COMPANY LOCATIONS

DIEFFENBACHER GMBH & CO. KG
Heilbronner Straße
D-75031 Eppingen, Germany
Tel. +49 (0) 7262 65-0
Fax Panel Division +49 (0) 7262 65-377
Fax Forming Division +49 (0) 7262 65-297
E-mail: dse@dieffenbacher.de
www.dieffenbacher.com

DIEFFENBACHER GMBH & CO. KG
Betriebsstätte Pfungstadt
Werner-von-Siemens-Straße 2
D-64319 Pfungstadt, Germany
Tel. +49 (0) 6157 803-0
Fax +49 (0) 6157 803-109
E-mail: dsp@dieffenbacher.de

DIEFFENBACHER GMBH & CO. KG
Werk Lebach, Dillinger Straße
D-66822 Lebach, Germany
Tel. +49 (0) 6881 9207-0
Fax +49 (0) 6881 9207-90
E-mail: dsl@dieffenbacher.de

DIEFFENBACHER MASCHINENFABRIK GMBH
Gewerbestraße 29
D-75059 Zaisenhausen, Germany
Tel. +49 (0) 7258 609-0
Fax +49 (0) 7258 8751
E-mail: info@dieffenbacher-zaisenhausen.de
www.dieffenbacher-zaisenhausen.de

KARLE UND JUNG GMBH
Werkzeug- und Maschinenbau
Dieselstraße 7
D-76448 Durmersheim, Germany
Tel. +49 (0) 7245 930-80
Fax +49 (0) 7245 930-818
E-mail: info@karle-jung.de
www.karle-jung.de

DIEFFENBACHER AUTOMATION GMBH
An der Reitbahn 13
D-21218 Seevetal, Germany
Tel. +49 (0) 41 056676-0
Fax +49 (0) 41 056676-90
E-mail: dieffenbacher@da-h.de
www.dieffenbacher-automation.de

ASA GMBH AUTOMATION UND STEUERUNGSANLAGEN
Im Grund 1-3
D-75045 Walzbachtal, Germany
Tel. +49 (0) 7203 9150-0
Fax +49 (0) 7203 9150-11
E-mail: info@asa-automation.de
www.asa-automation.de

DIEFFENBACHER - CZ s.r.o.
Hydraulické lisy
Řipská 15, 62700 Brno, Czech Republic
Tel. +420 5 4842 3111
Fax +420 5 4821 7087
E-mail: dcz@dieffenbacher.cz
www.dieffenbacher.cz

DIEFFENBACHER NORTH AMERICA, Inc.
9495 Twin Oaks Drive
Windsor, Ontario N8N 5B8, Canada
Tel. +1 519 979 6937
Fax +1 519 979 6803
E-mail: dna@dieffenbacher.ca

EWES ENTERPRISES, L.L.C.
PO Box 9124
Boise, ID 83707, USA
Tel. +1 208 939 9963
Fax +1 208 939 9964
E-mail: steve_germain@msn.com

SALES OFFICES

DIEFFENBACHER, Inc.
1800 Peachtree St., NW, Suite 425
Atlanta, GA 30309, USA
Tel. +1 404 609 9911
Fax +1 404 609 9933
E-mail: mail@dieffenbacheratl.com

DIEFFENBACHER NORTH AMERICA, Inc.
211 Consumers Rd., Suite 204
North York, Toronto
Ontario M2J 4G8, Canada
Tel. +1 416 491 3304
Fax +1 416 494 4674
E-mail: woody@interlog.com

DIEFFENBACHER BRASIL
AMi Comércio International e Representações Itda
R. Três Irmãos, 201 - cj. 61
05615-190 São Paulo-SP, Brazil
Tel. +55 11 3721 3391
Fax +55 11 3721 1892
E-mail: alex.morato@terra.com.br

DIEFFENBACHER BEIJING
Sci Tech, Unit 1305, 13th Floor
22, Jianguomen Wai Dajie Beijing, PR China
Tel. +86 (0) 10 6522 0935
Fax +86 (0) 10 6522 0936
E-mail: dboklz@public.bta.net.cn
www.dieffenbacher.cn

DIEFFENBACHER ASIA PACIFIC
#04-70A German Centre
25 Intl. Business Park
Singapore 609916
Tel. +65 6562 7630
Fax +65 6562 7639
E-mail: dapsin@singnet.com.sg

DIEFFENBACHER MOSKAU
Kutuzovsky Prospekt 36
121170 Moscow, Russia
Tel. +7 095 290 85 03
Fax +7 095 290 81 30
E-mail: dieffenb@aha.ru
www.dieffenbacher.ru

EDITORIAL presses & more

Gustav Aumüller
Tel. +49 (0) 7262 65-224
Fax +49 (0) 7262 65-420
E-mail: gustav.aumueller@dieffenbacher.de

www.dieffenbacher.com

An announcement of the Dieffenbacher Group | 2003.6

presses & more

DIEFFENBACHER

Contents

Dear Readers,

In 2002 we were facing great challenges by unsatisfactory production volume, price and cost pressure and weak incoming orders.

Nevertheless, all members of the Dieffenbacher Group were able to make profit and the consolidated equity has increased further. Major restructuring has been completed and increases in costs becoming effective in 2003 could be compensated.

In the meantime incoming orders have increased significantly and right now amount to about one year´s turnover. This favorable situation mainly results from the wood-based-panel division with twelve plants ordered and mainly destined for PR China.

In the investment range we are extending our works in the Czech Republic. A number of rationalization measures are taken in the German works. We will boost our activities in Asia and have already employed additional personnel especially in the service range.

Trendsetting developments in the forming division will secure our future also in the field of plastics and metal forming.

I would like to thank you for being interested in Dieffenbacher.

Kind regards, Wolf-Gerd Dieffenbacher

Start-ups – Panel Division

LVL – Laminated Veneer Lumber

The new wood-based timber product

In 2002 Dieffenbacher started up their second continuous LVL plant delivered to Nelson Pine Industries, New Zealand. Five plants now are in operation worldwide. All plant components were delivered by Dieffenbacher and Corvallis Tool Company (CTC). The majority of delivered plants is operating in Northern America, however, there is a growing trend towards LVL (Laminated Veneer Lumber) also in Europe because of the applied method of continuous production and the resulting excellent product characteristics.

alexander.deschner@dieffenbacher.de

Continuous LVL production plant of Nelson Pine

LVL is produced from veneer sheets assembled to a veneer billet with all veneer grain longitudinally oriented. This results in excellent physical properties of the finished product.

LVL is highly appreciated for many engineered wood applications replacing solid wood. The LVL-production line for Nelson Pine has also been equipped with the option to feed crossband veneer sheets which allows the continuous production of plywood as well. CTC has also supplied the veneer feeder stations to supply at predetermined speed single veneer sheets to the curtain coater for resin application and subsequently to the Dieffenbacher layup station. One feeder is dedicated to discharge veneers which have been found to show incorrect moisture content or other defects and to replace such sheets by sheets meeting the technical specification. All veneers will pass over a skew correct table in order to achieve proper alignment of each veneer layer.

In the Dieffenbacher 2-level lay-up station a reversible loading conveyor puts together the oriented veneers upon and behind another to form a continuous veneer billet. Subsequent veneers in one layer overlap in the front and rear which guarantees continuity and structural stability of the veneer. The two veneer patterns coming from the lower and upper daylight then are continuously placed on one another by sloping belts. A total of 40 single veneers can be laminated to form a billet of 120 mm thickness.

After passing a metal detector, the material is entered into the continuous CPS press.

A 300 kW microwave system is installed in front of the Dieffenbacher CPS press to preheat the core of the laminated material up to 70°C. The applied microwave technique produces a vertically aligned standing wave with maximum power focused to the core of the billet. This preferential heating of the core is supplemented by the subsequent conventional heating of the billet in the CPS press via steel belts which results in a more uniform heating profile at the end of the process.

Preheating with microwave in connection with continuous production in the CPS press enables pressing times of approx. ten minutes when producing LVL billets with 38 mm thickness. This seems very long in comparison with the pressing times required for particleboard or MDF, but is very short as compared to conventional LVL systems where pressing times of 18 – 20 minutes are standard for the same thickness.

Feeder line (CTC)

Layup station

LVL-production line with continuous press type CPS

Pressing is followed by finishing; at first the glue bond is checked and defects are marked. The LVL billet is trimmed for a final width of 1,220 mm, i.e. 50 mm are chipped on each side to compensate for the displacement of layers caused mainly by wavy veneers that could not be totally eliminated.

