Successful family enterprise entrusts WALDRICH COBURG

Why did you decide on a WALDRICH COBURG machine in 1994, although you were maintaining business relationships with other suppliers?

In 1991, when we purchased the first gantry milling machine, we made our first experiences. Being satisfied with the results, we ordered a sister machine.

The former supplier, who went bankrupt, was not able to complete the machine, so I contacted WALDRICH COBURG again. By chance, they had a gantry milling machine PowerTec 5000 for sale - all components ready, packed and stored. It was great fortune that the machine fitted closely on the existing foundation and that the first WALDRICH COBURG gantry could start up production after 5 months only.

With the PowerTec 5000, also your customer profile has substantially changed.

Yes, that’s right: Before that time, our customers were companies located close to us, coming from the general machine-tool industry, printing industry and equipment-engineering industry. With the first PowerTec 5000 AG gantry we reached new dimensions. For the first time, roughing of large and heavy workpieces with big stock allowances and then finishing with the highest geometrical accuracies was possible on the same machine. This was an absolutely new experience.

We very soon identified the market trend towards more complex workpieces like press columns, press head ends, machine beds for revolving transfer machines or gearbox housings. We were open to our customers’ new requirements - we did not ignore them, but we met them.

Consequently, a bigger WALDRICH COBURG machine had to be purchased. The PowerTec 6500 having an X-axis travel of 20 m, equipped with an S2 boring and milling head (drive power 105 kW, Z-axis travel 2500 mm). Further WALDRICH COBURG machines followed: in 2000, another gantry milling machine PowerTec 5000 AG, and in 2003 a turning machine PowerTur 6000 kW, Z-axis travel 2500 mm).

During an in-house exhibition at company G.M.W. Präzisionen GmbH & Co. KG, the new horizontal boring machine system PowerTec HB was presented to a large and expert public.

The ongoing boom in the energy sector, in the machine tool industry, as well as in the plant engineering industry is driving us to new investments. Leipert has to keep pace with the dynamics of the global markets. An increasing customer demand can only be met by further investments. For the time being it is not possible to extend the existing workshop, therefore we have planned to extend the capacities of the machine which is presently being assembled by a second portal: There will be one portal working in the area of the turntable while the other portal is working in the area of the floor plate. This optimum configuration permits double use of the occupied area. Further considerable savings can be achieved by the common use of the chip conveyors, coolant system, tool changer and spindle-unit serving system.

By the way, we have already received the first order for our new gantry. The workpiece to be machined has a weight of 200 tons and a length of 38 m. It is apparent that we made the right decision.

continued on page 2>>
WALDRICH COBURG keeps on growing

At nearly 180 million EUROs our 2006 target order income was exceeded by 2.5 times. We achieved a further increase in 2007 to 250 million EUROs and, this year to-date, has already exceeded the record high of 2007. There is no change in sight and the energy sectors in Europe, Asia and America show high investment requirements. This sensational order inflow will generate an order backlog, ensuring full employment for more than 3 years.

In order to deal with the increasing delivery times, we will realize a turnover of twice the figures of 2006. Three sequential years with growth rates of more than 30% are a big challenge and we are proud to have people achieving these high goals.

The number of employees has increased by 65 to 688 and we are glad to welcome 20 new apprentices who have started their career at WALDRICH COBURG in different fields of work.

We took advantage of the good business situation and have significantly increased our investment volume in 2008. The extension of our assembly area by 1550 m² has been completed and the procurement of a jig boring machine as well as further machine tools will help to increase our production capacity. Additional new projects are running in the infrastructure area.

We have a strong market position and are a competent partner developing new technologies for all kinds of applications. The orders for retrofits and modernizations on a high-quality level has increased, despite the high order volume of new machines. The next project on our list will be the strategic development of our service activities.

The future of WALDRICH COBURG is optimistic and we are looking forward to continued successful cooperation with our customers.

Enjoy reading this newsletter!

Hubert Becker

HUMAN RESOURCES

Since the last issue, we expanded our personnel by 65 employees to 688 people.

At present, we have a total of 54 apprentices. This corresponds to rate of 8% of the whole staff and exceeds the average rate in Germany.

IMPRESSUM

News by WALDRICH COBURG

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This investment in our Kraich-
tal location will secure the jobs of our longstanding employees and shows that Leipert is well posi-
tioned for the future.

Mr. Ott (production manager), you have played an important role in this story of success. Quality and availability are the pre-condition for a smooth production. How do you manage to achieve a constantly high availability?

