GAWGROUP

NEWS FROM THE GROUP imteam

ARTEC – Innovative recycling plant for Ishizaka Group Japan

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KRESTA
Anlagenbau Gesellschaft m.b.H Nfg & Co KG

OSMO
membrane systems

ARTEC

thomas SPEDITION Gesellschaft m.b.H.

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Shortcuts

Curtain coater working stations

Paper manufacturers are increasingly deploying the non-contact curtain coating process also for applications other than in the field of special paper. Since there is no longer contact between the application nozzle and paper web, curtain coating technology is able to impart entirely new functionalities to paper and is already being used in the production of foils, adhesive strips, flexible packaging and labels. Mayr-Melnhof in Frohnleiten, Austria, is operating the first carton machine in the world, deploying the curtain coating process online for the application of a graphic coating. GAW is supplying the highly complex working stations for the curtain coater and a new challenge is imminent: Conventional curtain coater plants come in widths up to five metres – a Chinese paper producer has now ordered working stations for a curtain coater which will be a world first and unique in terms of its width.

KRESTA records double success in Switzerland

KRESTA was able to secure not one, but two new orders in Switzerland: Kresta is busy with a multi-million project near Winterthur, in the energy sector, which is scheduled for completion in April 2011 and includes 375 tons of steel construction, with fabric filters and flue gas ducting. Another project assignment is carried out near Zurich for the pulp and paper industry, involving the reconstruction of a paper machine and installation of equipment.

Banknote paper on GAW plants

GAW coating colour processing systems are also used for special paper such as banknotes, for instance. Such special paper must comply with very special demands: It must be impossible to counterfeit and remain stable even under extreme stress. The surface of the notes is coated with a dirt-repellent layer which is applied directly to the substrate as a thin layer of varnish. Paper thickness and structure remain unchanged. The working widths of the banknote paper machines are up to 2 800 mm, with speeds of 20 – 90 m/min.

Editorial

What will happen if the present crisis in the Euro zone is not resolved? What happens if the 750 billion euro umbrella should fail? These are topical questions impacting over 300 million people. The crisis ruthlessly exposed the fact that we have all lived beyond our means for many years and all Euro countries are now tackling their indebtedness with strictly trimmed budgets. It is doubtful, however, whether the recent savings measures introduced by the Federal government will improve Austria's prospects for a healthy future because the easy route was once again followed and long overdue structural reforms in administration, health, pensions and education were postponed, as they were before. Although the budget will reduce new indebtedness faster than expected, short-term comfort was again given preference over long-term wisdom – the responsible politicians are obviously lacking long-term perspective and they especially do not have the courage to make decisive structural changes sorely needed to ensure the future of generations to come!

The world after the crisis is not the same and what is needed in particular after this sober realisation is the corresponding determination to act. Austria's businessmen are demonstrating on a daily basis what can be done. They simply cannot afford to ignore future scenarios and keep on postponing decisions. An example: Competitive innovation will increase even more in future and good positioning in the global competitive market and clearly conceived innovative performance in all sectors are defining parameters for the competitive strength of a company. If, in view of this, the sales philosophy should be completely revamped as from 2012, the key decisions must be made right now and transformation must begin, otherwise time will run out.

It is the responsibility of every GAW Group MD to have a clear view of the future and to identify and define future challenges for his particular company, but retrospection is of course also permitted – especially at year-end. In this respect, we can look back on a consistently positive assessment for all our companies in 2010. I am particularly pleased to be able to report that ARTEC already has twenty plastic recycling machines in its order books since our entrance into the market, both the traditional type as well as new product lines, and the current new acquisitions in the KRESTA Group were successfully integrated as well. In this editorial, however, I do not necessarily wish to highlight the companies but rather the people themselves – staff and managers who identify with their company and its basic value systems and whom we have been counting on for decades. They are the driving force behind quality, innovative flair and sustainable growth and it is these people in particular whom I wish to thank here for their contributions over the past year, wishing them the energy and good health to continue into the future and its challenges!

Mag. Jochen Pildner-Steinburg

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COMPANY REPORT

KRESTA industries – successful takeover of the German Eickhoff GmbH

In autumn, KRESTA industries took over the German industrial plant construction company EICKHOFF GmbH in Mülheim – a further step in the expansion strategy which KRESTA has been consistently following for many years.

1 Eickhoff Team at KRESTA

With effect from 1 September, KRESTA industries took over 100% of the company shares of EICKHOFF Industrie-Anlagenbau und Montagen GmbH, in the German city of Mülheim, from the German GMH Holding. EICKHOFF GmbH is active in the field of industrial repairs for the chemical and steel industries, where it supplies high quality components for compensators. With a staff complement of more than 140, EICKHOFF generates an annual turnover of 20 million euro.

Successful expansion of the market position

KRESTA industries has a broad base in the strategic business areas of pulp and paper, the petrochemical and chemical industries, the timber industry and environmental technology, where it focuses on large industrial plants. The acquisition of EICKHOFF GmbH enables extension and sustainable strengthening of the existing market position in industrial engineering and power station technology as well as in the chemical industry and in steelworks.

“Complementing KRESTA industries with EICKHOFF GmbH is a further step in our company development, serving to sustainably position KRESTA industries in all sectors of industry”, says Franz Kreuzer, managing partner of the KRESTA Group

LEADING ARTICLE

Pensioner’s paradise Austria – or the great pension lie?

Austria is a country of early pensioners – and the politicians are doing their best to intensify the problem.

Says the London Economist in one of its columns: “A pensionable age of 60 in an ageing society is not a sign of a particularly highly developed civilisation, but a cruel joke at the cost of the next generation”. But what does a country do, faced with an average retirement age of 58 and where the number of so-called “hackler” [long-term pension insurant] is exploding? It is not worried. Why should it be?! As long as the increasing number of pensioners are happy - and there is always that thing called hope – not so?

The youth loses confidence

Even if the politicians never tire of telling us that financing of our pension system will remain sound and our pensions are assured – Hackler arrangements and early pensions are manoeuvring us into a hazardous imbalance and you do not need an expert to show you that the system is bound to collapse in the medium term unless far-reaching reforms are implemented. Because, just as the financial crisis took hold, parliament resolved, four days before the National Council elections, to extend and expand the long-term insurants’ pensions (i.e. “Hackler arrangement”), thereby opening a dangerous loophole for early retirement. Already now, only 9.9% of women and 21.1% of men in the age group 60 to 64 years continue to be gainfully employed in Austria. In total, 73% of the working population are entering retirement before the legal pensionable age!

Another disturbing factor is the rising rush into the Invalid pension. Over 460 000 of the 2.3 million pensioners are classified as invalids – 20% of all pensioners. Quite a paradox, considering the much improved health standards at the workplace and the progress in medical technology.

The consequences to the general public are catastrophic. Austrians are enjoying their retirement for a full 23 years and the taxpayers are expected to make ever increasing contributions to the standard of living of those no longer working. Today already, only 70 percent of pension payments are covered by contributions and especially the post-1970 generations are increasingly confronted by the reality that they will have to finance not only the pension of their parents, but also their own.

Generational fairness?