The continuous LVL billets are cut to length by a diagonal saw and stacked in an intermediate storage from where individual panels are taken for processing in a 2-head sander, lengthwise ripping into planks and direct outfeed to the packing section. At present, Nelson Pine mainly produces billets with the thicknesses between 44 to 75 mm; a daily output of 258 m^3 is obtained with 75 mm billets. The main customers come from Asia and Australia ■

Start-ups – Panel Division

New continuous particleboard plant

for Akritas S.A., Greece

Akritas S.A. have been producing quality particleboard since 1979 at their Provaton Soufli Evros facilities, located appr. 30 km from Alexandroupoli, close to the Turkish border.
The 350 m³ production line with Dieffenbacher single opening cycle press was supplied by Bison in 1978. This line now needs to be replaced in order to be able to cope on a longterm basis with increased customer demands for quantity and quality of boards produced primarily for the furniture industry in Greece.

roland.jager@dieffenbacher.de

Standort Akritas S.A., Provaton Soufli Evros, Greece

After very intensive and detailed technical consultations Akritas finally awarded a contract to Dieffenbacher for the supply, erection and start-up of a new continuous particleboard production line with CPS press 2,40 m x 25,6 m, designed for a capacity of up to 1,000 m³ per day referring to a board thickness of 16 mm. The Dieffenbacher scope of supply was from the glue preparation and dosing system through to the finished board stacking boxes behind the sanding line. The contracts for the green-end sections of particle preparation and storage, drying and energy generation have been awarded directly to specialized suppliers under the customer`s own responsibility with the engineering assistance of Dieffenbacher. Since November 2002 the new continuous particleboard production line is successfully in operation. The quality of the produced panels is very much appreciated by the Akritas customers and is considered to be the best available in the market. This finally results in increased market shares for the Akritas' products in Greece. Meanwhile also the contractually guaranteed capacities per day for the different board thicknesses are constantly and successfully produced. The old single opening production line has been taken out of operation since the start-up of the new continuous line. ■

Contract signature: Mr. Athanasios Sarantis and Mr. Dimitrios Habouris from Akritas (front right)
Mr. Carl, Mr. Jager and Mr. Kopp from Dieffenbacher

Thin boards

Dieffenbacher sets the trend

New developments facilitate the most economical production of fiberboards

The new Dieffenbacher continuous production system for the manufacture of thin MDF and fiberboard of 5/64" to 15/32" (2 - 16 mm) thickness is the economical alternative to other production systems, e.g. calender or cycle presses.

guenter.natus@dieffenbacher.de

The new system enables fiberboard with a density range from 500 to 1,000 kg/m³ (light MDF, MDF, flooring HDF, HDF) or thin particleboard with a high density of up to 900 kg/m³ to be produced without any problems.

The complete system is designed to manufacture thin boards with a high surface density and uniform density profiles over the entire board width with the highest degree of efficiency. The system further excels through a high thickness accuracy of +/- 0.15 mm and the consistent quality of both board surfaces.

The low initial costs of the overall concept ensure quick return of investment. The key elements of the new concept are the new spreaders, the novel preheating system and the new, short continuous CPS press with variable inlet sections.

With the new MDF spreader of the Conform CFM type, the dissolving of fiber balls is incorporated in the bin discharge. The integration of the dissolving and discharging functions saves space, particularly precious headroom. The novel spreader head spreads the fibers for all mat thicknesses (5/64" to 15/32" board thickness) with highest accuracy, so that mat scalping and return of the fibers can be dispensed within almost any case. A mat weigh scale installed in direct proximity of the discharge provides a fast control circuit, the prerequisite for high spreading accuracy. The board surface is smoothed with the use of an equalization roller and no prepress is required.

For thin fiberboard, the proven Conform CFS spreader system with integrated mat weigh scale and specially fast control circuit is used. Designed to instantly correct deviations from setpoint, this system ensures a high degree of spreading accuracy.

The novel mat pre-warming system helps to obtain a high surface density and significantly improves the performance of the overall system. Steaming of the entire mat ensures a homogeneous density profile. Less energy has to be applied to the mat, and the pressing time is shortened. Compared to other eligible preheating systems, a stronger compaction of the mat center in the press is avoided which permits the raw density of the board to be decreased. The advantage: the reduction in raw density saves material and reduces the customer's manufacturing costs.

Another novel feature is the "Short CPS Press System" for MDF / HDF plants with an operating speed of up to 1,200 mm/s. Only 8,800 mm long, this system is equipped with a special press inlet that allows the geometry to be adjusted to almost any type of board.

The increased length of the variable inlet sections allows high mat speeds and eases the deaeration of the mat. ■

System Design Data

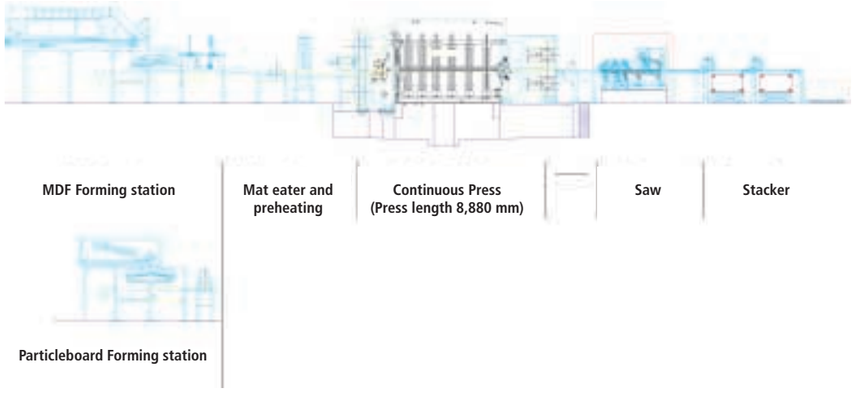
Capacity Particleboards
(m³/day, 3 h Production, Press Length 8,8 m / 29‴)

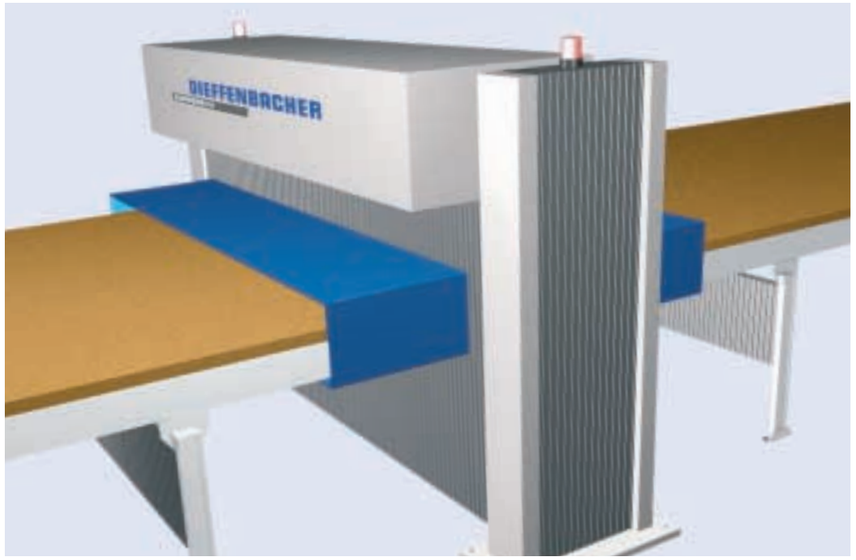
Board thickness (mm)/(inch)	Density (kg/m³)/(lbs/ft³)	Width 1,83 m / 6′	2,10 m / 7′	2,44 m / 8′
3 mm / ⅛ inch Particle	780 / 48	200	230	260
6 mm / ¼ inch Particle	780 / 48	210	250	280
11 mm / 7⁄16 inch Particle	680 / 42	270	310	360

Capacity MDF- and HDF-Boards
(m³/day with Surface Layer Dampening, 23 h Production, Press Length 8,8 m / 29″)

Board thickness (mm)/(inch)	Density (kg/m³)/(lbs/ft³)	Width 1,83 m / 6′	2,10 m / 7′	2,44 m / 8′
2 mm	950 / 59	190	220	250
3 mm	900 / 56	200	230	260
7 mm	880 / 55	170	190	210
12 mm / 15⁄32 inch MDF	780 / 48	160	180	200

MDF-Plant





Dieffensor

Dieffensor

New highly sensitive Dieffenbacher system for press steel belt protection, definition of the mat weight and material distribution

The Dieffensor detects metallic and non-metallic, high-density foreign bodies in fiber, particle or OSB mats such as glue balls, superdense fiber knots or plastic and aluminum particles that cannot be detected by common metal detectors or magnets.

ulf.koenekamp@dieffenbacher.de

New Developments

The following novelties were introduced into the market at LIGNAplus 2003 :

- Pre-heating by steam to increase the performance of MDF and OSB plants.
- MDF spreader station with improved spreading accuracy and integrated fiber dissolving.
- OSB spreader station with integrated weighing equipment.
- Dieffensor: System for press steel belt protection

Foreign bodies contained in the mat spread could cause irreversible damage to the steel belts of a continuous press especially when producing thin board. The Dieffensor recognizes the shape and mass of any foreign body and stores three-dimensional pictures and trend curves for later evaluation.

