

COMPETENCE IN MEASURING SOLUTIONS

EFFICIENCY, RESOURCE CONSERVATION
& PROCESS OPTIMISATION

SAFETY AND AN OPTIMAL PRODUCTION CONTROL



02/03

INNOVATION IS OUR TRADITION

Identify quality deviations at an early stage and take effective counter-measures at the right time, optimise the use of resources, avoid production losses. These are only some challenges which we want to help you to overcome with our products from the measuring technology and fire protection field!

The measured values recorded with the GreCon measuring systems provide exact data and information which you need to control your production plant efficiently and reliably. Our measuring systems support your production process, e.g. from the wood chips cleaning via the thickness and moisture measurement to the surface inspection of coated wood based panels. Reliable measured values facilitate an exact production of the product quality which your customers request.

Detect and eliminate sparks before a fire breaks out! Since more than forty years, GreCon spark extinguishing systems have protected industrial production plants in the wood based panel industry. They are used to monitor pneumatic and mechanical equipment, silos, filter systems or mills to detect sparks also in demanding environments and activate the corresponding protection measures within milliseconds - without any interruption of your production. It happens "without being noticed" in the background.

The uniform user interface of our systems makes the handling of the GreCon product family easier for your employees. Our worldwide service network supports you in the implementation and maintenance of your GreCon systems.

Rely on our experience of more than forty year!

PREVENTIVE FIRE PROTECTION

GreCon spark extinguishing systems detect ignition sources wherever flammable materials are transported pneumatically or mechanically. Sparks or glowing embers are eliminated even before great damage can be caused. Thanks to the modular design and a wide range of detection and extinguishing equipment, GreCon property protection solutions and protection concepts are used throughout the industries.

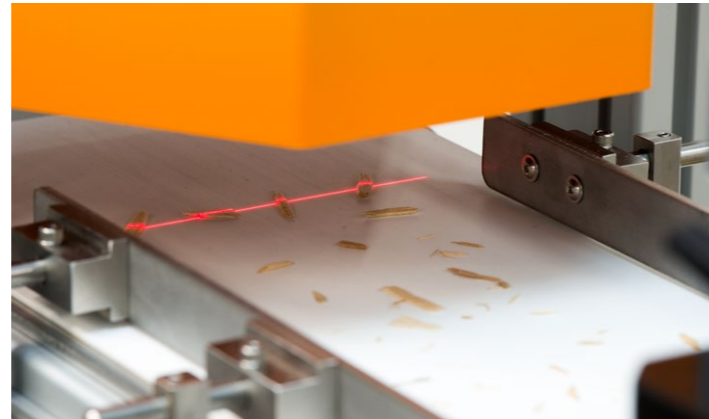
1 BS 7 2 FLAMEWOLF



ANALYSIS OF THE PARTICLE SIZE

The measuring system to analyse the particle size measures and classifies all three dimensions of particles. The relation of particle surface to volume is the decisive parameter for the effectiveness of the gluing of particles. Specific adjustments of the protrusion of the knives at the knife ring flaker make a saving of glue and an optimisation of the mechanical properties of the board possible.

3 3D PARTICLEVIEW



SURFACE QUALITY

A high surface quality is a requirement for a quality product in case of panel materials. Surface defects must be detected as early as possible and as well as possible. If this is not the case, expensive rejected productions up to customer complaints occur. An automatic continuous detection of surface defects avoids subsequent faults and ensures good quality.

4 SUPERSCAN



GAS PRESSURE AND TEMPERATURE

The inline gas pressure and temperature measurement makes an exact analysis of upstream processes possible when the material passes the hot press as well as during the conditioning phase and up to coating. By inserting a measuring board into the material, it is possible to record important information wirelessly and optimise the pressing process.

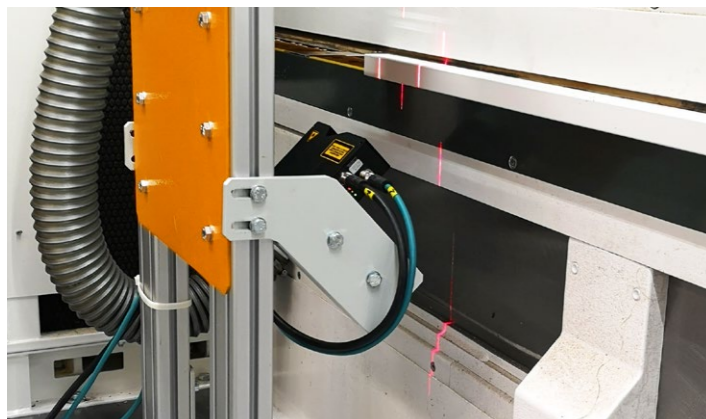
5 EASYLOG



EDGE INSPECTION

Split glue joints, broken edges, uncoated areas or doubling are only some of the imperfections that may occur around the edges when wood materials are coated. Our edge inspection system checks the edges for such imperfections. Compact laser sensors measure the area three-dimensionally, thus allowing you to draw conclusions about the causes of the defects.