Anyone who still insists today that the past success of the contributory system guarantees its success into the future shuns reality and denies the generational contract. The high demands on the pension system due to constantly increasing life expectancy, the progressively delayed entry into gainful employment due to longer periods of training and the low birth rates are self-evident and, as a result, 12 billion euro must now already be budgeted for annually to make up for pension shortfalls. Twelve billion that are needed elsewhere already: in education or child care, for instance. Therefore, if representatives of senior citizens continue to insist on protection of vested rights and if our government continues to ignore the challenges to the pension system, the threat of cancelling the generational contract is real and retirement provision in its traditional form may collapse.

Young Social Partners protest

The Young Social Partners of Styria have resolved to, under no circumstances, stand by idle as their future and especially the future of their children is jeopardised. They are determined to intervene and together try to take the “pension system” political football out of the hands of the politicians and place it on a more secure long-term base. They have three concrete demands capturing our attention:

More youth around the negotiating table!

The Pensions Commission has the responsibility of guaranteeing the security of the Austrian pension system in the longer term and its members with voting rights comprise three from the senior citizens organisations against one from the youth – giving the younger generation the voting powers they deserve in terms of the structuring of this system is a matter of solidarity and generational fairness.

Matching the actual to the legal pensionable age!

We are spending more time of our life not working than working. This increase in the effective pension drawing period is a serious challenge to the financing base of the pension system. The government would save 1.2 billion euro simply by raising the pensionable age by one year.

Automation of the pension calculations!

The Pensions Commission is responsible for determining an annual guideline for pension increases but, due to its composition, it is virtually impossible to de-politicise the topic. The long-term stability of the pension system would benefit by the implementation of a model for automatic pension calculations.

At an average of 23 years on pension, Austrians are enjoying more pension years than almost all the other OECD countries but, despite this, it is always the other European governments who are time and again announcing the future necessity of increasing the pensionable age. In view of its economic and social position, it is also time for Austria to face the necessity of honest discussions of the topic. The demographic development of our country does not leave us much time for re-orientation!

Working at an older age

Working people between 55-66 years in %

Iceland	*84,9*
Newzealand	*70,4*
Sweden	*69,8*
Norway	*67,4*
Swiss	*65,7*
Japan	*64,7*
China	*64,5*
USA	*61,8*
Denmark	*60,9*
Greatbritain	*57,4*
Finland	*54,5*
Ireland	*53,4*
OECD	***53,0***
Germany	*48,5*
Russia	*47,4*
Netherlands	*46,9*
Czechia	*45,2*
Spain	*44,1*
France	*40,5*
Austria	***35,5***
Hungary	*33,6*
Slowakia	*33,2*
Italy	*32,5*
Belgium	*30,4*
Turkey	*30,1*
Poland	*28,1*

Source: OECD, 2008

ARTEC – plastics recycling par excellence

The concept of recycling is defined as the renewed use or utilisation of products or parts of products in the form of systematic circulation of materials and energy.

The Upper Austrian engineering company ARTEC is specialised in the manufacture of recycling plant for plastics, in particular integrated recycling systems for application in factories producing plastic foil.

The following chapters roughly describe the ARTEC plastic recycling plant process in order to provide an overview of its operation. Refer to Figure 2 for the operation of the plant as a whole

Step 1: Material shredding

A conveyor takes the material to be processed to the cutter, where the material is shredded by rotating knives and its temperature brought to the processing temperature suitable for the specific material. These temperatures are generally over 100° Celsius, where the water will evaporate and the shredded material dries out. As soon as the material in the cutter has reached the required operating temperature, it is pushed into the helical screw by a variable pusher which also controls the fill level of the extruder screw. This is optimised through the special patented interface between the cutter and the extrusion unit. See Figure 3.

Step 2: Melting of the material

The temperature of the processed material is raised to a defined melting temperature in the extruder screw and homogenised. The extruder screw has different heating zones to ensure even heating of the plastic.

Step 3: Cleaning

1) Solids contamination

Solids contaminating the material may be foreign matter such as paper, wood, mineral substances or similar. Such contaminants are intercepted almost completely by the melt filter strainers.

2) Gaseous contamination

Gaseous contaminants comprise gases created by moisture in the material and the resultant water vapour, or vapours created by markings on the processed material as the colour evaporates at a certain temperature. Different designs in the helical screw region ensure that these gaseous contaminants are optimally extracted:

S	no vacuum unit
V	simple vacuum unit
DV	dual, mutually independent vacuum units
DHV	dual high performance vacuum; two mutually independent

Step 4: Granulation concludes the process

After the melt flow has passed the filter unit, it is conveyed through a perforated plate and then, depending on material and machine type, it emerges in its final form after hot-cutting, under water granulation or strand granulation.

Figure 5 schematically shows the division of plastics and their granulation.

Example: ARTEC "V" recycling plant

The extruder comprises an extruder screw in two halves. The pre-shredded material from the cutter is introduced into the front section of the extruder by centrifugal force, from where it is conveyed towards the conversion zone through the extruder movement. The conversion zone includes an area where the depth of the helical screw is reduced to a minimum, which ensures homogenisation of the material. The screw depth thereafter suddenly increases again which relieves the stress in the material. This stress relief releases the air and fluids from the plastics stream. The vacuum unit, which draws off this free air and water vapour, is located in this zone.

The density of the melt is thereafter increased again and it is transported on to the metering zone.

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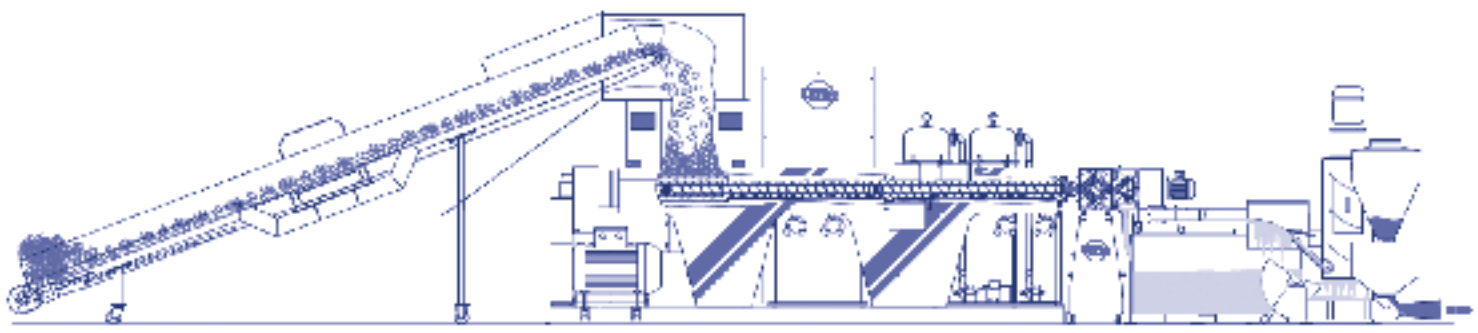