With the Dieffensor it is possible for the first time to completely protect the steel belts from permanent damage caused by non-metallic, high-density foreign bodies as e.g. glue balls and fiber balls. Until today, this function cannot be offered by any other manufacturer in the wood-based panel industry.

The Dieffensor also determines the mat weight and material distribution over the entire width of the fiber, particle or OSB mat spread.

For the first time, the operator and the technologist are given a complete image of the mat spread quality after forming. This feature is not available with any conventional weighing or traversing mat weighing system available in the market.

The Dieffensor is installed in front of the continuous press above the forming line and offers several functions and advantages all combined in one system. ■

Particleboard core layer spreader heads

"Cost reduction and quality improvement"

New core layer spreader heads for existing forming stations

Dieffenbacher´s action "Cost reduction and quality increase" is meant to help quick increase of the efficiency of particleboard plants delivered to customers at an earlier date.

klaus.schmidts@dieffenbacher.de

Troublefree and quick replacement of existing core layer spreader heads by the new design represented by CONFORM-HSR Spreader Heads will increase the board quality and reduce the operating and production costs at the same time. Better spreading accuracy, higher throughput capacity, further reduction of glue consumption, less soiling and minimum maintenance are further advantages to be mentioned. The new CONFORM-HSR Spreader Heads on the outside are dimensionally practically identical with the old HS spreader heads installed in existing plants and therefore can be replaced without any problem. Delivery is possible within a very short time.

This means a profitable expenditure with guaranteed return on investment especially for long-standing Dieffenbacher customers resp. owners of plants delivered by Schenck. ■

Weihua Co. contract signing ceremony

China buys eight HDF lines from Dieffenbacher in twelve months

New orders from China for HDF / THDF plants surged to an impressive high for panel plant supplier Dieffenbacher of Eppingen, Germany. During the first quarter of the year 2003 Dieffenbacher clinched another pack of three new plant orders for HDF production lines using the new continuous forming and pressing technology.

georg.rahm@dieffenbacher.de

This brought the score of contracts awarded to Dieffenbacher by Chinese customers up to a total of eight orders for HDF / THDF plants within a period of twelve months between the start of the year 2002 and the beginning of 2003.

The increase in demand for High Density (HDF) and Thin High Density Fiberboard (THDF) in China led to a flood of contracts signed up by Dieffenbacher with major leading panel producers in various parts of the country.

Most of the customers are established companies in the board industry of China now adding HDF and THDF to their existing product range to cope with the rapidly rising market demand for panel products in this country.

All plants on order are featuring the newest design Dieffenbacher continuous panel forming and pressing system (CPS) to maximize equipment output and product performance on THDF products. Superior HDF board properties at maximum throughput and optimum operational efficiencyare reached. These new developments were tested under various operating conditions and verified on numerous THDF production lines of Dieffenbacher customers around the world.

The wave of new panel plant orders commenced for Dieffenbacher early in the year 2002 with the project decision of wood panel producing Company Guangxi Gaofeng, Guangxi Province to apply the Dieffenbacher continuous panel system technology for gluing, drying, sifting, forming, pressing and panel handling at their new THDF plant installation near the city of Rong Xiang.

This was followed soon after by the contract awarded by Lishui OAK MMB Co. Ltd., Lishui City, Zheijing Province appointing Dieffenbacher as the main contractor for the supply of a similar THDF plant package.

A short time thereafter the decision was made by Sunway Forest Products Co.Ltd. to include the largest Continuous Press installation to date producing HDF / THDF within Asia into their new plant site near the city of Wuzhou, Guangxi Province. By mid last year Shandong Zhenghe Wood Ind. in Dongying City, Shandong Province had placed an order with Dieffenbacher for the main supply contract of their new THDF plant to be located in Guang Rao County.

Asia Dekor Holdings Co. Ltd. known as one of the established and leading laminate flooring producing Companies in China confirmed its project decision for a Dieffenbacher CPS equipment package comprising the known major plant sections at the new HDF factory site to be built near Heyuan, Guangdong Province.

Another Guangdong based Company, Weihua Group Co.Ltd. of Meizhou City, chose Dieffenbacher for the supply of the main process sections from gluing and drying, sifting, forming and pressing, including board handling and storage, sanding and cut-to-size of their THDF plant package.

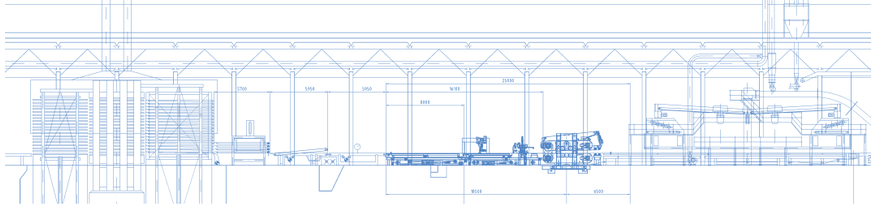
The northern Province of Heilongjiang will see Dieffenbacher continuous panel system technology applied with a similar plant package supply to the project of Company Xinchao Group for their new THDF plant site destined for a location near the city of Daqing.

MDF-/HDF-Boards

Servicing the country's Capital City of Beijing and other surrounding panel markets from their plant location in Hebei Province, Wood Panel Producer Yingang Co. of Zhending City, has ordered from Dieffenbacher the main process sections using a continuous THDF plant package including gluing, sifting, forming and pressing and raw panel handling. ■

New orders of the panel division from China

Plant	Customer	Country	Technical Data
continuous MDF Plant	Guangxi Gaofeng	PR China	CPS 23,2 m
continuous MDF Plant	Lishui Oak	PR China	CPS 23,2 m
continuous MDF Plant	Sunway Forest Products (Wuzhou)	PR China	CPS 42,8 m
continuous MDF Plant	Shandong Zhenghe	PR China	CPS 28,5 m
continuous MDF Plant	Asia Dekor	PR China	CPS 31,3 m
continuous MDF Plant	Weihua Group	PR China	CPS 28,5 m
continuous MDF Plant	Xinchao Group	PR China	CPS 26,0 m
continuous MDF Plant	Hebei Yingang	PR China	CPS 23,2 m



Modernizations

At present Dieffenbacher is planning the conversion of several particleboard and MDF plants in Russia. Improvement of the board quality, increase of output, minimization of production costs and reduction of energy costs are in the focus here. Dieffenbacher not only modernizes plants manufactured by themselves or Dieffenbacher presses, which were installed in plants delivered by Bison resp. Schenck, but foreign makes also.

New pace in an old plant

In the course of modernization in Russia, the cycle press in a 19-daylight particleboard plant was replaced by a continuous pre-press. The forming line was modified at the same time. New side edge trimming, diagonal mat trimming saw and new acceleration belt were installed amongst others and the entire forming line was modified for frequency-controlled drives. A visualization system has been provided for this control range to ease operation. The target was the improvement of the particleboard quality and higher thin board production by increasing the speed of the forming line.

Quick replacement

Not long ago, we replaced a 4-head forming station and components of the forming line at a Japanese manufacturer of particleboard. Higher capacity and better spreading accuracy were the main reasons for deciding in favour of a new forming station to replace the old one. To minimize the downtime of the plant, the complete new forming station was installed while the old one was still in operation. After the production stop, the old forming station was removed within a very short time and the new one was transversally shifted to its final position. This procedure was a prerequisite for least possible downtime of the system. ■

Innovative solutions for superior products – Dieffenbacher at LIGNAplus 2003

Dieffenbacher realizes successes

As one of the leading providers of turn-key production systems for the wood-based panels industry and number one in new MDF plants built in PR China we will present at LIGNAplus in Hanover, Hall 27, Booth F 05, from May 26 –30, 2003: "Innovative solutions for superior products".

Dieffenbacher is your competent partner ...

... who will give comprehensive information about innovative, flexible systems, plants and processes for the production of particleboard, OSB, MDF, HDF, LVL and new high-performance plants especially suitable for the production of thin MDF board. The focus is on future-oriented plant engineering and cost-effective production plants for wood-based panels including power generation, drying, gluing, spreading, pressing, finishing, conveying and storage as well as process control and monitoring systems.

Dieffenbacher sets standards

We will present the following innovative solutions:

- High-performance Conform MDF spreading technique
- OSB spreader station with integrated weighing equipment
- New mat preheating systems
- Successfully sold press systems
- Prodacon and the new Proguide visualization system
- Dieffensor – the newly developed mat detector for protecting the press steel belts
- A new service concept with spare parts centers in Europe, America and now also in Asia
- Online service via the internet
- Diespo – the automated spare parts ordering system
- Short-cycle systems for economic lamination of boards made by Dieffenbacher Maschinenfabrik Zaisenhausen
- Future-oriented systems for industrial energy supply and waste heat recovery made by Intec-Engineering.

