

NEWS

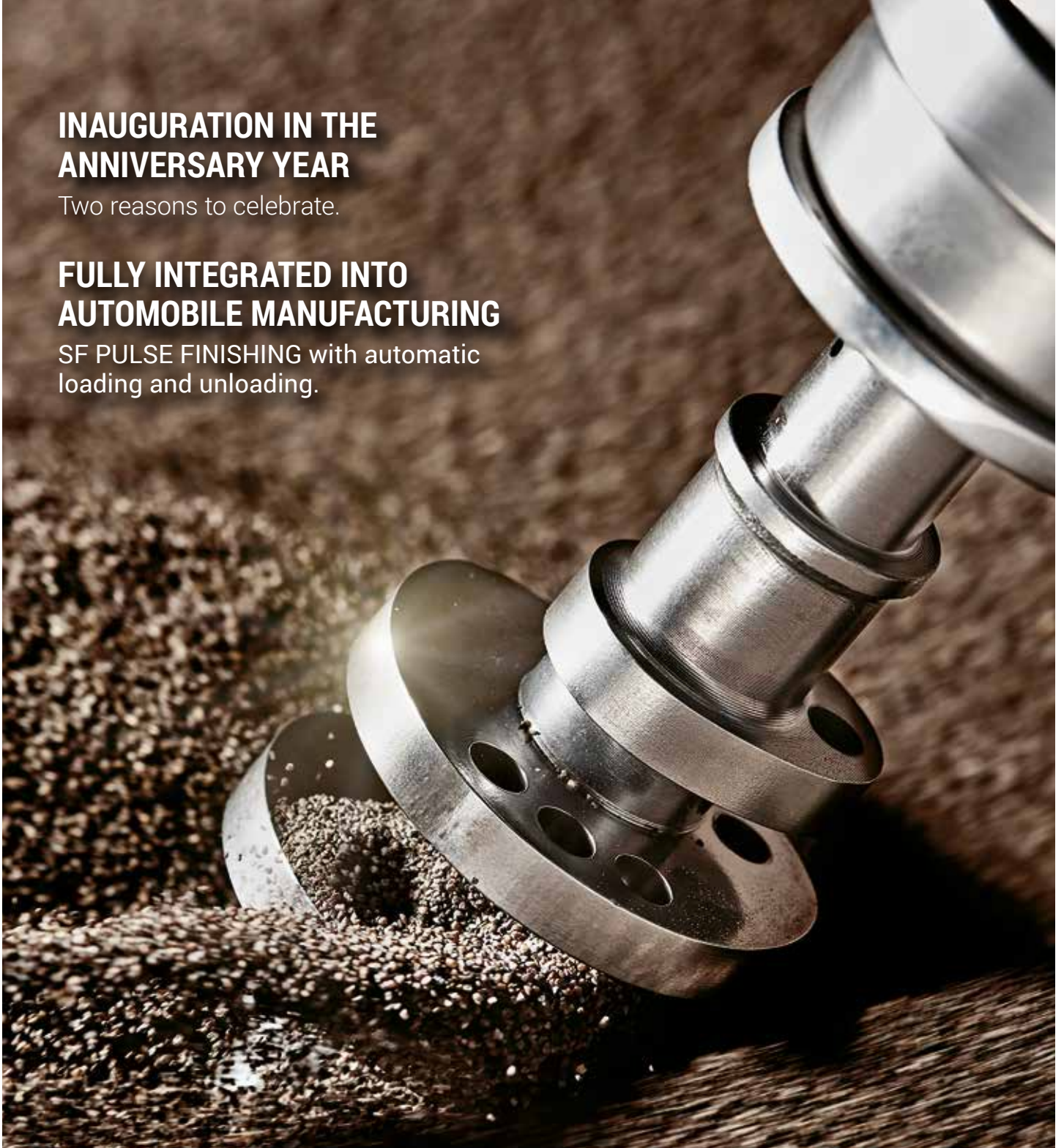
ISSUE #
01
2016

INAUGURATION IN THE ANNIVERSARY YEAR

Two reasons to celebrate.

FULLY INTEGRATED INTO AUTOMOBILE MANUFACTURING

SF PULSE FINISHING with automatic
loading and unloading.





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info@ruebenackers.de

Kitchen party

Start: 7:00 p.m. sharp

Friday, 23.09.2016

Friday, 14.10.2016 | Friday 28.10.2016

Saturday, 26.11.2016

Tuesday, 06.12.2016 Saint Nicholas Day Party | Friday, 09.12.2016 | Saturday, 17.12.2016

Roast joint evening

Start: from 6:00 p.m.