2 ARTEC recycling plant

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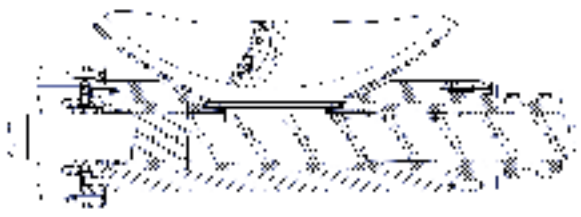

3 From the cutter to the extruder screw

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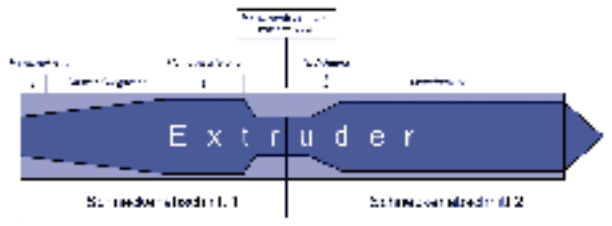

4 ARTEC Extruder

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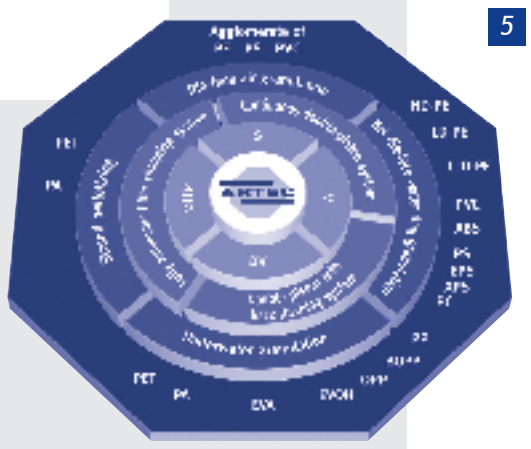

5 Granulation system

GAW – dispersing units as body types

The body unit represents a significant contribution to the increase in operational reliability and flexibility in respect of maintenance and service, also offering the option of schedule-independent service.

Body units are identical to production units and of the same quality as the original units which are generally in operation for decades. Body units are not fitted with the dispersing elements such as rotor/stator and upper/lower propeller, i.e. without the conventional production-dependent wearing parts; they are particularly advantageous when the operational reliability needs to be increased.

Reduction of downtime

Experience shows that, after unexpected damage such as the presence of foreign metallic material or mechanical defects such as bearing trouble or malfunctioning, it is often impossible to repair the unit as fast as required. On the one hand, the required spares and wearing parts are often not (or not all) in stock at the customer's (increasing tendency to reduce maintenance resources) and, on the other hand, a full overhaul of the dispersing unit including bearing replacement, bearing seat rework and centring of the shaft (or the manufacture of a new shaft) and the execution of a trial run may take a very long time. If a body unit is in stock, however, the downtime is reduced to the time it takes to disassemble and reassemble the unit.

The GAW body units are fully compatible with existing GAW dispersing units and are therefore 1:1 interchangeable – all things considered, a significant contribution to the increase in operational reliability and flexibility in respect of maintenance and service.

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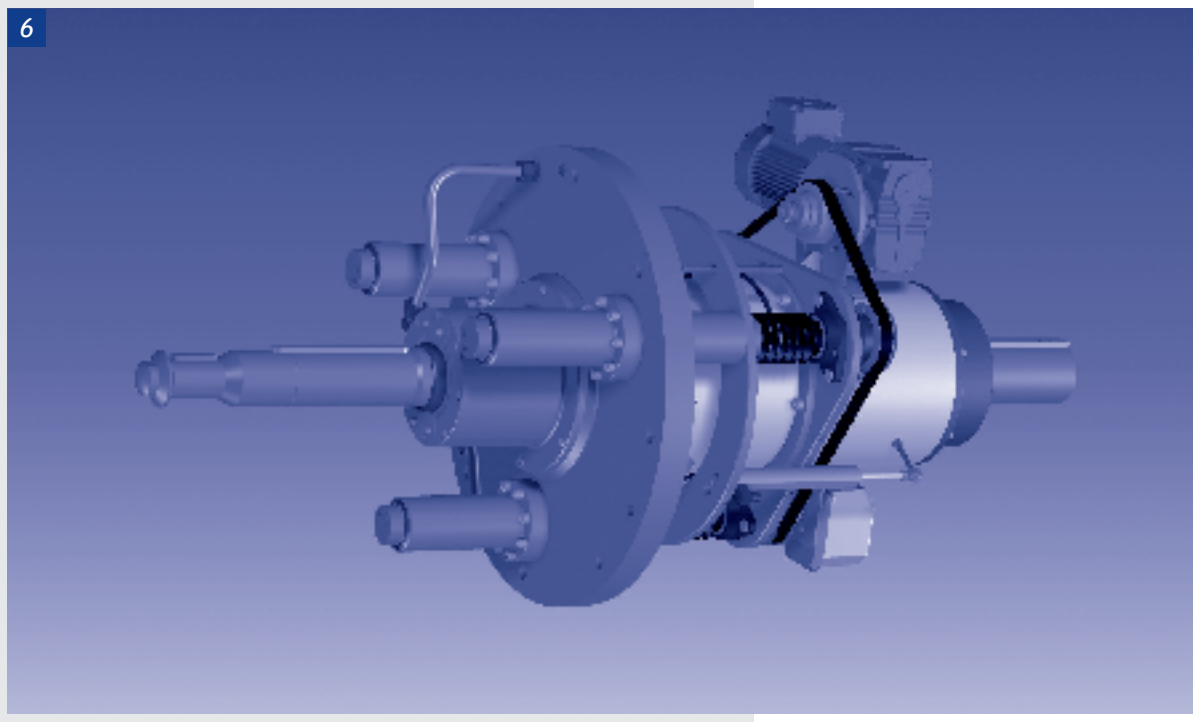


6 Dispersing unit as body type

PROJECTS

GAW supplies a plant for paper factory in Rumania

A Rumanian paper factory is equipped with enzymatic starch preparation and a workstation and feeder for the size press.

7 Vrancart paper factory

The VRANCART paper factory has been in the business of producing corrugated cardboard for 30 years and is presently one of the most important manufacturers in Rumania. In Adjud, approx. 3 hours by car from Bucharest, the company has one of the largest production capacities in the country, producing about 82 million square metres of corrugated cardboard per annum.

Specially established centres for the collection of used paper are sending 25% of all used paper collected in the country to the Vrancart paper factory for recycling.

GAW has now, for the first time, been commissioned to supply the full enzymatic starch preparation and workstation and the feeder for the size press.

GAW is furthermore responsible for supervision of the assembly and for commissioning and training. Delivery is scheduled for February 2011.

The process

The starch is delivered to the factory in 1 000 kg big bags, where it is offloaded and stored in an 8m3 hopper. This hopper has a vibrating floor to enable continuous dosing into the slurry tank, where the starch is prepared with a solids content of 30%. The enzymes are dosed into the slurry tank using a dosing pump. The starch slurry is then conveyed into the converter via a pre-heating station by means of an eccentric screw pump. After the degradation process (having reached the desired viscosity), a speed-controlled eccentric screw pump pumps the pre-heated starch slurry through the GAW jet cooker, where the starch is cooked and the enzymes are deactivated, into the starch supply tank. On entering the supply tank, the starch slurry is continuously diluted to a solids content of 20%. The supply tank has a double jacket to allow both heating and cooling of the starch slurry. The 20% starch slurry is thereafter diluted to 7-8% with hot water in the automatic GAW dilution station and continuously pumped to the two working tanks at the size press (one each for the top and bottom sides of the paper web).