6 EDGEINSPECT



LABORATORY CUT MEASUREMENT

The results of the laboratory cut measurement must be quickly available to optimise the current production. With the automatic and contactless measurement of the thickness and the weight per unit area, the values are available within a few seconds without a long preparation of samples. Besides the measured values, the system also automatically determines the density distribution of laboratory cuts.

7 BOARDCONTROL



MOISTURE MEASUREMENT

Material drying is expensive, but essential. If the moisture of the raw material is too high, problems occur at the downstream production processes and with the panel quality. If it is too low, valuable resources are wasted. The exact continuous determination of the moisture makes an optimised use of energy and an improvement of the further production process possible.

8 MOISTURECONTROL



EMISSION ANALYSIS

The emission of formaldehyde of wood based materials is subject to legal regulations. Too high emissions are unacceptable and can cause serious quality defects. Due to the more stringent limit values, the presently used measuring methods are quickly unable to cope with the requirements. The reliable and exact determination of the formaldehyde emission makes a safe compliance with the limit values possible.

9 GASANALYSER



WEIGHT PER UNIT AREA / RAW DENSITY

The weight per unit area provides information on the quantity of material used. If the weight per unit area is too high, valuable material is wasted. If it is too low, quality defects may result. With the measurement it is possible to optimise the material quantities used and reduce deviations.

OPTIMISATION OF FORMING

The uniform material distribution in the mat is an important requirement for a good panel quality. Fluctuations result in material waste and deviations in the planned panel quality. The material use is optimised by a uniform material distribution in the mat so that significant material savings can be achieved with an improved product quality.

FOREIGN BODY DETECTION

Foreign bodies and particles of a high density as, for example, metal pieces, non-metals or fibre lumps can cause enormous damages or impair the panel quality. With the CHIPINSPECTOR, foreign bodies are sorted out right at the beginning of the production process. The MATCONTROL detects these foreign bodies in the chip and fibre mat and protects the steel strap. Even areas which are too lightweight as blowholes or missing material can be detected.

FIBRE MEASUREMENT

With respect to the manufacture of fibre panels, the largest part of energy is consumed for the generation of the fibres. The analysis of the percentage of large shives in the surface of the fibre cake leads to conclusions on the necessary quantity of energy. Also the time when the refiner discs are to be changed can be defined specifically. Thus, quality problems can be avoided.

RAW DENSITY PROFILE

The raw density profile is an important parameter for the manufacture of wood based panels. If the profile does not correspond to the optimal shape, this has partially massive effects on the mechanical properties of the panel. The quality of the panel which can be optimised by specific adaptation of the process parameters can be predicted by permanent control of the raw density profile. The measurement can take place inline or in the laboratory.

THICKNESS MEASUREMENT

Fluctuations of the thickness due to production can be detected in time by means of the inline thickness measuring system and material waste or quality losses can be avoided. The use of different measurement transducers as lasers or roles makes the use of numerous applications possible. The plant can be calibrated or maintained anytime by the use of ct technology.

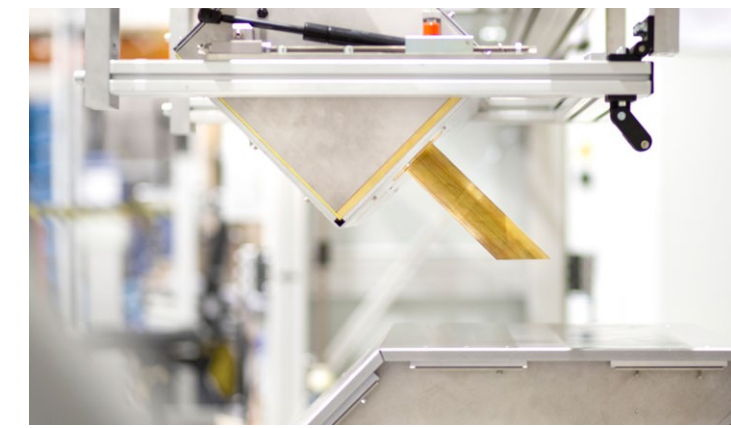
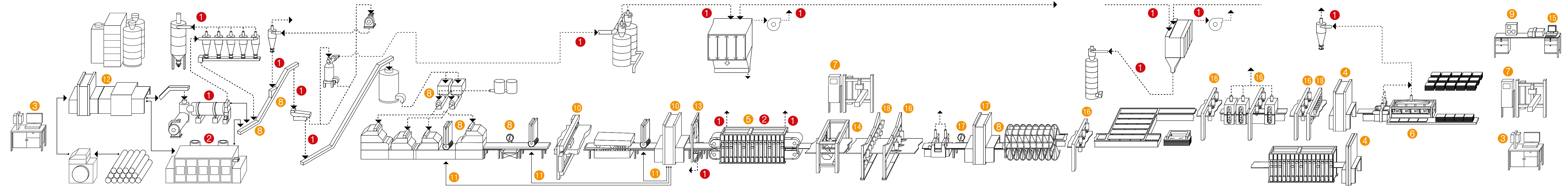
WEIGHT MEASUREMENT