Thursday, 15.09.2016

Thursday, 06.10.2016 | Thursday, 27.10.2016

Fresh pork feast

Start: from 6:00 p.m.

Thursday, 20.10.2016

Big bottle party; speciality wines and beef

Start: 7:00 p.m. sharp

Friday, 21.10.2016

Duck menu

Start: from 6:00 p.m.

Saturday, 29.10.2016

Cookery courses

Start: 6:00 p.m. sharp

Wednesday, 21.09.2016 | Wednesday, 19.10.2016

Goose menu

Start: from 6:00 p.m. / Sunday from 12 noon to 3:00 p.m.

Friday, 04.11.2016 | Saturday, 05.11.2016 | Sunday, 06.11.2016

Thursday, 10.11.2016 | Friday, 11.11.2016 | Saturday, 12.11.2016 | Sunday, 13.11.2016

Friday, 18.11.2016 | Saturday, 19.11.2016 | Sunday, 20.11.2016

All details about the individual events can be found on our website at www.ruebenackers.de. To reserve, please phone us on **07082 4911799** or send an email to info@ruebenackers.de.

EDITORIAL



Dear readers,

to constantly evolve, to strive for new heights and to always find the best solutions – that is OTEC's maxim. Our aim is not to expand at all costs, but to achieve healthy and responsible growth. We pursue advancement in the vanguard of our industry, seek to do justice to the demands of our customers and aspire to work together to create innovative new standards. These aspirations are accompanied by optimised processes in which our employees play a key role. Furthermore, we fully live up to the principles of lean management. For example, fixed assembly stations have been transformed into continuous flow production lines, lead times have been reduced and administration and sales seamlessly integrated into lean processes.

In this first issue of OTEC News, we would like to give you a brief glimpse into how we live and work at OTEC. In future, this newsletter will appear at regular intervals and while technical innovations will always have pride of place, personal insights, news updates and reports on recent events will also be featured.

For OTEC, 2016 is another year characterised by innovative concepts and their implementation. We are celebrating our 20th anniversary and inaugurating our new headquarters and production facility. Read more about this on pages 4 and 5. We also highlight our SF pulse finishing system – tailor-made for the automotive industry. And of course, we give a preview of selected trade fairs. Details of which fairs we are exhibiting at and when can be found on page 16.

We hope you enjoy reading this issue of OTEC News and look forward to receiving your feedback and comments.

Yours sincerely

Anni Bauer, Marketing

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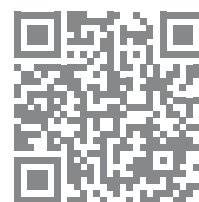
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<https://www.youtube.com/user/OtecGmbH>



ANNIVERSARY + NEW BUILDING = CELEBRATION²

Two reasons to celebrate – in the year of its 20th anniversary, OTEC celebrates its move into new corporate headquarters.

To celebrate its move into the new building, OTEC invited customers, suppliers and business partners, as well as employees and their families and all tradesmen who had worked on the construction project, to join OTEC in inaugurating the building at a summer party held on 24 June 2016.

This modern industrial building with a floor area of 8,000 m², which is about the size of a football pitch, was put up within the space of a year. Because the focus at OTEC is on innovative processes and machines, the assembly and production area is located in the centre of the building. The entire manufacturing process is visible from a gallery housing the surrounding offices. Next to this is a spacious high-rack warehouse with enough capacity to accommodate materials, abrasive media and other processing media.

>>>



» 575 M²
FINISHING CENTRE
WITH STATE-OF-THE-
ART MEASURING
TECHNOLOGY «

A further key component is the finishing centre for processing sample workpieces, which is equipped with the latest measuring technology. But it is not only customers who benefit from the new corporate headquarters. All employees enjoy fresh food every day in the new canteen and have unrestricted access to the company's fitness room and sauna.

So there was a lot to discover. For all those who had not had the opportunity to familiarise themselves with the premises since the move in November 2015, tours were held on both days. Following a champagne reception with canapés, visitors were able to tour the new building in small groups. A special highlight was the impressive

production area. This was equipped with 40 selected machines fitted with samples for demonstration purposes in order to give visitors an insight into the range of applications in the surface finishing sector.

But over the course this weekend OTEC not only provided a wealth of impressions, but also food and drink for all. Rübenacker's, which operates the event "VINOTEC" restaurant inside the OTEC building, offered all guests a wide choice of culinary delicacies. Whether cooked in a smoker or straight off one of 11 barbecues, whether meat, fish or vegetable – there was something to suit every taste. The celebrations, which were already a resounding success, finished on a

» NOT ONLY
A WEALTH OF
IMPRESSIONS,
BUT FOOD AND
DRINK FOR ALL «



true high on the Friday evening. The event was rounded off by a 15-minute firework display, much to the delight of everyone present.