Win with Dieffenbacher twice by using

- Competent, customer-oriented advice
- In-house research and development
- Flexible, predictive facility planning
- High-performance panel plants
- Production under preservation of resources
- Advanced, modular process management and automation systems
- Competent, worldwide service and online maintenance systems
- 130 years of experience gained from more than 1,000 press systems and lines delivered worldwide ■

New service centers in Southeast Asia and PR China

By opening two new service centers in Southeast Asia and China, Dieffenbacher has achieved worldwide presence in the service sector. The new service centers operate groupwide and are the keystone in our worldwide service network.

Now we are close to each customer anywhere in the world. Both service centers offer well-known, high service quality secured by experienced specialists who are capable of fulfilling any service requirement – on site and online. In China, Dieffenbacher has established an extensive stock of spare parts and intelligent logistics system for deliveries to customers in China and Southeast Asia.

The spare parts stock includes all the major components for gluing, spreading, pressing and finishing. Efficient and immediate delivery to our customers is guaranteed in this way. Optimum individual service is achieved by the exchange of product-related technical information between all service centers worldwide. ■

Dieffenbacher Successful at "Xylexpo" and "IWF"

In 2002, Dieffenbacher participated in two major, international technical fairs for machines and plants for wood-based panel production.

"Xylexpo", Milan, Italy. In June 2002, the Dieffenbacher booth with open and pleasing design built on an area of about 100 m² attracted many visitors coming from Europe and other countries, especially from the Asian markets.

Qualified Dieffenbacher personnel, assisted by staff members from our sales offices in Moscow and Peking and the representatives in Italy counseled the visitors seeking information for new projects, resp. inquiries and held detailed technical discussions in connection with current projects.

"IWF", Atlanta, Ga., USA. An exhibition stand of similar size and design was the well-accepted meeting point for many North American customers during the international technical fair for wood processing machines and plants. All staff members from our sales offices in Atlanta and Toronto to assisted by sales people from the headquarters in Eppingen were available to all interested visitors at our stand. Valuable information about future market developments and investments planned by our customers could be achieved during many substantial discussions.

The new Dieffenbacher design of the exhibition stands with clear, visual representation of the focal points by means of pictures and text banners and product samples, was acclaimed by the customers. The big number of professional visitors registered and the quality of the discussions held in our booth justify the statement that these two technical fairs were a great success for Dieffenbacher. ■

Dieffenbacher team during the IWF, Atlanta

Check out our quality and prices before you buy press platens!

Press platens manufactured by Dieffenbacher use the highest quality materials and workmanship. Designed, by our experienced staff, to meet your exacting requirements. Replacement or refurbished platens for all makes and types of presses for use with steam, water, thermal-oil and electric cartridge heaters. One piece construction allows highest specific pressures with maximum accuracy and reliability.

Features include:

- Pressure-tested up to 700 psi
- Channel drilling from 1/2 " up to 11/2 " dia
- Holes for steam or extraction
- Thermocouple wells
- Port couplings and mounting pads
- Edge-milled turnarounds with welded inserts

Capacity:

- Size:
  4,500 mm (15') x 15.240 mm (50') long.
- Weight:
  72.000 kg (160,000 lbs).
- Accuracy:
  Flatness and parallelism
  < 0,04 mm/m (< 0,002"/ 4')
- Surface finish:
  63 RMS

DIEFFENBACHER NORTH AMERICA, Inc.
9495 Twin Oaks Drive
Windsor, Ontario,
Canada, N8N 5B8
Tel.: +1 519 979-6937
Fax: +1 519 979-6803
E-mail: dna@dieffenbacher.ca

DIEFFENBACHER GMBH & Co. KG
Heilbronner Straße
75031 Eppingen
Tel.: +49 (0) 7262 65-342
Fax: +49 (0) 7262 65-377
E-mail: dse@dieffenbacher.de

Dieffenbacher Technical and Research Center of the panel division

The new technical center was recently opened in Eppingen where new machines and processes are developed in an expanded area and with advanced equipment.

The new laboratory is also equipped for raw materials testing and definition of process steps as required by the customers.

Gluing systems, spreaders and several presses allow low-volume production and development of new products.

New laboratory equipment and testing devices are available for immediate checking of all panels produced. ■

Partial view of the technical and research center of the panel division

Dieffenbacher-Zaisenhausen takes over the short-cycle lamination business

As of the beginning of this year, Dieffenbacher-Zaisenhausen took over responsibility for product range "Lamination Equipment" in the course of a redistribution of tasks within the Dieffenbacher Group.

Worldwide increasing demand for laminate flooring, furniture boards and other laminated substrates, accompanied by diversification and further development of surface materials are proof of the vitality of this market segment.

In addition to maximum productivity and profitability, advanced lamination systems must satisfy two basic demands of the market: Firstly, a constantly high quality and secondly, high flexibility with regard to batch size and product variation. Here, Dieffenbacher is confirmed in the strategy of driving forward new technical solutions to be able to meet any task in each market segment.

The realization of solutions to market requirements is now the responsibility of Dieffenbacher-Zaisenhausen, a group member that has been dedicated to development, manufacture and handling of complex systems in the field of lamination technology with great success for more than two decades. The team-orientated staff of Dieffenbacher-Zaisenhausen has assumed overall responsiblity for this product ranging from sales up to commissioning and after-sales service.

A highly committed staff is available for continuous development of the plant technology. A big variety of innovative detail solutions and future-orientated developments, e.g. in the field of press loading and unloading as well as board and foil separation, guarantee a continuous increase of economic efficiency at high quality level. Synergistic potential from other divisions of the Dieffenbacher Group also adds to achieving these goals.

Press unit with Synchron quick loading system

A new generation of highly productive lamination systems that excel by easy operation and high process reliability will be developed during the realization of current projects for Asian customers and especially in China where new possible solutions had to be found not only for project handling but especially in the technological field.

These short-cycle lamination systems allow customization of all substrates such as particleboard, MDF, OSB and plywood. A big variety of surface materials can be used, e.g. melamin-impregnated decorative papers, finish foils and papers impregnated with phenolic resin. Possible mechanical capacity of the systems: 180 cycles per hour and up to 3 boards per pressing cycle.

The Dieffenbacher cycle press forms the centerpiece of the system. The customer is guaranteed high flexibility owing to quick and even heating of the material sandwich and quick changeability to fulfil a big variety of workpiece requirements. The patented Synchron Quick press loading and unloading system developed by Dieffenbacher is another highlight. Here, the development engineers succeeded in consistent reduction of the moved masses. Highly dynamic sequences of movement with short manipulation times and a very economic energy balance are possible in this way. Simple gripper and depositing mechanics in connection with a new NC system provide gentle handling of the material sandwich. The best possible pressureless time is about 1.2 sec.

The logistics of the used caul plates and their quick exchange is a focal point especially in the case of a big variety of individual product surfaces. Here, Dieffenbacher has developed a system with automatic caul plate exchange system. Smooth handling of the valuable and sensitive caul plates is guaranteed. Storage and exchange of a complete set is performed by means of a cassette that allows change-over times around 10 minutes. The system control permits automatic size change of all devices as well as automatic adjustment of the pressure and thickness.
This new generation of plants makes Dieffenbacher-Zaisenhausen well prepared to satisfy market requirements in the field of lamination technique.

The scope of supplies offered by Dieffenbacher-Zaisenhausen in addition to short-cycle lamination systems also includes finishing, sanding lines and storage systems as well as complete solid wood plants, trimming and dividing saws. ■

Press line for the production of stainless steel sinks

Kindred joins the MPC Club

Kindred Industries, a subsidiary of the Franke Group in Switzerland, one of the leading companies for the production of stainless steel kitchen sinks, located in Midland, Ontario, Canada was the latest manufacturer to join Dieffenbacher's worldwide users of MPC (multi point control) technology.

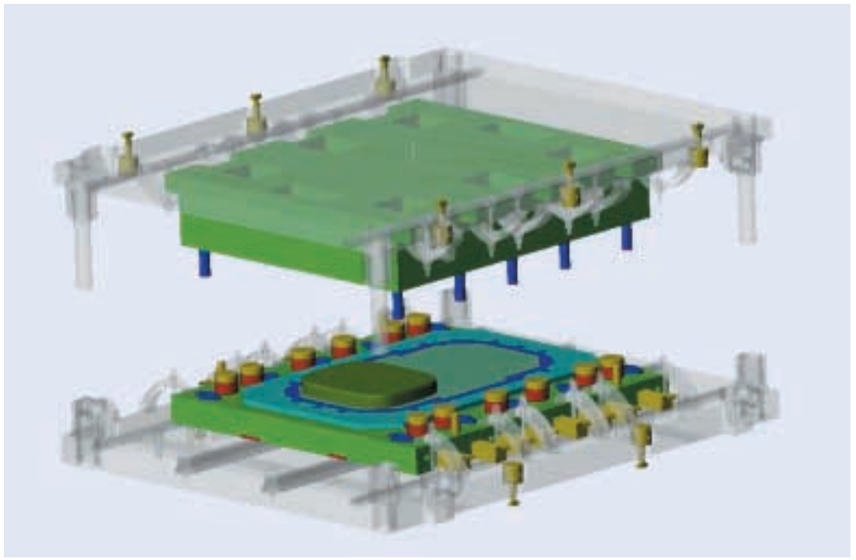
manfred.bruemmer@dieffenbacher.ca

As of February 2003, a successful runoff of a production line consisting of three 800 ton high-speed MPC presses and one 320 ton trimming/edge forming press has been completed.