The weight is an important parameter for the manufacture of panel materials. It is possible to determine the raw density via the weight as one of the most important key figures in the panel industry. The quantity of the raw material can be verified as well. By means of high-precision and comprehensive x-ray systems it is furthermore possible to illustrate the weight distribution.

EARLY BLOW DETECTION

The early blow detection identifies any delamination in different materials which may occur due to the process. Additionally, the ultrasound measured values provide information on important panel parameters (moisture, weight per unit area, etc.). Hereby, it is possible to optimise the production process. The system can be calibrated or maintained anytime thanks to the use of ct technology.

- 10 MATCONTROL
- 11 FORMATOR 10 MATCONTROL
- 12 CHIPINSPECTOR
- 13 FIBERVIEW
- 14 STENOGRAPH 15 DENSITYPROFLER
- 16 THICKNESSCONTROL
- 17 BOARDSCALE
- 18 DELAMINATIONCONTROL



MAXIMUM AVAILABILITY OF YOUR GRECON SYSTEM



11/12

A SERVICE TAILORED TO YOUR NEEDS WHICH PAYS OFF

The maximum availability and reliability of your GreCon system is what we want to achieve! In the field of measuring technology as well as in the fire prevention area. Measuring technology by GreCon helps you to optimise the use of e.g. energy and resources by obtaining objective data. The quality and the reliability of these measurement results influence your product quality and your production result. The service which you need specifically is available to you thanks to the individually combinable service modules - no matter when and where you need it.

The GreCon spark extinguishing system detects sparks and extinguishes them before a great damage is caused. A maintenance plan which has been especially developed for these systems provides for reliability and takes away any worries about damages due to fire.

Starting with the complete assembly, the project planning on site and the assembly support via the commissioning, the inspection or the maintenance. We compile a service package tailored to your needs - and you always have the optimal solution to avoid standstill times and reduce malfunctions and disruptions to a minimum. We support you where you need us. Also online!

SATELLITE - SAFE, SIMPLE AND FAST

With the remote support SATELLITE, GreCon experts are available to you worldwide in case of urgent questions or a possible failure. By means of a remote diagnosis we will help you to make your GreCon system safe, easy and quickly available again. The access to the data history makes a specific and quick analysis of the cause of failure possible. Local interventions can be better prepared thanks to GreCon SATELLITE and even completely avoided.

SUPPORTING YOU WORLDWIDE

Fagus-GreCon
Germany

GreCon Ltd.
Great Britain

GreCon S.A.R.L.
France

Fagus GreCon Inc.
USA

GreCon Co., Ltd.
Thailand

GreCon GmbH China
China

GreCon América Latina
Brazil



In 1911, Carl Benscheidt founded Fagus GmbH for the production of shoe lasts and punching tools. His great-grandsons Ernst and Gerd Greten integrated the companies GreCon-Anlagenbau and GreCon-Elektronik. Numerous inventions originate from this merger, including shoe lasts for the right and left foot; measuring technology to record thickness, surface characteristics or the weight by X-ray; the industrial spark extinguishing system.

Today Fagus-GreCon Greten GmbH & Co. KG is a family business in the fifth generation. Divided into the specific business units "Fire Prevention", "Measuring Technology", and "Shoe Lasts & Moulds", we deliver demanding solutions for a range of applications across different industries. Thanks to numerous inventions and the commitment of our worldwide team (including over 650 employees), we were able to establish ourselves as the leading global partner of our customers in every business unit.

The UNESCO World Heritage Fagus Factory is a special fourth business unit as a cultural enterprise within an industrial setting. In 2011, the building complex at the Alfeld site was listed as the "UNESCO World Heritage Fagus Factory". The Fagus factory built in 1911 as the first building of the architect and founder of the Bauhaus, Walter Gropius, is considered the origin of the modern era of architecture.

INNOVATIVE POWER IN ALL BUSINESS UNITS

GreCon
Fire Prevention

GreCon
Measuring Technology

Fagus
Shoe Lasts & Moulds

Fagus Factory
UNESCO World Heritage

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