On June 25, OTEC held an open day, once again inviting some 700 friends and visitors from around the region to acquaint themselves with the new corporate headquarters, enjoy a similar program of events and gain an impression of the company.

DETAILS OF THE NEW OTEC BUILDING

Construction:	October 2014 – October 2015
Move/opening:	October/November 2015
Total surface area:	8,000 m ²
Production area:	2,363 m ²
Finishing centre:	575 m ²
Warehouse:	1,674 m ²

CONSTRUCTION DETAILS

633	individual parts
250 t	steel
200	cement mixer trips for the floor slab (approx. 3,750 t)
36 km	pipework for underfloor heating
28 km	IT cable
1,000 l	exterior paint
3,000 l	interior paint

LATEST MACHINES, APPLICATIONS AND PROCESSES UP CLOSE

Distributor training 2015/2016







» IT IS IMPORTANT FOR DISTRIBUTORS TO BE ABLE TO TAKE PART IN OTEC'S ACTIVITIES «



In keeping with previous years, our distributors were invited to see for themselves the latest highlights in terms of machines and applications. The first group of our partners from Brazil, France, Spain, Japan, the Czech Republic, Italy, Poland, England and the USA visited us in December 2015. The second group from Lithuania, Hungary, Belgium, Romania, Turkey, India, Russia and the USA followed in April 2016.

But the first item on the agenda focused of course on the new building and its spacious production area. CEO Helmut Gegenheimer gave the visitors a guided tour of the building and showed them the new premises. Against the background of OTEC's development and the new potentials that are opening up, the delegates met from Thursday to Friday and many new products and ideas were presented, taken on board and discussed.

It is important for distributors to be able to take part in OTEC's activities and receive key information, especially through a review of the relevant business year and future prospects. OTEC is well equipped for the future and continues to build on the strength of its partnerships.

More complex machines demand more complex and comprehensive project management. Armen Papanian set out in detail how and to what extent OTEC can support such endeavours. Closer cooperation between OTEC, its partners and its customers will be crucial to designing large, complex systems.

The complexity of a current project process was illustrated by the largest order in progress at the moment: an automated SF system for use in series production. The first machines for this project have already been delivered.

The training session was rounded off by further presentations from the likes of OTEC Italy, OTEC Turkey, OTEC USA and OTEC India. In this context, Alessandro Meacci reported on his successes on the Italian market and his methods of customer acquisition. The international audience had a keen ear for these presentations, since there is many areas of application or a customer requirement which is also of interest in other countries. Maintenance and service work can deliver a key competitive edge, not only in Germany – Martin Moser presented his 24-hour service concept and the new maintenance contracts to be implemented internationally in close consultation with local partners.

And last, but not least, the event offered an opportunity to socialise. Culinary delights and a chance to network enhanced the good relations between OTEC and its partners – essential for future success and mutual cooperation.





INTRODUCING THE WAREHOUSE DEPARTMENT

Perfect planning – tonnes in, tonnes out!

The warehouse department occupies a floor area of 1,674 m² in the new OTEC building. The department is divided into goods in, goods out, spare parts and small parts storage and in the high-rack warehouse with over 838 pallet spaces, it can accommodate a wide variety of materials. The sophisticated goods cycle enables us to organise orders to our suppliers and deliveries to

our customers in such a way that our warehouse capacity is always kept at a manageable level. Most of the space is taken up by media and compounds. About 310 different process media are stored in the six high-rack storage bays. In addition, OTEC's own compounds are mixed in a separate mixing area in order to cover all possible customer requirements.

In addition to production and assembly storage areas for the CF, DF and SF assembly stations, spare parts are also kept in the vertical storage system. Our compounds and pastes are stored in the small parts warehouse.

Up to 40 courier consignments are packed and dispatched every day in our packing station. Next door in the goods in and goods out area, we load and unload up to 15 trucks every day. This fast turnover of goods (up to 650 t per year) enables us to keep our promise of a 24-hour delivery service, at least within the European region, and to ship urgently needed replacement parts to our customers over night.

Faultless planning means that goods for delivery or collection can easily be loaded or unloaded onto tail lifts at ground level. For especially heavy goods of up to 24 t, the heavy-duty lifting platform is used.

A total of seven employees work in the warehouse department, five in the media storage area and another two in goods in. Together they ensure that everything runs smoothly.





