



From woodyard to finished flakes and chips:

Hombak expands the Siempelkamp product range with front-end technology

By Ralf Griesche

Effective June 2009, a new company belongs to the Siempelkamp Maschinen- und Anlagenbau GmbH & Co. KG. The Hombak Maschinen- und Anlagenbau GmbH based in Bad Kreuznach, Germany, has enriched the product range of the Group with products for the front-end area which are used in the production of wood-based boards. The company's program has been well established on the market. What is important for our customers is that now even more services are readily available from one source. The Siempelkamp portfolio moves towards completing itself!

Wood shaving mill

With this acquisition Siempelkamp is setting another milestone towards complete plants for the wood-based products industry. The company can supply complete production lines from the woodyard to finished laminated furniture boards – all from one source. Thanks to Hombak, Siempelkamp can now offer machines for material crushing and shredding, material grading and screening, as well as conveyor systems and bunker installations.

Hombak, founded in 1924, started out with the development and production of joinery machines. In 1956 the company supplied the first flakers to a thriving particleboard industry. Hombak consistently expanded in this area by developing individual machines to complete lines for the flake, strand, and chip processing.

46 employees generated a sales volume of approx. 6 million Euros in 2008. The company's experience of many decades guarantees high quality for flaking processes as well as for the production of wood chips: The portfolio includes drum flakers for pre-cut timber, universal drum flakers, drum chippers, rest wood shredders, and butt end equalizers. For the reduction of recycling wood of all kind,



Aerial picture of Hombak

Hombak developed the hammer mill: The processed material can be used for further processing or for boiler fuel. Wood shaving mills have recently been added to the product range. They process logs of up to 3 m (9.8 ft) in length.

A feature of the reduction technology by Hombak: "Our knife clamping system as well as the improved feeding of wood optimize the production of chips. Our customers profit from high efficiency, high-quality chips and last but not least low wear costs," explains Heinz Richterich, Managing Director of Hombak Maschinen- und Anlagenbau GmbH.



Debarker



Chipper

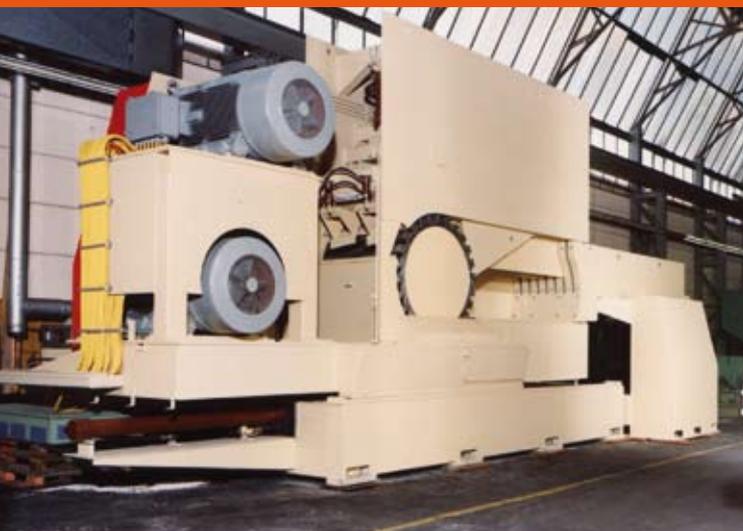
Separation technology: exact and gentle

In the area of separation technology, Hombak's screening equipment provide for a gentle handling of the material to be screened as well as for efficient separation into the required fractions. Gyratory screens, drum screens, and disc graders kill two birds with one stone: they provide a high degree of separation as well as gentle screening. According to the requirement, different screening techniques are used or combined with one another. New procedures allow the screening of the incoming material into homogeneous fractions according to their size and weight.

In the area of conveyor belts Hombak focuses on custom-fit designs according to customer requirements. Custom-made conveyor systems which are tailored to the customer are core

elements of each Hombak line. They guarantee low maintenance and trouble-free production. "We create an optimal layout which is backed by three quality factors. The first factor includes an exact analysis of the line capacity, the second the integration of existing machines provided by the customer, and the third a fine-tuned cooperation with the end-customer," says Heinz Richterich.

With regard to gentle processes, Hombak's bunker installations focus on the gentle handling of the incoming material. Exact dosing allows consistent material feed to downstream aggregates. The Hombak metering bins guarantee the safe discharge of extremely long strands which tend to plug. An exact dosage is achieved by using a frequency-controlled discharging transport belt and spiked rollers.



Left: Largest flaker
Right: Universal drum flaker



Left: Knife-ring flaker
Right: Rotor



Metering bin

In-house developments with consistency

No matter which Hombak product, all machines are developed and continuously optimized at the Bad Kreuznach location. The manufacture is based on a high quality standard of which the foundation is skilled personnel and quick and qualified service. Concerning customer proximity Hombak is in line with the demands of the Siempelkamp Group! More than 5,000 delivered machines and over 3,000 customers worldwide are the solid 'dowry' that the Bad Kreuznach-based specialist for wood reduction technology brings into the Siempelkamp family.