GAW dispersing units impress the customers

The GAW dispersing units are the centrepieces of any plant for the preparation of pigments and coating colours.

Dispersing units remain highly appreciated by our customers - whether in the preparation of complex product formulations for top quality coating paints or for the dispersing of pigment slurries with high solids content.

Preparation of thermal compound

The most modern and economical production facilities for thermal paper are found in Kehl, Germany, where they are operated using the latest production and coating technologies including, among other, the high performance GAW dispersing machine which was supplied 15 years ago and continues to provide service at a working volume of 4 000 litres. In autumn, the Papierfabrik August Köhler ordered a new dispersing machine from GAW, to be integrated into thermal compound preparation as an extension. The dispersing unit operates on the basis of the proven rotor-stator principle, allowing relatively short batch times to be scheduled without compromising product quality in terms of particle size.

Energy-efficient dispersing

KANZAN is a new GAW customer also operating in the thermal paper segment. It is part of the Oji group of Japan and has a staff complement of 20 000 and an annual turnover of approx. 8 billion euro. After highly satisfying results with the GAW laboratory mixer, they placed an order for the new CDS (Combined Dispersing System) equipment:

The dry product is introduced and finely distributed in the liquid phase with a rotor/stator overlap of 0% and a well-developed infeed vortex. Dispersing at high shear rates then follows in combination with the GAW-VST , continuously variable up to 100% overlap. The dispersing agent volume is therefore reduced, whilst the slurry stability and solids content remain high. The new rotor/stator geometry also requires less power, since the power consumption is only as high as actually required over the period the batch is prepared.

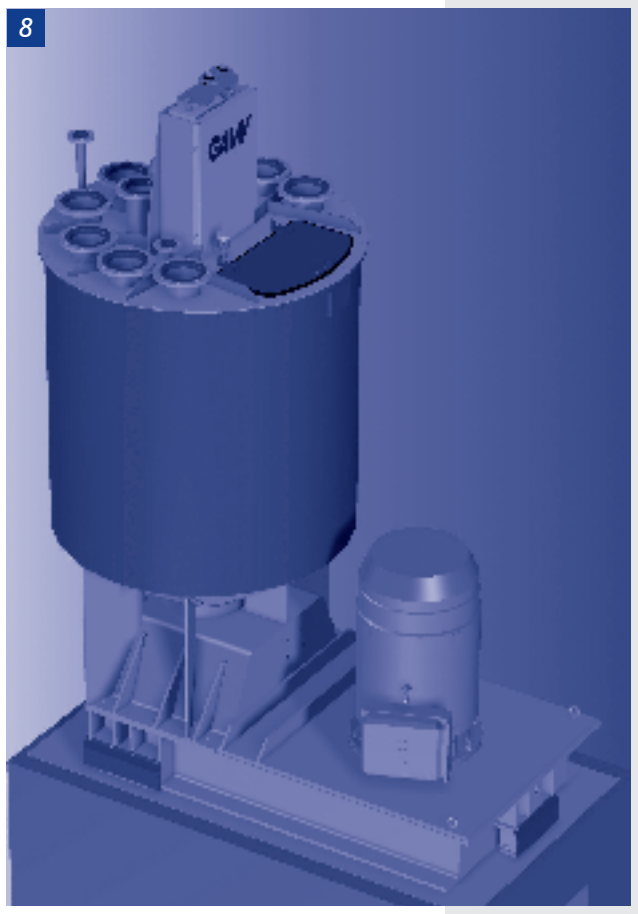
Thermal paper is a type of paper used for thermal printers, coated with a heat-sensitive layer of pigments, binders, colour pigments, developers and ancillary substances on the printing side.

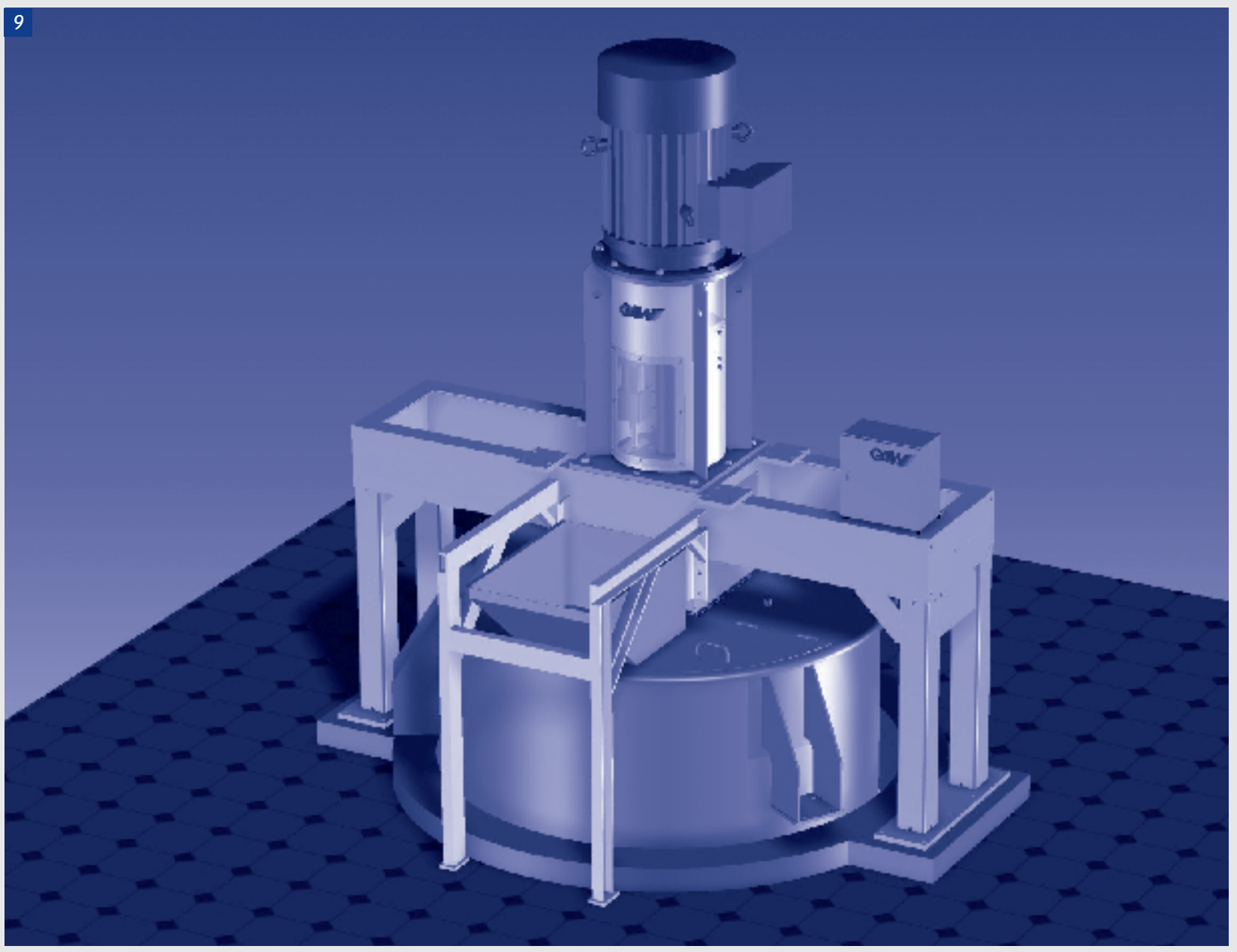
The thermal printing process generates a colour image through the direct application of heat onto the colour reactants in the paper. The applications today include

printing of cash slips, receipts, parking tickets, admission and bus tickets, medical examination protocols and all types of barcode labels (e.g. on self-service fruit and vegetable scales).