At the time of order, we take care that the new machine is designed with identical motors and drives - or even better - having milling and boring units with identical interfaces.

The fast error analysis through INDIS (INteractive Diagnos-
tics System) enables an exact error detection by the operator. WALDRICH COBURG's tele-
service provides immediate access to the control system. WALDRICH COBURG offers excellent stand-by times as well as a 24-hour service guarantee.

Regular maintenance reduces the stress in production and avoids conflicts with the cus-
tomer. Annual geometrical in-
spections reduce the rework, re-
sulting in higher efficiency. Due to our highly qualified personnel and sufficient spare parts avail-
ability of important electrical components and drive motors, our machines have an average availability of approx. 98%.

Interview-dated 25.08.08
by Will Grabenau

Leipert Maschinenbau is investing

Professional Training

On September 1, 2008, twenty young people started their apprenticeship at WALDRICH COBURG.

20 New Apprentices

10 industrial mechanics, 3 electronic technicians, 3 cutting mechanics, 2 draughtsmen as well as 2 administrative appren-
tices have started their career at WALDRICH COBURG.

Trainers and management welcome the new apprentices.

Investments

WALDRICH COBURG extend their assembly and storage ca-
pacities.

On August 14, after 3 ½ months con-
struction time, a new shop building was officially inaugurated in the pres-
ence of representatives of the local pol-
ts, the construction companies as well as the management and staff of WALDRICH COBURG. The high order volume and consequently the need for more capacity made this ex-
tension necessary.

The new shop building has the follow-
ing dimensions:

- Area 1550 m²
- Length 50 m
- Width 31 m
- Height approx. 15.5 m

This building project, representing an investment of 1.75 Mio. Euro, was exclusively carried out by local companies. Further substantial in-
vestments will follow and show that WALDRICH COBURG is strengthen-
ing their Coburg facility.

by Sven Grosch

New Shop Building

WALDRICH COBURG management, representatives of Coburg and construction companies, Otto Waldrich (former owner, 2nd from right)

The new building was inaugurated on August 14.
Meeting of the Giants

Huge WALDRICH COBURG gantry-type milling machines are used to machine the large components of the world’s most powerful diesel engines driving the giants of the oceans.

Globalisation sets new standards in the design of super-container ships and super-tankers (length 415 m, width 65 m, draught 15.5 m to 35 m – picture 1). These giant ships are being equipped with new powerful main engines (80,000 kW = 110,000 hp) in order to ensure the transport of enormous cargoes in a faster, more economical and more environment-friendly way over the oceans. Even bigger tankers and engines are already being designed.

In general, a slower-running two-cylinder engine consists of three main components: base plate (picture 2), column (picture 3) and cylinder block (picture 4), which are machined separately.

The biggest component is the column; for a 14-cylinder block, it is 24 m long, 5.5 m wide and 5 m high. The completely assembled engine weighs approximately 2300 tons, has the height of a five-story apartment house (15 m) and a quarter of the length of a soccer field (25 m).

The machining of such large workpieces requires huge machines having the following capacities.

Machine Specification
Overall dimensions 42 m x 20 m x 15 m (L x W x H - picture 5). The portal of a gantry-type machine moves in longitudinal direction over the workpiece clamped on the floorplate. This longitudinal travel length is variable and can be extended, if necessary. The machining range is 30 m x 7.5 m x 8 m (L x W x H), the total weight of the machine is 800 tons.

Foundation And Workpiece Weight
To ensure the accuracy of all axes and the proper function of the guideway system, the foundation has an essential importance for the machine. The permissible deflection of the moving load in longitudinal and cross direction must not exceed 0.095 mm/m for a machine portal with 330 tons. The biggest workpieces weigh 600 tons and more. The foundation thickness ranges between 5 and 7 m, depending on the local soil conditions. As a general guideline, the weight of reinforced concrete used for the foundation is 8 to 10 times the machine weight.

Equipment And Machine Requirements
The machine is designed for the complete machining of the workpieces.

The milling power is 105 kW, with a torque of 10,000 Nm. For machining a wide range of engine types, the machine is equipped with 10 to 12 attachments which can be automatically changed and can have an automatic tool changer having a capacity of 200 to 400 tools with max. weight up to 150 kg.

The high level of automation ensures that one operator can operate the machine alone in automatic mode. Observation cameras, controlled via monitor in the operating panel, show the machining area.