The line is used for the production of single bowl stainless steel kitchen sinks carrying new design features. Dieffenbacher North America was awarded the delivery of these presses in 2002. The presses had been completely tested at Dieffenbacher's Windsor facility and were set in operation in shortest time. Further to the scope of the presses themselves, a complete tool change system was delivered by Dieffenbacher including a tandem die cart with automated pull and push functions and of course an automated hydraulic tool clamp system, which reduces the tool changing to a minimum.

In particular, the MPC technology permits adjustment of the necessary die ring forces by a hydraulic closed looped control system, which permits the smallest minimum down time for a model change. With this new facility, the Franke group now operates three complete lines in North America. Their sister company Federal Home Products located in Ruston, Louisiana, received two complete double bowl MPC lines. (Reported in Presses & More, issue 2001.3)

In the meantime, completing this job, Dieffenbacher North America has built and delivered fifteen presses for the production of kitchen sinks since opening their new plant back in October 1998. Along with manufacturing the presses, Dieffenbacher North America's service center is well equipped and stocked with spare parts, which adds to the advantages of this excellent technology. ■



Modular trimming tool for different sink sizes

Further successful co-operation with Franke Kitchen Systems Ltd.

The cornerstone of economical and flexible production of stainless steel kitchen sinks by Franke Kitchen Systems Ltd. in Durban, South Africa, was already laid in 1998 by the delivery of a 12,000 kN Dieffenbacher drawing press. Ordering a further 12,000 kN press and additional tooling in the second step was aimed at increase of the output in that location and expansion of the present scope of supplies.

georg.obermaier@dieffenbacher.de

Dramatic currency depreciation of the Rand makes procuring of capital goods in foreign countries practically unthinkable to South African companies. Nevertheless, Franke AG have decided to have the new press and tooling delivered by Dieffenbacher because of the technical advantages of the patented MPC technology and not least our successful co-operation in the past.

The kitchen sinks are predrawn on the existing Dieffenbacher press. The new 12,000 kN press is destined for the second draw. On the new press, the bowls are drawn to final depth and calibrated. In addition, the edge is pre-bent and the draining borad embossed in the drip area of the board sink.

To directly influence the forming sequence, Dieffenbacher developed different operating modes that can be selected by the user especially for the second draw. Without a change of tooling, it is possible, for instance, to readily draw the bowl after prebending the edge and emboss the draining board thereafter or vice versa. In this way, the forming process can be easily adjusted and optimized as required for the individual model.

Economic production of similar sink models with different dimensions and arrangement of the bowls and drains is given by the modular tooling concept that was developed by Dieffenbacher´s subsidiary Karle + Jung. The delivered tooling set in monobloc technology includes the production stages first draw, perimeter trimming, final draw and edge forming. The trimming tool designed as a modular system can be adapted to suit the different product sizes easily and quickly. This concept developed by Karle + Jung represents an economic alternative to dedicated trimming tools, especially for product groups with dimensions varying in one direction. Only seven months after order receipt the press with Karle + Jung tooling was accepted ready for production by the customer at Dieffenbacher in Eppingen.

After arrival in Durban, the new press DSF 1200 was reassembled and handed over to the customer to start production on 6th December, 2002, as scheduled. ■

New Press line

Fully automated production of car body parts

The press line delivered to Menzolit Fibron for the production of undercover shields for the PQ 35 platform vehicles of the Volkswagen AG is close to its production start.
The undercover parts meet the noise emissions limited by law and serve for corrosion protection. They also support the aerodynamics and, in connection with the lightweight design, the minimization of the gas consumptions that result in environmental care.
The expression "PQ 35 platform" means undercover parts of various car models of the Volkswagen Group, as – for example – Golf, Audi A3 and other cars of Seat and Skoda.

heinrich.ernst@dieffenbacher.de

LFT-D line with a 30,000 kN high-speed press equipment with active parallel motion control system

This plant is the most complex one that Dieffenbacher has ever delivered for the production of car body parts. The line includes the production of a glass fiber reinforced plastic compound by a Dieffenbacher extrusion line, the production of the parts by a Dieffenbacher high-speed press with an active parallel levelling unit and a compression force of 30,000 tons, the finishing of the parts (i.e. stamping of the fixing holes by a Dieffenbacher stamping press of 1,000 kN and the fully automatic inserting machine for hole reinforcements equipped with an integrated controlling station).

The entire plant is connected with a total of 3 robots in order to ensure the fully automatic working procedure of the production process. At the outfeed of the plant, the parts are visually checked and destacked into containers for despatch.

Another special feature is the initially realized short cycle time. In double-tool mode, two parts are produced at the same time within 20 s. This fact requires great performance of the automation and the gripper systems, the die cooling systems and cycle times of the press. The entire plant is controlled by a superset line control with an integrated process data logging system. Such a control is absolutely necessary for achieving high availability by efficient trouble-shooting and for process supervision as – within the plant – the compound as well is produced.

The production of the compound is supervised by continuous control of the quantities and mixture proportions of the plastic as well as the proportion of the glass fibers to be integrated.

The process conditions are subject to tight tolerance limits. The compound viscosity, the part's weight and its geometry are supervised by the sensorics of the parallel motion controlled press.

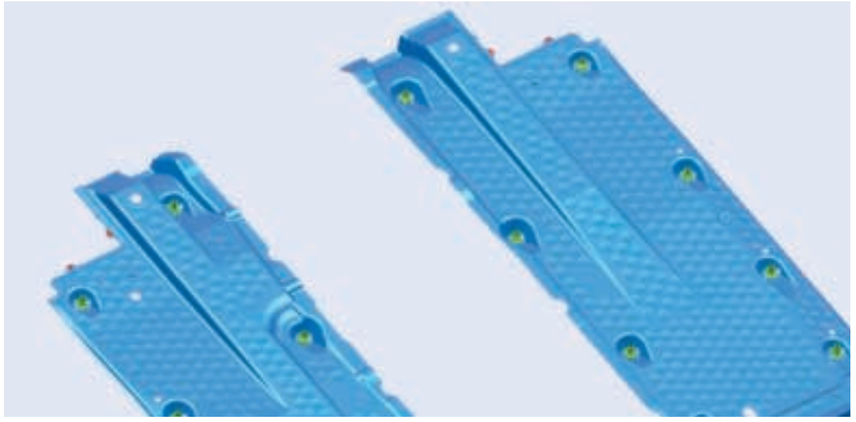
These values are then assigned to each single part by a bar code printer in order to refer again in detail to the production conditions of each single part. So, the smooth processing can be proven and registered if required. Waste parts are automatically eliminated if they are not in line with the assigned limits.

The direct process LFT-D/ILC developed by Dieffenbacher results in high savings in material and costs for logistics by omitting the production of semi-finished products.

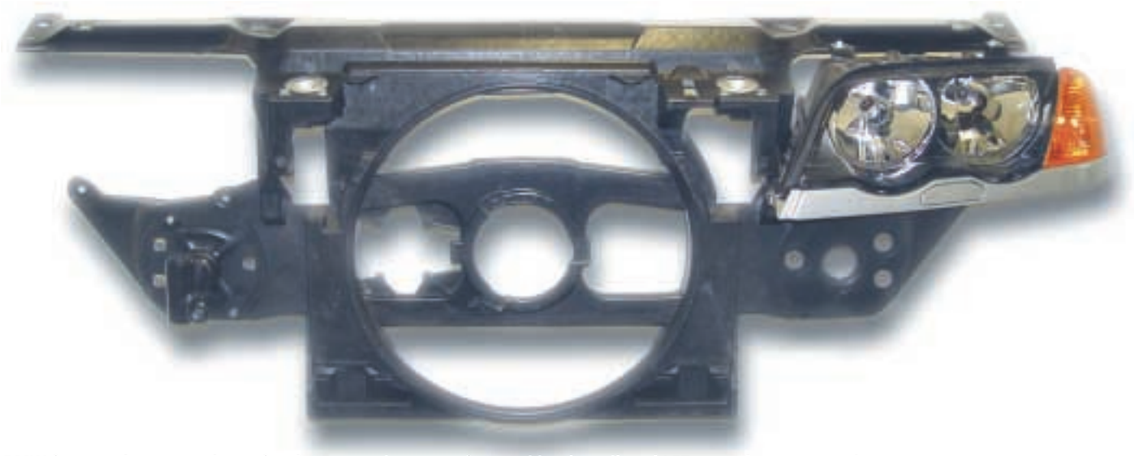
However, the economic effect is exceeded in two points by the described plant conception: namely the production of parts by double tooling; i.e. per cycle, two parts are produced at the same time and moreover they are produced within an initially realized cycle time of 20 s.