8 Combined dispersing system for Oji group of Japan

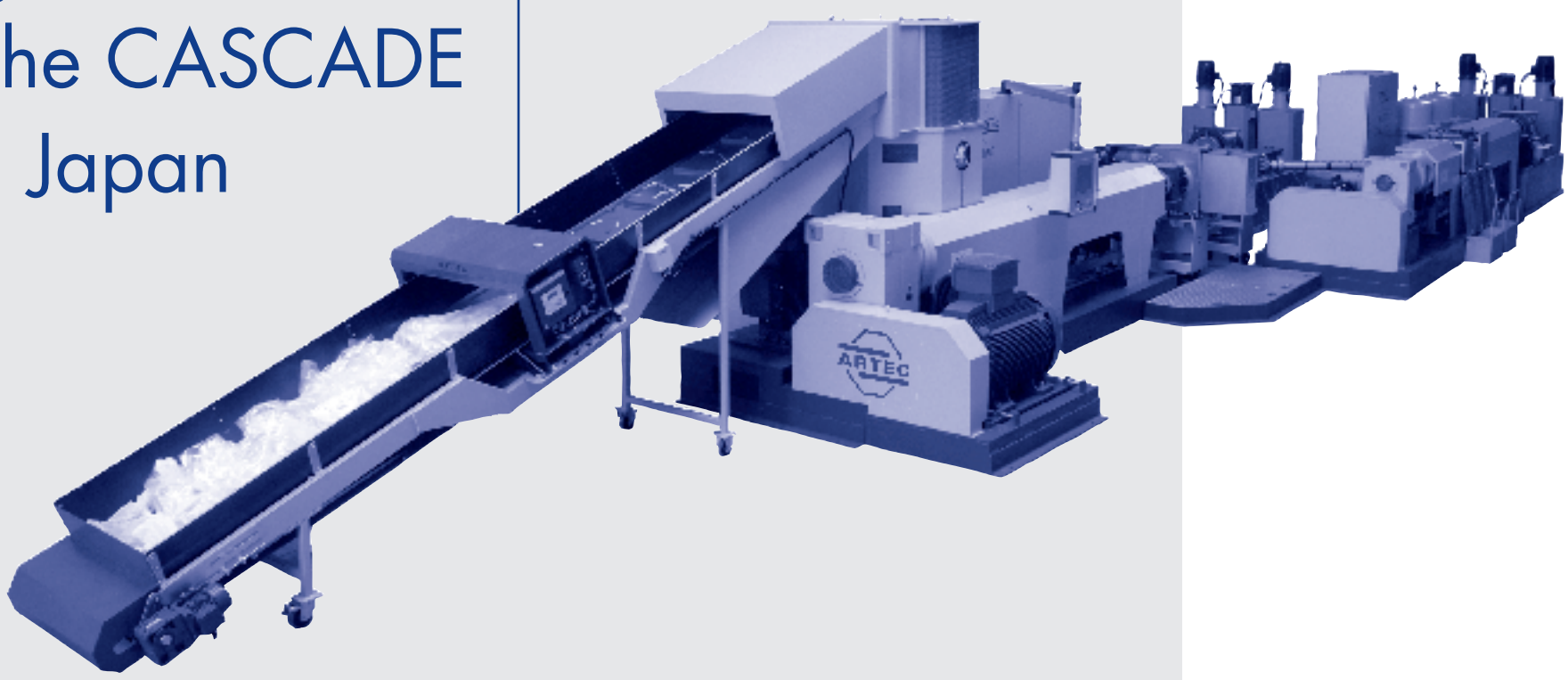
9 Combined dispersing system for August Köhler paper factory





ARTEC – successful commissioning of the prototype for the CASCADE product line in Japan

CASCADE simplifies recycling of materials with varying characteristics and levels of contamination.



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Since the spring of 2010, the new innovative product line CASCADE has been included in the ARTEC machinery GmbH portfolio. The first manufactured and delivered plant of this type has now been commissioned (at the beginning of October) by ARTEC technicians in Japan. The plant was ordered by the Ishizaka Group and has been installed at Kumamoto on Kyushu, the southernmost island on the Japanese chain of islands.

Saving energy through flexibility

The main advantages of the CASCADE type of plant lie in its capability to process a broad range of materials and its high flexibility since only those parts of the plant are operating that are necessary for processing of the material. Whilst the proven ARTEC recycling plants are designed as single screw extruders, the CASCADE design has two extruder stages in series, with an intermediate filtering stage. The first extruder serves to melt the material whilst the second extruder incorporates a dual de-gassing stage (DV) for de-gassing the material. Downstream of the filter unit, the process features a melt junction where the melt can be routed either to the second extruder (cascade operation) or sent directly for granulation. This process allows the customer to save considerable energy by not heating or operating the second extruder stage if the particular material does not require de-gassing.

If, however, the materials to be processed contain substances which emit gas during melting, which must be extracted, the melt junction is switched to route the material through the second extruder and its dual de-gassing stage. A second, separate granulation unit is arranged downstream of this extruder.

To summarise therefore, it is possible to operate either the “short line” comprising cutter-extruder-filter-melt junction-granulation or the “long line” comprising cutter-extruder-filter-melt junction-cascade extruder-dual de-gassing-granulation – in short, a machine that adapts to the material!

Low development costs despite high innovation

The development costs for the innovative CASCADE concept were kept low by designing in existing ARTEC components, tried and trusted in many installations worldwide. ARTEC sees an enormous market potential for CASCADE, especially for companies recycling different materials with varying characteristics and levels of contamination. This expectation has been confirmed following the highly positive reaction from customers to whom the system has been introduced already.

11

10 Recycling plant CASCADE
11 Start up

OSMO – optimal utilisation of resources

Selectively operating membrane processes enable recovery and re-use of substances contained in water.

Although conventional processes for the treatment of waste water can remove the waste water load simply and at low cost, it is not generally possible to recover and re-use the substances removed from the waste water. It is a different matter, however, with selectively operating membrane methods such as those used in the Süd-Chemie AG Heufeld plant since 2005. The waste water is cleaned here using state-of-the-art reverse osmosis technology with the result, firstly, that the cleaned water is returned to the production cycle and, secondly, that pure sodium nitrate is recovered for commercial use.