All linear guideways are hydrostatic, which guarantees highest cutting performance and ultra-smooth surfaces (Ra < 0.4, roughness 3 microns) during finish machining.

Accuracies
Base plate and column of the motor block are welded parts. High rigidity of machine, ram and attachments is required to machine the guiding surfaces of the cross head. These guiding surfaces have a width of 270 mm and are finish-milled in one cut by means of a milling cutter of dia. 400 mm, the stock allowance being 0.05 mm. The vertical stroke of the WALDRICH COBURG ram of type S20 is 3500 m and the additional special attachment has a length of 1850 mm.

In order to ensure machining over the entire height of 5200 mm, ram and crossrail move simultaneously in vertical direction (Z- and W-axis - picture 5).

On the crossrail - 14.5 m long, weight 80 tons -, the milling head of type S20 (weight 30 tons) travels in transverse direction (Y-axis). The guideways on the crossrail are provided with a compensation curve ensuring a straightness of < 0.055 mm over 7 m milling head motion in relation to the floorplate.

WALDRICH COBURG Gantry-type milling machines are an outstanding product of the German machine-tool industry and are the result know-how and experience over decades.

Currently 25 gantry-type milling machine of the PowerTec series are in order, 11 of them will be used for the two-cylinder heavy engine production.

When purchasing a WALDRICH COBURG machine, our customers trust in our innovative products, technological competence and long-term reliability of their investment.

by Peter Schneuer

Picture 1: Super-Container-Ship of class A1

Picture 2: Base plate

Picture 3: Column

Picture 4: Cylinder block

Picture 5: Gantry-Type Milling Machine with engine part.
Trade Fairs

Trade fairs at home and abroad are an important platform for WALDRICH COBURG to present their innovative products to expert public.

A lively year of trade fairs has started in 2008 with the METAV in Düsseldorf, followed by the Metalloobrabotka in Moscow. In September resp. October we were represented at the IMTS in Chicago and will participate in the BIMU in Milan.

In 2009, we will exhibit at the EMO in Berlin and at the EMO in Milan. For further information about our trade fair schedule, please refer to our internet site: www.waldrich-coburg.de

PowerTec HB in Operation

During an in-house exhibition at company G.M.W. Präzisionen GmbH & Co. KG, the new horizontal boring machine system PowerTec HB was presented to a large and expert audience.(>> is issue 2/06).

On June 11, 2008, WALDRICH COBURG’s latest development was presented under production conditions at the in-house exhibition in the facilities of Burg. The machine system consists of two floor-boring machines and was put into operation by Norbert and Erich Brinkmann (Managing Directors of G.M.W.) and Hubert Becker (CEO of WALDRICH COBURG). The main characteristics of the PowerTec HB are the hydrostatic bearings of the milling and boring spindle and linear guideways.

In-House Exhibition at G.M.W.

Nearly 250 visitors got the chance to see this powerful machining system. In the party pavilion the audience was also informed of the next investment of company G.M.W. Peter Schneyer, Applications Manager of WALDRICH COBURG, presented the portal milling machine PowerTec 6500 AT-M2 recently ordered by G.M.W.

EMO, METAV & Co.

Dr. Kapp Award

Award for Voluntary Social Work

The Dr. Kapp Award supports voluntary social work, and two WALDRICH COBURG apprentices were among the honourees.

The Dr. Kapp Award honours the social work of apprentices. The award is endowed with 10,000 € and is split among 41 honourees. Wolfgang Reß and Tobias Siegel were honoured for their work with the Boy Scout Confederation “Weltenbummler” and with the volunteer fire brigade.

The change of the legal status facilitates the internal processes of WALDRICH COBURG.

With registration in the Commercial Register of Coburg as per July 2, 2008, the legal status of our former company name Werkzeugmaschinenfabrik Adolf Waldrich Coburg GmbH & Co. KG has been changed to Werkzeugmaschinenfabrik WALDRICH COBURG GmbH.

The company with the new legal form assumes all rights and duties of the contractual relationships of the company with the former legal form, which means that there are no changes in the existing contracts. Our VAT ID number will remain the same. Regarding our new tax and commercial-register numbers, please refer to our website. Our customers are kindly requested to use the new company name from now on.

Change of Legal Status

New Company Name

Congratulating the honourees (from left): H. Becker, K. Damaeschke, T. Siegel, W. Reß, M. Henze

by Klaus Damaeschke

by Uwe Herold

by Sven Grosch

by Uwe Herold

by Sven Grosch