FULLY INTEGRATED INTO AUTOMOBILE MANUFACTURING

OTEC's stream finishing and pulse finishing units have been specially tailored to the requirement profile of assembly line production in the automobile industry or high-tech tool industry, in order to meet the high standards of process reliability, speed and processing quality demanded by large-scale series production.

» THE STREAM FINISHING MACHINE IS LOADED AND UNLOADED VIA AUTOMATIC LIFT DOORS «



SF for series production with automatic loading and unloading

STREAM FINISHING MACHINE TYPE SF4/140

We developed the Type SF 4/140 stream finishing machine with pulse drive especially for full integration into the production lines of large-scale automotive series production plants. This system type enables our customers to deburr, round and smooth camshafts in a very short time.

Plant layout

With the aid of a central handling cell made by our partner Felsomat, two Type SF4/140 stream finishing units are loaded and unloaded automatically. The loading and unloading is carried out by way of automatic lift doors at the stream finishing machines.

The transfer from the system to the main portal is effected via a separate conveyor belt integrated into the handling cell. This plant layout enables eight workpieces to be processed at the same time, giving a cycle time of 17 seconds.

The complete unit linked in this way measures approx. 6,5 x 3,5 x 3,12 m. Control panels fitted to the side of the support arm make the system easy to operate.

Of course, individual adjustments can be made to suit the customer's wishes and requirements.

How the machine works

The workpieces are clamped by means of collet expanding mandrels. The rotating workpiece is finished by being immersed in a stream of polishing medium. The stream is generated by a rotating process drum. After finishing, the workpieces are blasted clean and returned to the customer's process by means of a separate conveyer system. In this way, 3,500 – 4,000 workpieces can be finished daily.

Result

Smoothing of the surface from Rz 2.5 µm to less than 1 µm and Rpk vale to less than 0.1 µm.

PULSE FINISHING MACHINE TYPE SF3

Cycles of 20 to 25 seconds

The company developed the pulse finishing process specially for assembly line series production in the automotive and automotive supplier industry.

Better than polished

In this process, the workpiece is clamped to a spindle and lowered into a drum containing an especially fine-grain abrasive medium. The drum rotates around its own axis at speeds of up to 60 rpm. The spindle holding the workpiece oscillates at about 2,000 rpm, i.e. it accelerates to 2,000 rpm within one second, then decelerates and accelerates again to 2,000 rpm and so on.

In addition, the spindle can be swivelled through up to 25 degrees so that the stream of abrasive medium to the workpiece can be adapted to the specific geometry of the workpiece. "The processing time for reducing the roughness value from, for example, 0.2 µm to 0.1 µm, is less than a minute," says OTEC CEO Helmut Gegenheimer in explanation of the strengths of this machine concept. Depending on the number of spindles, the cycle time is from 20 to 25 seconds. In the finishing centre, OTEC determines the exact processing time, the best process media and the right machine parameters for each workpiece.



The oscillating spindle is accelerated to 2,000 rpm and decelerated again every second.



PREVIEW



Forthcoming national and international trade fairs.

OTEC USA will be exhibiting on a brand new stand at this year's IMTS 2016 in Chicago and showing our new DF 5 HD in the USA for the first time. Fully redesigned and with an integrated lifting door, this drag finishing machine is set to draw in the crowds at the fair.

But pulse finishing technology will also be seen in action in the form of the SF 1 Pulse; stream finishing is attracting more and more customers from the automotive sector. And of course the disc finishing segment will be represented – by a CF 50 which rounds off the range of machines to be shown at the fair.

At AMB in Stuttgart, OTEC will be exhibiting its new stream finishing machines, the prototype of the SF with integrated optical measuring system and a SF pulse finishing machine with automatic holder changer. In addition, we will be presenting our wide range of machines in the mass finishing sector, including the CF 1x18 and our new DF 5 HD.

WE LOOK FORWARD TO WELCOMING YOU!



12 – 17 Sept. 2016
Hall B · Stand N7369



13 – 17 Sept. 2016
Hall 6 · Stand C49

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+++ ISSUE #02 OF OTEC NEWS WILL APPEAR IN JANUARY 2017 +++

NEW HSK-63 ADAPTOR

Automatic tool change

The new SF 3 stream finishing unit now offers the option of an automatic tool changer, which is effected by means of an HSK-63 adaptor. The magazine for the holder changeover can accommodate up to 18 holders. The workpiece to be finished can be clamped in this holder in both internal and external diameters.



1. Start position



2. Moving to
change position



3. Change position