEEK product from Ensinger is characterized not only by its toughness, higher ductility and dimensional stability, but also by its excellent resistance to wear and abrasion. In association with a high level of chemical resistance, these outstanding mechanical and tribological properties make for a significantly extended service life.

The benefits of the new material are brought to bear as early as the semi-finished product processing stage, with improved machinability making for shorter processing times. Productivity is also significantly improved by the minimal degree of deburring work required.

Applications in wafer production

Ensinger's two new latest developments are ideally suited for the manufacture of retaining rings. These components require extreme processing precision and dimensional stability in order to reduce the occurrence of microscratches in wafers and ensure a higher yield of usable ICs. Extensive tests carried out by machining companies and leading OEMs have confirmed the material benefits of the new thermoplastic materials. Ensinger produces semi-finished products for CMP applications in its parent plant in Nufringen, Germany. [JF]

For more information:

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