Worldwide, the Dieffenbacher Group is the unique supplier of such automated plants – from a single source. The proportion of own production is very high as the presses, the double-screw extruder for integration of the fibers, the grippers and the manipulation systems as well as the inserting machine and superset line control are designed and delivered by Dieffenbacher and affiliated companies. ■

Start-ups – Forming Division



Underbody cover out of glass fiber reinforced thermoplastic material



BMW front-end structured part for demonstration: manufactured by the tailored LFT extrusion-compression process

The "SMART PART" research project: Successful final presentation

The final presentation of the "SMART PART" research project took place at Dieffenbacher in Eppingen on 25th March, 2003, with many delegates of the partners involved. Within the studies for this development, it has been possible to realise the Dieffenbacher LFT-D/ILC two-machine technology. Processing of polypropylen and glass fibers has been the main issue.

richard.bruessel@dieffenbacher.de

For the processing of technical thermoplastics, such as – e. g. – PA, PBT, ABS, SAN, PET and PC, this technology also offers very good possibilities.

With the inline-compounding in the classical twin-screw compounding extruder, the basic polymeres can, for special applications, economically be purified with additives directly while being compressed.

In that way, the color of the compression part, the thermal stabilisation, the fiber-matrice connection or filling materials are given to the plastic melt for achieving better characteristics. In the compounding extruder, the long fibers are added to the plastic melt. Thanks to the particularly safe way of conveying granted by the wide content of fibers and the servo-controlled plastic melt conveying nozzle, very complex compression parts at lowest weight tolerances and high material parameters can be produced. Even particularly large and thin parts can be produced economically.

Besides textile glass fibers, also carbon-chemical and natural fibers and also mixtures of them, can be used. Thanks to the load-orientated additional reinforcement by endless fibers/fabrics of LFT compression parts, light compression parts for highest requirements can be realized by an economical production.

The expression "tailored LFT" was created out of this application. The processing of recycled granules and/or recycled chips with the higher fiber potential is also possible and has already been in use for serial production.

After three years of development, the equipment for repeatable automatic pressing of a structural component for the vehicle front wall with a 30-second cycle (15 sec. cooling time) could be presented in Dieffenbacher´s technical center.

Incinerated compression part segment – The long fibers have penetrated the endless fibers and filled the rip structure. The endless fibers have kept their position and hardly been damaged by this penetration.

Consistent planning, development of the equipment components, materials development and simulation models for the formed part were confirmed by the results of components testing. The BMW-Group confirmed to have achieved the goal of weight reduction for a production part by 30 % in the 3-series at same performance and in all aspects. ■

Development partners in the "SMART PART" project

More benefit from new press type

Wherever advanced technology and a good price are the decisive factors, the new press type made by Dieffenbacher should be in the foreground. Dieffenbacher sets new standards for future-oriented press systems. The combination of force, ergonomic design, comfortable operation and design are unique in the world of forming technology.

juergen.hohnhaus@dieffenbacher.de

Front view with open protective door

Accumulated experience from over 200 presses delivered in the past 10 years, has brought Dieffenbacher to developing a press type that fulfils technical requirements with attractive price/performance ratio for the big number of mid-sized companies. Achieving this goal is based on using standard modules for customized design of the press.

The press comprises the standard modules of rack, working cylinder, ram and guiding, the technical data of which result from customer-specific requirements for performance, table size, installation area and ram stroke. The customer is enabled to select from several preset standard pressing forces, table sizes, installation areas and strokes. Pressing forces are range from 1,600 kN up to 10,000 kN and table sizes from 800 mm x 800 mm up to 3,200 mm x 2,200 mm. The standard designs have been defined by analysing the most frequently delivered ones.

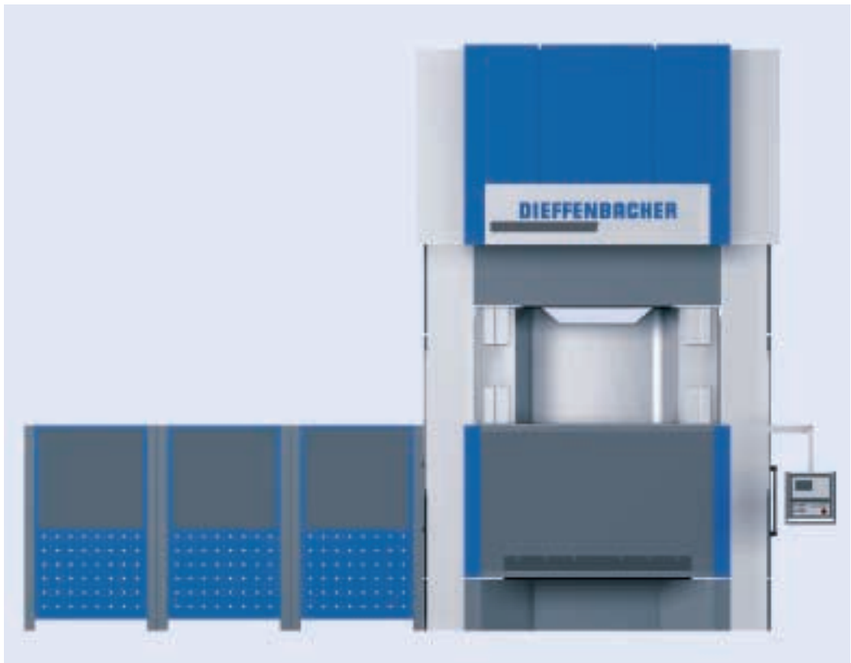
The big number of available optional equipment to be installed in the press have a modular design, for instance, cushion system, damping of the trimming, shock or parallel motion control system.

Modular design is a prerequisite for an attractive price because it limits the design effort to only a few details that need to be customized. An example of this method is the frame representing the most important module of this press type. This newly developed module permits installation of the press either on a foundation or on the floor without requiring significant change of the design. In addition, it is easily possible to open the lateral column for the tool change or automatic operation.

The standard design includes PC visualization with software PLC that is advantageous with regard to scan times and diagnosis assessment. A data analysis and operating data acquisition system are further features to be mentioned. The data analysis system permits display and evaluation of all setpoints and actual values as a function of time. In this way acquisition and checking of the process parameters and thus permanent checking of the forming process are easily possible. The cause of fault messages can be traced quickly and accurately which helps high uptime. Operating data acquisition is used to record and evaluate failures of system components with the goal of minimizing downtimes and maximizing the production output. The operating equipment includes a two-hand control panel and suspended command panel. The focus of development was on our customers´ request for shorter delivery periods and comprehensive service. Short delivery periods are achieved not only by reduced design periods but also by adjustment of manufacturing equipment to the module elements. The newly established, attractive service range will help Dieffenbacher to optimally fulfill the customer requirements and guarantee high plant uptime. Moreover, Dieffenbacher has designed a new financing concept making the new press type even more desirable.

Summary: The new Dieffenbacher press type offers to our customers an attractive price/-performance ratio, short delivery periods and prompt service for high profitability and availability of the plant. In September, the press line will be introduced into the market.

We cordially invite you to join us for this event. ■



New, compact Dieffenbacher press line

Dieffenbacher successful at JEC 2003 in Paris

As every year the Composite Branch met at the JEC fair in Paris in the time from April 1 - 3, 2003.

The importance of this fair has significantly grown in the past years especially in the field of fiber-reinforced plastics and their application – this fact was confirmed again by a big number of exhibitors and professional visitors.

Dieffenbacher together with the Fraunhofer ICT were represented in a fashionable booth under the slogan "Tailored LFT – One Step Ahead".

The highlight of the presentation was a newly developed BMW carrier that was subsidized by the Federal Minister for Research and Technology and accompanied by project holder "New Materials, Jülich" (Project SMART PART) *).

Beside the exhibited, BMW carrier', a video about the manufacture of the newly developed molded part was shown on a large flat screen. The innovative character of this part lies in the Tailored-LFT-D-process. An additional, pre-heated board (TWINTEX), which is reinforced by endless fibers, is added to the glass-fiber reinforced plastics melt to provide additional local strengthening of the manufactured part.

This newly developed method obviates the need for costly hybrid structures of metal and plastics which results in a significant increase of profitability.

Dieffenbacher´s booth staff was very happy about great interest shown by the professional visitors and as a result we can say:

This fair was a great success for us! ■

*) Development partners in the "SMART PART" project: BMW Group, Dieffenbacher, DOW Automotive, Fraunhofer ICT, Leistritz, Menzolit-Fibron, Polymer-Chemie, WFS.