The Nitrea® project

Nitrea® is a combination of membrane technology and concentration, with downstream crystallisation, patent-protected by Süd-Chemie AG. Based on its sustainable combination of processes, the project was supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. The construction of the membrane plant was awarded to OSMO Membrane Systems, who had supplied the pilot plant already and guided the pilot processes.

The installation of the high pressure reverse osmosis system at Süd-Chemie was a first for OSMO since a plant with these technical dimensions had never been implemented before.

The pre-treatment and cleaning process stages initially strictly separate all the substances contained in the water which may be undesirable in the re-use of the sodium nitrate. The purpose of reverse osmosis here is to increase the concentration to a maximum since the energy effectiveness of the membrane technology is about an order of magnitude better than that of the evaporator. Against this background, the cost-effective tape-wrapped module technology has been developed further to achieve operating pressures up to 120 bar.

Another function of the plant is to remove the nitrogen loading whilst maintaining strict in-feed criteria. Especially with low ion concentrations, conventional membrane technology often reaches its limits because the molecular structure of especially nitrate and ammonium makes these substances very difficult to separate. With the installed technology, however, the generated permeate after the last reverse osmosis stage is of such good quality that it is used as feed medium for the existing VE water plant. The remaining conductivity is less than 50 µS/cm which is clearly below the conductivity of the well water currently used.

Nitrea® is convincing – based both on ecological and economic considerations

Deploying the Nitrea® process also makes sense in terms of business economics, as was demonstrated in a direct comparison with competing treatment processes.

Although the conventional biological treatment of waste water clearly requires lower investments, the lack of the carbon source in the waste water would have resulted in comparatively higher operational costs. A purely thermal treatment could be excluded considering both the investment and operating cost aspects.

Key data for the waste water treatment plant (reverse osmosis plant)

Nitrate concentration - feed	*1 - 100*	*g/l*
Nitrate-nitrogen concentration in the permeate	*< 50*	*mg/l*
Ammonium-nitrogen concentration in the permeate	*< 25*	*mg/l*
Sodium nitrate retention	*> 99,9*	*%*
Nitrate concentration, high pressure reverse osmosis	*> 180*	*g/l*
Working pressures	*40 - 120*	*bar*
The technology can be transferred to other inorganic substance systems		

Reverse osmosis

Reverse osmosis is a pressure-driven osmosis process. Membrane separation processes are physical processes which selectively separate small particles, molecules or ions by means of a membrane. The sizes of the separated particles are in the region of some microns down to one nanometer.

Reverse osmosis is used to separate salts, or ions, from mainly aqueous solutions. Reverse osmosis is used to increase the concentration of solutions or to separate aqueous components.

Semi-permeable membranes are used for this purpose. These have the property of letting through the aqueous component whilst blocking a large portion of most ionic components.

Semi-permeable membranes are solution diffusion membranes. Contrary to the porous membrane used for microfiltration or ultra-filtration, the solution diffusion membrane has no holes. Here, the separation effect is due to the charge carriers in the membrane and resultant attraction or repulsion by the electrical charge. This basically transports the permeating component through the membrane in three steps:

1) Absorption at the membrane

2) Diffusion through the membrane

3) Desorption from the membrane

The charge on the other hand repels (equally) charged ions. This means that polar substances such as water or other polar solvents exhibit a high through-flow, whilst large charged ions are mostly held back.

Depending on the membrane used, the rejection for table salt, for instance, is 97% - 99.5%. The rejection therefore varies with both the membrane used and the medium to be separated. For many mixtures of substances, it is imperative to carry out laboratory tests and possibly even tests in a pilot plant before large scale implementation.

FOCUS ON

Peter Stuffer – GAW congratulates on 50 years of service

It is not simply matter of course that someone should spend a long career with only a single company, but it is also proof that spending a few decades with GAW can be rewarding and shows that the many years of professional experience of the members of staff is highly appreciated.

Since it is a rare occasion for someone to look back on half a century of working for a company, GAW had more than enough reason on 1 September this year to raise the glasses to a highly appreciated colleague. Without a doubt, Mr. Peter Stuffer is an important part of the exciting and successful GAW history and each left his mark on the other:

After completing his occupational training as a toolmaker and machine fitter, Peter Stuffer completed a second apprenticeship as technical draftsman and, in those days already, gained first and important experience in process technology, especially since GAW ventured into the field of small chemical plant construction for the regional paper and cardboard industry back then.

He was appointed as group leader in the Design Department in 1969 and advanced to works manager in 1972. In the course of the GAW expansion and its entry into the global market, Peter Stuffer increasingly concentrated on the fields of technology, development and sales and is globally recognised today as an expert in matters of paper production and beneficiation, as evident by the virtually innumerable industrial plant which he has planned and the machines and processes which he developed. He is also the proud holder of the Kaplan medal of the Austrian Inventors Association and an award by the Styrian province for special services to the region.

Through his enormous professional knowledge and ongoing tremendous personal engagement and commitment, Peter Stuffer remains a very valuable GAW member of staff to this day, for which imteam once more extends its heartiest congratulations!

12 f.l.t.r. Peter Stuffer, Martina Fahnler

13 GAW – Expo Shanghai

14 ARTEC – Plastic Fair Düsseldorf

15 KRESTA – Focus on pulp & paper fairs

Great customer interest at GAW Group trade fair presentations

GAW Group demonstrates its impressive strengths through global trade fair presence. Apart from the Expo Shanghai, we also exhibited at Europe's major trade fairs.

GAW in the Austria Pavilion at the EXPO world fair in Shanghai

On the 13th of September GAW, together with representatives of the Jebsen company, invited members of the Peking, Shanghai and Changsha Design Institute to a VIP visit to the Austria Pavilion on the impressive EXPO Shanghai site.

In an interactive exhibition including multimedia presentations, the visitors were able to experience Austria with an array of their senses.

With a site of more than 5 square kilometres and 630 000 visitors per day, the world exhibition is history's largest and most visited. Approximately 73 million people have seen this exhibition of superlatives.