Hombak will continue to market its products and services under the Hombak name. The completion of the manufacturing program will take priority in the near future. Next to the environmental and recycling industries, Hombak will focus on OSB production and OSB handling. With the additional know-how and support of the Siempelkamp Group, Hombak will continue to fine-tune existing machines and develop new machines for the front-end area.

Hombak highlights: Range of applications and customer benefits

	Range of applications	Supply material	Customer benefits
Universal drum flaker	discontinuous flaking of different types of wood with a drum flaker	logs of random lengths, cores, slabs, and edgings	<ul style="list-style-type: none"> during flaking the logs are kept in place with weights excellently suited for the production of flakes with very narrow thickness tolerances and very low percentage of fines and splinters
Drum chipper	continuous production of wood chips	logs, residual wood, and wood wastes	<ul style="list-style-type: none"> large drum diameter, screening surface equipped with additional cutter bars → high quality chips high degree of operational reliability due to toothed draw-in rollers with surface armoring → long service life the counter knives are designed for multi-lateral use and can be reground
Drum and gyratory screens	grading and screening of green and dry material	<p>Drum screen: strands, chips, flakes, sawdust, extremely long flakes (OSB and wafers)</p> <p>Gyratory screen: chips, flakes, bark, peat and compost as well as sawdust</p>	<p>Drum screen:</p> <ul style="list-style-type: none"> precise grading as well as gentle screening due to large drum surface and special lining considerably reduced idle times due to easily replaceable screen linings in frames <p>Gyratory screen:</p> <ul style="list-style-type: none"> maintenance-free, rubber-spring universal joints fast and easy replacement of the screen frame → long service life almost self-cleaning and vibration-free mode of operation
Metering bins	intermediate storage of strands, wafers, and similar materials both green and dry	strands, extremely long chips, especially OSB	<ul style="list-style-type: none"> safe discharge of extremely long strands which tend to plug exact dosage by means of the frequency-controlled discharging transport belt and spiked rollers
Hammer mills	reduction of recycling wood of all kind (used for further processing or for boiler fuel)	pallets, crates, boxes, scrap wood, wood residues, construction timber waste, bushes, branches, packing materials, roofing cardboard, etc.	<ul style="list-style-type: none"> top of machine housing can be opened hydraulically for easy change of the hammers, screens and counter knives
Rotor Debarkers	debarking of logs with a length of up to 6 m and wood with a diameter ranging from 50 to 600 mm	logs	<ul style="list-style-type: none"> simple, robust construction high operational reliability variable agitator speed simple operation
Knife-ring flakers	production of core and surface layer chips for the particleboard industry	chips	<ul style="list-style-type: none"> easy knife-ring replacement excellent chip quality high wear protection
OSB strander	production of high-quality OSB strands from log wood	logs	<ul style="list-style-type: none"> easy knife replacements excellent strand quality
Logyards	MDF plants, OSB particleboard plants, recycling wood plants	logs, chips, scrap wood	<ul style="list-style-type: none"> complete planning and start-up of plants robust construction long-standing experience
Secondary wood shredder	MDF plants, particleboard plants	chips	<ul style="list-style-type: none"> simple, robust construction user-friendly easy knife replacements
Surface layer mill	particleboard plants	core layer screened oversizes	<ul style="list-style-type: none"> easy adjustment of the size reduction technology robust, solid construction

Heinz Richterich, Managing Director of Hombak



The Hombak asset:

A higher percentage of complete production lines from one source

Heinz Richterich, Managing Director of Hombak Maschinen- und Anlagenbau GmbH, explains to bulletin what makes Hombak developments so strong.

Hombak's specialty are technologies and processes for the reduction of wood to chips and flakes. What role does this area of expertise play in the entirety of a plant?

Heinz Richterich: The processing of wood into high-quality chips and flakes influences the quality of the board. Therefore, its weight in the entirety of a plant takes top priority. First-class quality of the reduced material positively and purposefully prepares all subsequent processes.

To what extent is an effectively developed front-end system relevant for board quality?

Heinz Richterich: Let's take, for example, a particleboard line. The flakes for the core layer are produced by means of a drum flaker. By using these flakes, the board receives a far better transverse tensile strength.

What Hombak developments come into play here?

Heinz Richterich: With the help of frequency converters we have significantly shortened the times for ramping up and braking of the motors for universal drum flakers. From an efficiency stand point, over a period of one year the customer receives approx. 20 additional operating days due to the reduced time for knife replacements. At the same time, the start-up peak is reduced to 3.1-times of the nominal current load. The heat that is generated during the braking process is converted to electricity and fed to the power network.

What invention is the most important and successful one in the history of Hombak?

Heinz Richterich: A single outstanding invention does not exist at Hombak. The

multitude of our inventions, the small and large modifications, and our patents have all served one purpose, to improve our machines and the well-being of our customers.

What opportunities do you anticipate for your future as a part of the Siempelkamp Group especially in regard to the benefits for our mutual customers?

Heinz Richterich: The affiliation to the Siempelkamp Group provides our company with the freedom for significant new developments such as knife-ring flakers and rotor debarkers. For our customers this acquisition stands for a stronger presence with regard to complete production lines from one source.