Polynorm Grau – Installation of the first Dieffenbacher press line for the automotive industry

Inauguration ceremony of the press plant Polynorm Grau

After successful marketing of the tryout presses Dieffenbacher has achieved another major company goal by selling the first press line for the production of car body parts.

It´s not long since the new press plant of Polynorm Grau was officially inaugurated on June 21, 2002.

The impressive inauguration ceremony was held in the already completed press pit (dimensions: length 70 m, width 9 m, depth 5 m) that had been prepared as a modern amphitheater for this purpose. In the press pit, where 250 invited guests were welcomed by Günter Kiefer, General Manager of Polynorm Grau, and given a presentation of the new plant at Gügling Industrial Park, a Dieffenbacher hydraulic press line is under construction since January 2003.

The new press line with table and ram size 4,000 x 2,500 mm comprises 6 hydraulic presses totaling a pressing force of 66,000 kN.

A triple acting lead press of 16,000 kN, equipped with a four-point controlled table die, and five follow-up presses with a pressing force of 10,000 kN each are the central components of the line.

Press automation via industrial robots with 6 axes linked to superset line control guarantees quick and flexible transfer of the parts.

The process of installation and start-up is running according to schedule. All on-site work and activities are conducted by Dieffenbacher´s Project Manager

Manfred Kreuzwieser in close co-operation with Dieffenbacher Site Managers Otto Faber and Christoph Hager.

The modular design of the press with a high degree of pre-assembly of major components prior to delivery helps realize the tight schedule until the start of production in September 2003.

Until that date the progress of installation and start-up of the first press line for car body parts can be watched through the "Live-Ticker" on Dieffenbacher´s home page. Just go to "www.dieffenbacher.de" and click on the "Live-Ticker". ■

Installation of the press line at Polynorm Grau

www.dieffenbacher.de Live-Ticker

Dieffenbacher involvement at shows and exhibitions in 2003

Theme	Exhibition	Town	Country	Date
Wood-based Panel Technology	WTCS	Portland	USA	03/19 - 03/21/2003
	International Wood Composite Materials Symposium	Pullman	USA	04/07. - 04/10/2003
	LIGNAplus	Hanover	Germany	05/26 - 05/30/2003
	Woodmac Asia	Singapore	Singapore	09/09 - 09/12/2003
	MSV 2003	Brno	Czech Republic	09/15. - 09/19/2003
	Intermob	Istanbul	Turkey	10/23 - 10/27/2003
Forming Technology, Plastics	JEC	Paris	France	04/01 - 04/03/2003
	AVK-Tagung	Baden-Baden	Germany	10/07 - 10/08/2003
	MSV 2003	Brno	Czech Republic	09/15 - 09/19/2003
Forming Technology, Metal	Metalform	Rosemont	USA	03/23 - 03/26/2003
	MSV 2003	Brno	Czech Republic	09/15 - 09/19/2003
	CIMT	Beijing	China	04/16 - 04/22/2003
Automation	Motek	Sinsheim	Germany	09/23 - 09/26/2003

Ambassador of Canada visits Dieffenbacher

Marie Bernard-Meunier, Ambassador of Canada in Germany paid a visit to Dieffenbacher, Eppingen, on December 17th, 2002. During a tour through the works, she was informed about the company´s field of business by Wolf-Gerd Dieffenbacher.

Special importance was attached to a large order placed by a Canadian customer, Tolko, Meadow Lake, Saskatchewan, covering a complete plant for the manufacture of OSB boards. Components for this plant could be shown to Ambassadress Bernard-Meunier during her visit. Since 1984 Dieffenbacher has operated a plant in Windsor, Canada, employing a staff of 70 and with a turnover of 30 million Can$ in 2001. Forming presses as well as components for particleboard plants are manufactured in this subsidiary. As North America represents one of Dieffenbacher´s major markets, the service activities for the relevant group of countries are centralized at the same location. ■

Wolf-Gerd Dieffenbacher with the Canadian Ambassador, Mrs. Marie Bernard-Meunier

Dieffenbacher Beijing office

The photo shows the crew of our Chinese colleagues at the Dieffenbacher office in Beijing. For more than ten years Dieffenbacher has been operating from the capital location to cover sales and service activities in this market with the aim to best meet up with the requirements of customers within the wood panel industry of P.R. China.

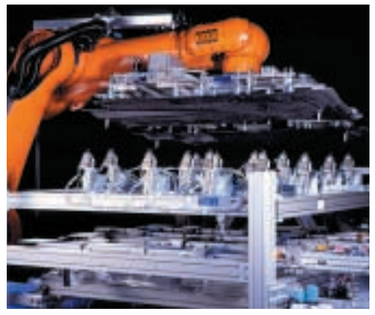
The team has been spearheading the pioneering work of the company in this important and strongly expanding market. Today the outstandig achievements can be measured in the leading market position for Dieffenbacher Continuous Press Systems as well as in the number of Dieffenbacher Short Cycle Laminating Lines installed in China. With the increase in project activities in China and a substantial number of new orders for Dieffenbacher on MDF / THDF plant equipment over the recent 14 months our team has now been strengthened by three additional service engineers.

A stock of spare parts located at the new Service Center to be established shows Dieffenbacher's commitment to the panel market of P.R. China and will provide better service attention and faster parts delivery to Chinese customers. ■

Our chinese colleagues of the Dieffenbacher Beijing office

Assembly robot

Branch office in Hamburg



Assembly unit

Dieffenbacher Automation GmbH – Good order situation and successful co-operation

In the past six months, a lot of orders amounting to millions of Euro have been placed to Dieffenbacher Automation GmbH, Hamburg (DAH) .

After a satisfactory, steady business result in 2002, forecasts are very favourable also for the current year. Orders were received from old and new customers located in the major market of Western Europe. 95 % of the products manufactured on lines delivered by DAH are used in the automotive industry as well as in the metal and plastics forming industry.

The forming division is a successful supplier of complete plants for metal and plastics forming. DAH has assumed the task of total project layout planning up to realization of handling mainly by robots and use of individual components provided by ASA, a sister company.

An example to be mentioned here is the order for a complete LFT-D plant placed by Menzolit Fibron for their plant in Voerde, Germany. Underbody covers for VW type PQ35 are manufactured in this plant where raw materials are transformed into finished parts that are fitted with various plastics and metal fasteners in an assembly station designed by DAH. The plant includes four robots for handling and assembly.

After realization of the first reference project at Daimler-Chrysler, Esslingen / Mettingen in 2002, DAH were successful in selling two further automation systems to Daimler Chrysler, Hamburg-Harburg. One system is used for automation of the IHU-pressing process at an existing press, the other one is used for subsequent processing of the IHU-parts.

At the end of March, DAH has received another order for retrofitting existing presses in the metal range at Neef in Wilnsdorf. A press feeding robot picks up the blanks with accurate positioning via a camera system and delivers it to a press with stepped tooling. Two further robots feed the individual steps of tooling in the continuous pressing process. The order also includes the master control and entire safety concept.

Retrofitting resp. conversion is another interesting section of the turnover. Changes of product families or models by the automotive industry require retrofitting of and additions to existing plants. DAH have received orders from Aksys RKT Kunststoffe GmbH, Polymer-Tec GmbH and other customers.

In the beginning of March 2003, Dieffenbacher GmbH, Eppingen, delivered a 21,000 kN plastics press to FPK in Bilbao, Spain. In that connection, DAH was successful in selling a complete automation system to FPK. This plant is characterized by high flexibility. More than ten semi-finished up to finished parts can be produced on this line. Peripheral supplementary devices are used, for instance, to automatically feed reinforcing metal parts into the pressing tools.

A big number of offers made and inquiries received make DAH expect many incoming orders in the future. ■

New General Manager for Dieffenbacher North America: Daniel Uszynski

Born and raised in Windsor, Canada, Dan Uszynski is Dieffenbacher's new General Manager for its North American operation. He takes over the role from Peter West who is retiring from DNA after ten years with the organization.

Uszynski is a Professional Industrial Engineer who graduated from the University of Windsor and also achieved a Certificate of Business Administration from the University of Heriot-Watt. With 20 years experience in operational and business management from various organizations, primarily in the automotive industry, he was appointed to his new posting effective April 1, 2003.

He started his career at Chrysler Canada in System Automation, followed by a move to Finance and Accounting and then to Sales and Marketing. Later in his career he was involved in lean manufacturing in the assembly operation of heavy-duty transport trucks. Before joining Dieffenbacher, he was Corporate Quality Manager and later General Manager for a machine builder who supplied automation and machines to the automotive OEM's in North America.