Strong KRESTA presence on this year's trade fairs

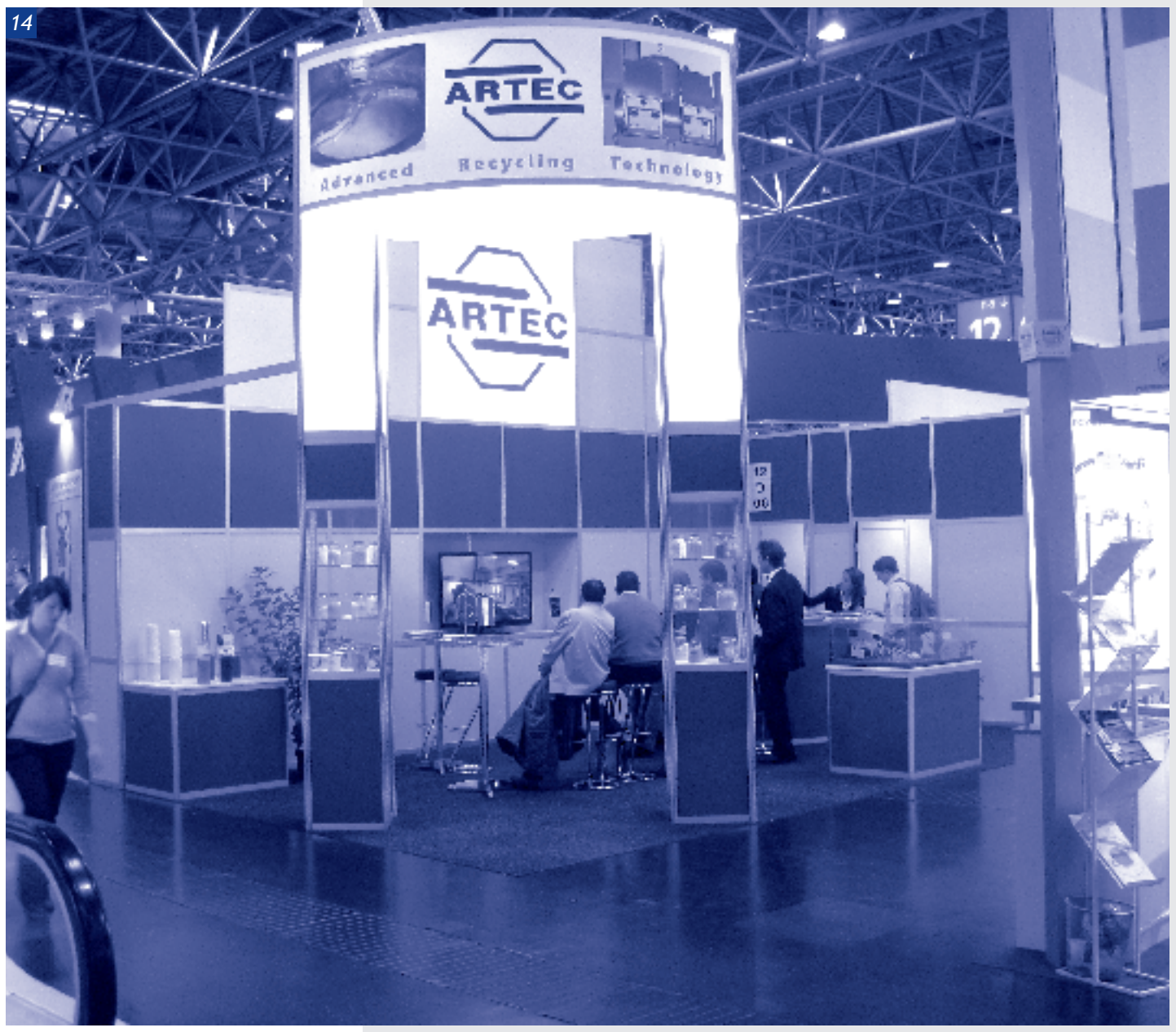
During the year, KRESTA industries had a strong presence especially on fairs with a focus on the pulp and paper industry such as the IMPS in Munich, the Papierfachtagung in Graz, MIAC in Verona, the PTS Symposium in Munich and the Papfor in St. Petersburg.

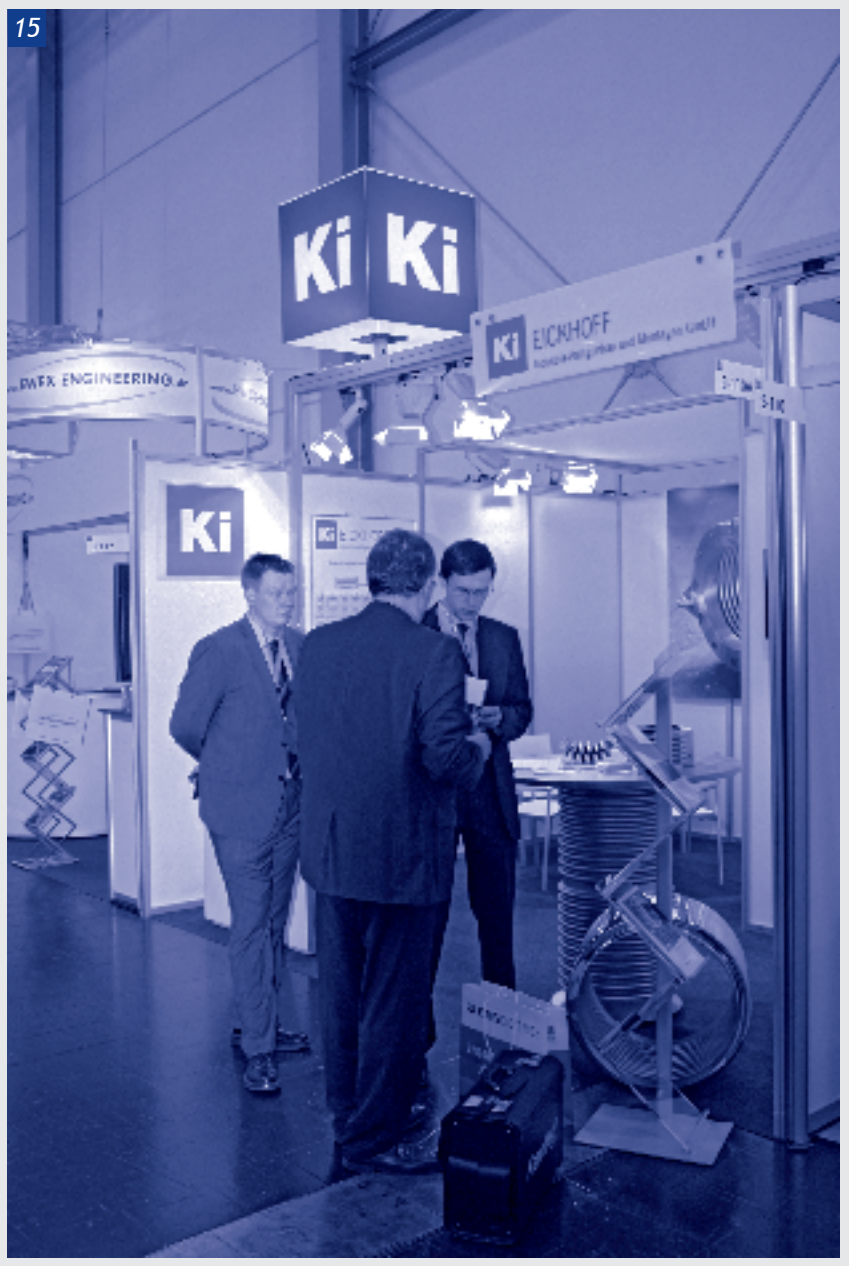
The PulPaper in Helsinki was on the schedule for June. The highlight of this year's "Trade fair year" was the Zellcheming in Wiesbaden, where management extended invitations to a press conference followed by a customer reception.

KRESTA also participated this year, for the first time, in the trade exhibition within the framework of the VGB Congress 'Power Plants 2010' in Essen.

Presentation of the CASCADE solution on the Plastics Fair in Düsseldorf

ARTEC had a prominent presence at the world's largest plastics fair in Düsseldorf/Germany K2010 with over 3 100 exhibitors, where it presented the standard recycling plant programme, with the focus on the latest "CASCADE solution" and "Green Line" developments. The visitors and customers showed an enormous interest in the new developments.





The KRESTA summer festival

The KRESTA summer festival was a great success once again in 2010. Franz Kreuzer is elated over the awards received by the Carinthian province.

16 Front f.l.: Franz Kreuzer, Erika Kreuzer, LH Gerhard Dörfler
Behind f.l.: Martin Kreuzer, Philipp Kreuzer

The annual KRESTA industries summer festival was well-attended this year again. Over 200 of the Group's staff welcomed the opportunity to get to know one another better and exchange views and experiences.

The climax of the festival this time was the award bestowed on MD Franz Kreuzer by LH Gerhard Dörfler – the Großes Ehrenzeichen [honorary medal] of the Carinthian province.

Kreuzer founded the KRESTA company at the age of 26 already and proceeded over the next 20-odd years to develop it into the international KRESTA industries group of companies. For more than ten years, Franz Kreuzer has been regional Economic Chamber ombudsman in Wolfsberg, co-founder and initiator of the Lavanttaler Wirtschaft society as well as on the board of the Industrialists Association in Carinthia and in Styria.

GAW on a Barcelona visit

Barcelona with its many attractions is always worth another trip. The GAW company excursion turned out a resounding success in all respects.

17 Barcelona

The day of arrival was already packed with highlights: after a brief stopover on Majorca, the next destination was Barcelona, where everyone embarked on a guided tour of the city directly on arrival. Suitably hungry and thirsty after settling down in the hotel, the 36-member GAW group invaded the restaurant "Palermo" where, accompanied by excellent Paella and other Spanish specialities and, not to forget the Sangria and Spanish red wine, the first day was brought to a jovial close.

On the following days, Barcelona was explored in small groups, with chance encounters time and again at attractions such as the Gaudi church, the Park Güell, the Olympic village or the La Rambla etc.

These three eventful days provided "first impressions" of Barcelona and the realisation that it is worth a trip even in late autumn – with its unique location on the coast this city, steeped in culture, also spoils its visitors with a very pleasant climate.

COURAGE!

Especially today's ruling political generation lacks the courage to implement decisive changes in attitude.

The Federal Congress of the Young Industry took place in Graz in October under the simple, but hauntingly urgent motto "COURAGE!" Why do we no longer have the courage to make decisions, to leave our comfort zones in order to do what is necessary?

The speakers were in a league of their own – from participants in extreme sports to war journalists – and they in actual fact delivered a blow with each of their statements to the present political and social mainstream – especially in Austria.

Acting, structuring and accepting own responsibility – these are virtues which have been lost and have been substituted by waiting, scheming and postponing. As the speaker Arndt Traindl put it rather aptly: "We are all balancing on the tip of the needs pyramid and now even expect someone to build a handrail for us to hold on to!"

But other quotes were equally apt and the question arises - do we simply look on or try to take matters into our own hands:

"What is missing in Austria is the education that teaches us to find the courage to implement things and to contradict the authorities, if we are convinced they are on the wrong track."
Friedrich Orter

"We have an advantage over chimpanzees: we have a cerebral cortex. We can suppress fear and therefore have better options than to simply take flight."
Arndt Traindl

"In Austria, submission to authority is a much stronger impulse than moral courage."
Heide Schmidt

"People without courage adapt to the circumstances. The courageous try to change them. This is why we owe all progress to the actions of courageous people."
Heinz Kurz

"The Sarrazin case demonstrates to the politicians what will happen if someone has an opinion out of line with the mainstream. This does nothing for the courage of politicians."
Ernst Sittinger

"A boat in the harbour is safe. But boats were not built for this purpose."
Chibueze Udeani

GAW on the victory rostrum at the Crocodile Trophy 2010

Urs Huber in the GAW jersey wins for the second time

On the beach of Cape Tribulation at midday on the 28th of October, 66 competitors rolled across the finish line –each one of them a winner. They had conquered 1 200 kilometres, 12 000 metres altitude differences and umpteen hardships through rain forest, bush country and outback, with potholes, sand, heat and wind. The Cape of Tribulation was therefore the apt place to finish the 16th Crocodile Trophy stage race. Although under the cloud of a tragic death and not without considerable turbulence, the race for the coveted boomerangs was again characterised by its top class: “In respect of the quality of the cyclists in the lead, this has probably been the best and also most adventurous trophy of all times”, concludes the organiser, Gerhard Schönbacher.

The same Podium as in 2009

In the final stages, the trio of last year was in the lead again. “I am delirious to have won the trophy a second time”, says overall winner Urs Huber. In a blistering first stage, the Swiss rider managed to gain sufficient head start before bringing his uphill qualities into play in the final time trials and ultimately beating Bart Brentjens of the Netherlands, who had achieved three stage wins, into second place. The Belgian Mike Mulkens, although riding extremely consistently, again did not manage to win a stage but is delighted about his sensational defence of the third place on the podium.

Hans and Abby took it all

In the ladies section, the Australian Abby McLennan took the honours – winning all nine of the evaluated stages. She was followed by Lauretta Howarth in second and Nancy Carceres in third place. The expat Austrian Hans Dielacher, returning to his adopted home Byron Bay on the Gold Coast, achieved maximum points in the M3 class and achieved 14th place in the general classification.

Estonians dominate the team scores

Led by the multiple Tour de France stage winner Jaan Kirsipuu, a three-man Estonian team topped the team scores. The superstar was also in the lead from the first day to the last in terms of the general classification for the Masters.

Crossing the finish line with grazed arms and tired knees but with great memories, many contemplated the next time and said: Never say never!

18 third from the rigth: Urs Huber - winner of the Crocodile Trophy

Foto: Crocodile Trophy 2010

People

Raj Venugopal
GAW Key Account Manager

Raj Venugopal, born in India, has been strengthening the Sales Department as Key Account Manager since July 2010. The focus of his responsibilities is presently on developing the Indian market and on supporting existing and new customers in the second most populous country on earth. Raj Venugopal already has more than 20 years of professional experience in the field of international marketing and sales under his belt and has in the past been working for renowned companies in the technical field in India, Dubai, Germany and Austria.

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Andreas Steinhöfler
GAW Sales

It is the goal of the GAW young talent development programme in the long term to fill specialist and management posts from internal ranks and Andreas Steinhöfler, HTL [technical college] graduate in mechanical engineering, has been participating in this since spring 2009. After successfully completing the training courses in construction, manufacture, assembly, commissioning and procurement, Mr. Steinhöfler has been active for several months already in project management whilst also attending a university course on Paper and Pulp Technology, all of which will serve him well towards his professional goal of independently practising as a sales engineer.

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Walter Hummel
ARTEC Management,
Technology and Sales

In his position as Managing Director, Walter Hummel is in charge of Technology and Sales at ARTEC.

Walter Hummel, one of the co-founders of the company in 1998, has since built a reputation as an innovative technical expert with a wealth of knowledge in plastics recycling. In his position as Sales Manager, Mr. Hummel travels the globe to discuss individual needs with customers and to offer suitable solutions.

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