Uszynski says his focus at Dieffenbacher will be to continue the growth and efforts made over the years in North America. Development of new strategic initiatives will focus on some restructuring and reassignments to further position the company for growth in order to acquire higher profits and market share. Further development of the sales organization and service & spare parts groups will put a stronger center of attention on the customer in order to ensure the highest level of support.

Daniel Uszynski

"Focusing on the customer's needs and requirements is paramount to DNA and the wonderful individuals that make up the team are a key and integral parts to ensure that our organization develops, grows and responds to those customers needs. ■

Dieffenbacher subsidiary Karle + Jung is heading for success

In 2002, Karle + Jung, the toolmaker in Durmersheim, Germany, achieved their best operating result since having been taken over by Dieffenbacher in 1997.

The development of business activities is promising also in this year. The current order backlog guarantees capacity utilization in the next 5 months and the number of promising projects allows optimistic forecasts of business year 2003.

This pleasing development is a reward for hard and consistent work of the new Karle + Jung management.

As of May 2001, Dr. Klaus-Jürgen Pahl has been the sole General Manager. Plant management was taken over by Matthias Jung at the same time. The new management in close co-operation with the Karle + Jung employees have fulfilled all the requirements formulated by the shareholders in Eppingen.

Immediate action taken with regard to a new personnel structure, product portfolio and organization of the tryout center for tool trials and parts production had very positive effects.

Today, Karle + Jung focus on their core business, the design and manufacture of drawing as well as trimming and edge bending tools for household products, mainly kitchen sinks, as well as segments of automotive technology. Systematic expansion of this know-how and corresponding increase of turnover are their acknowledged targets.

Works Manager: Matthias Jung

Appointment as Authorized Representative

Effective 1st April, 2003, Matthias Jung, Works Manager at Karle + Jung, is holding power of attorney. ■

Transfer systems for the European and North American metalworking industry

Electronic transfer systems for presses for sheet metal forming and forging replace mechanical transfers with invariable paths and motions. The focus is on flexibility, optimum adjustment of movements and increase of productivity. ASA has gained ground in this market segment. Besides other customers, ASA now supplies a renowned company in the German automotive supplier industry with the fifth transfer system to replace a mechanical system. Thanks to excellent project management, it was possible to install and start the new line in record time.

Another "serial order" received from the automotive industry is further proof of the positive effect from excellent project management, design, quality and reliability of the products combined with high performance. The same customer operates several ASA transfer systems already.

A new market segment opens up in the North American metalworking industry. Here, an order could be acquired and further ones are under negotiation.

ASA has adjusted the control architecture to comply with different marginal conditions at higher performance – automation of old and new presses in the European and American market. The basis of Indramat-NC allows the use of any commercially available PLC and visualization system as required by the customer. PC-based and hardware-based systems made by

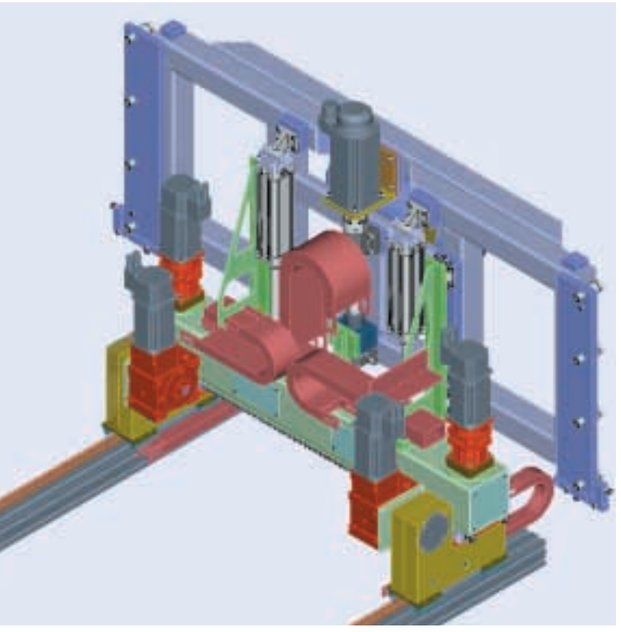
Arndt Nottrott

Siemens or Rockwell are offered. In this way, the interface between presses and automation system has been cleared and now appears as a unified whole.

Customer benefit will be ASA´s target also in the future. Together with the forming division, the transfer control will be extended such that maximum productivity can also be reached with hydraulic transfer presses. The result will be a new category of price/performance ratio for these presses.

Arndt Nottrott, member of ASA management since October 2002, has taken up the cause of continuing the strategy which was developed to the benefit of customers and shareholders after the takeover by Dieffenbacher. ■

New ASA system for faster transfer through hydraulic presses

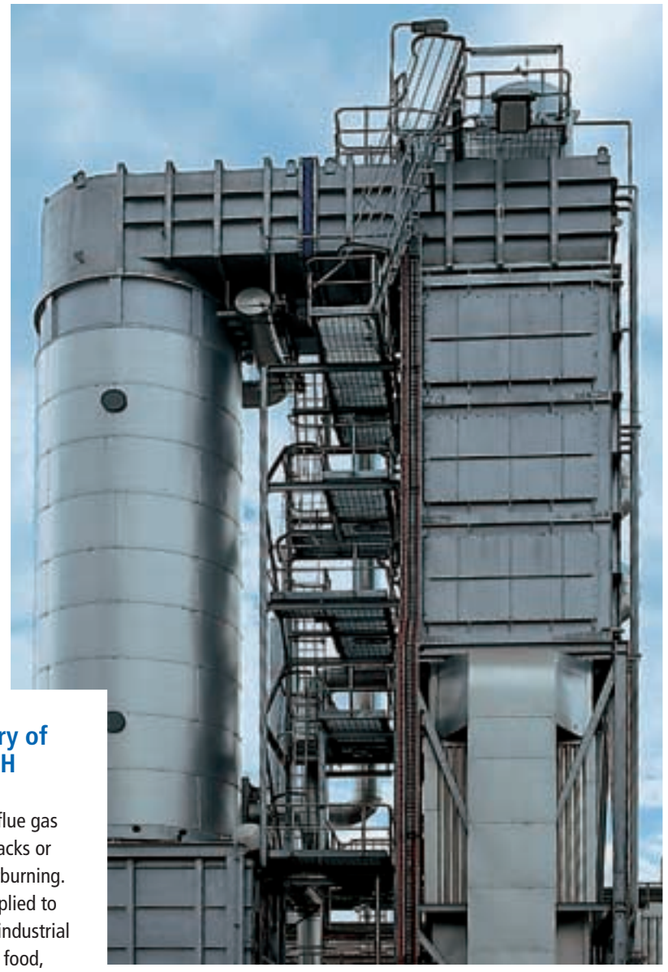


Transfer driving unit

A new generation of triaxial transfer systems was developed by ASA GmbH in conjunction with Dieffenbacher´s new press type. The target was increased productivity of deepdrawn parts on hydraulic presses. Limitation of the productivity below maximum hitherto was an obstacle to full benefit from the excellent price/performance ratio and flexibility of hydraulic presses.

Targets for the new transfer generation

- Clear, compact design by maintaining the proven ASA direct drive for transfer rails
- Separate gripping motion of the transfer rails for spring-mounted grippers
- Reduction of moved masses because higher speeds are necessary to increase productivity
- Synchronization of the movements of transfer and press ram resulting in a virtual mechanical coupling
- Integration of transfer control into the press control and harmonization of operation and visualization
- Possible integration of transfer control into other commercially available industrial controls. ■



Wood waste fired thermal oil heater

Process heat supply and waste heat recovery of our partner company Intec Enginering GmbH

An assured, environmentally friendly and cost-effective supply of energy is of high importance for any plant operator.

Intec Engineering GmbH, as one of the leading companies in this field, designs and supplies single components or complete energy plants for the heating of industrial processes for the production of wood-based panels. Energy is delivered to the process in form of hot gas, thermal oil, steam and warm or hot water. Typical fuels are production waste, sander dust and biomass.

Our product range includes also fuel oil or natural gas fired thermal oil heaters, tanks, secondary circuits for press heating as well as other components like fuel handling systems, flue gas cleaning equipment, stacks or plants for thermal afterburning. These products are supplied to and used also in other industrial applications, e.g. in the food, chemical, metal, marine industry.

The picture shows one of two identical units of a wood-waste fired thermal oil heater with net capacity of 12.5 MW commissioned in 2002 for sawmill application of Hyne & Son Pty Ltd. at the Tuan Mill, QL and the Tumbarumba Mill, NSW in Australia.

Main advantages

- Careful design and integration of combustion system with the thermal oil heaters.
- Modern design of the thermal oil heater with separate radiation and convection units.
- Convection heater executed with serpentine tube bundles is equipped with automatic soot blowers for long operation time without shutdown periods for cleaning.
- Reliable and safe operation due to design according German regulation for thermal oil heaters DIN 4754.
- Customer is very satisfied due to proven excellent operation figures, workmanship and short-time commissioning. ■