FARO’s speed and accuracy aid Kronospan site surveying

Based at the company’s Chirk, North Wales site, Chris Norman CAD Technician is responsible for surveying each of Kronospan’s global facilities. As each site continually evolves and makes physical changes, Chris is kept busy constantly up-dating all relevant 3D records. Although Kronospan’s existing laser scanner was less than a year old, owing to the magnitude of Chris’ scanning tasks, the need to further speed-up scanning routines, a search was made for a fast acting, precise, easy to use laser scanner. Given the need to make regular visits to Kronospan factories throughout the world, and the company’s understandable reluctance to transport the proposed laser scanner in aeroplane’s holds, a light weight, compact scanner that could be taken on-board as carry-on luggage was the preferred option. The answer to this demanding list of prerequisites was found in the advanced FARO FocusS 350 FARO’s speed and accuracy aid Kronospan site surveying.

Explaining his choice Chris Norman said, “I carried out a lot of prior research and evaluated several laser scanning systems, although, having first witnessed other options in action, a very impressive on-site practical demonstration of the FARO FocusS 350 performed on a range of demanding applications convinced me that FARO’s advanced laser scanner was by far the most impressive of the systems that I considered. “I bought the FocusS 350 as it met, and in many areas exceeded all of my requirements. In addition to being impressed by the FARO Laser Scanner’s accuracy and the resolution of its HDR (High Dynamic Range) system, its robust construction, IP54 rating, compact size and light-weight nature made it ideal for convenient transporting. “A key factor in the purchase of our FocusS 350 was the major time savings made possible by the advanced scanner’s on-site registration function. Previously, when undertaking a scanning project at one of Kronospan’s overseas facilities, I would spend time post-processing all of the day’s scans in my hotel room. Now, thanks to the FocusS 350’s enhanced capabilities, as I carry-out my work, each scan is automatically transmitted into my computer via a wifi link and the previously time-consuming processing and registration functions are immediately performed. “In addition to the FARO laser scanner, I now use the most relevant FARO software applications to our intended use, such as FARO Scene, 3D laser scanner software that efficiently processes 3D point clouds. I also use PointSense Plant software that is specifically designed for use by professionals involved in maintaining industrial plants. PointSense Plant has proven extremely useful as it enables the modelling in AutoCAD of items such as steel components and piping runs, all based on captured 3D laser scan data. I also use Faro...
The FocusS 350 provides scanning results even and outdoor applications and boasts a small

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alterations, machine installations and modifications
before embarking on activities such as structural
staff to precisely plan and to visualise changes
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models will prove invaluable as they will allow
accurate three-dimensional models of all relevant
our new FARO laser scanner and software to create
world-wide Kronospan facilities, my aim is to use
quickly. It also helped that the very knowledgeable
FARO Account Manager, Jack Strongitharm who
performed the original product demonstration,
carried-out my training, he also remains contactable
should we have any future difficulties or questions.
“Soon after the delivery of the FocusS 350 and
our training session, over a period of time I was
able to scan many aspects of the Chirk site. Given
the many different aspects and complexities of the
site and the required accuracy related to certain
features, my learning curve was extremely short
and I was able to establish a comprehensive 3D
model of the facility in a much shorter time than I
expected.

“Now, given the time constraints that are often
involved in international travel and the need to
achieve both accurate and quick results, it helps
that once I arrive on site at a remote destination,
the FocusS 350 is very quick to set-up. Also, as the
laser scanner has an extended scanning range, all
of the intended targets can be accurately surveyed
with fewer scans when compared to other systems,
meaning that scanning projects can be completed
extremely quickly.

“As no drawing exist for some parts of certain
world-wide Kronospan facilities, my aim is to use
our new FARO laser scanner and software to create
accurate three-dimensional models of all relevant
features of every single company plant. These
models will prove invaluable as they will allow
Kronospan facilities managers and other company
staff to precisely plan and to visualise changes
before embarking on activities such as structural
alterations, machine installations and modifications
to services such as electrical supplies, pneumatic
air lines and pipe-work. In future, on completing
each of major alteration, the changes will again be
scanned by the FocusS 350 allowing the appropriate
3D models to be updated.

“The instant access to up-to-date, precise 3D
models by Kronospan colleagues throughout the
world will result in shorter planning phases, the
closer completion of alterations and additions,
and also bring about reductions in lost production
time.”

The FARO Focus® 350 is ideal for both indoor
and outdoor applications and boasts a small
size, light weight and extended scanning range.
The Focus® 350 provides scanning results even
in challenging environments, such as difficult to
access locations, dusty or humid areas and in in
rain or direct sunlight. An on-site compensation
tool allows data quality optimisation on-site.
Integrated GPS and a GLONASS receiver enables
easy positioning. HDR imaging and HD photo
resolution ensure true-to-detail scan results with
high data quality.

The scanner’s 3D scan data can be easily
imported into all commonly used software
solutions for a wide range of applications,
including use in areas such as architecture, civil
engineering, construction, industrial manufacturing
and land surveying. Distance dimensions, area and
volume calculations, analysis, inspection tasks
and documentation can be carried out quickly,
precisely and reliably.

As purchased by Kronospan, FARO SCENE
is specifically designed to process 3D point
clouds collected by FARO laser scanners. SCENE
processes and manages scanned data easily and
efficiently by using automatic object recognition as
well as scan registration and positioning. SCENE
can also generate high-quality colourised scans
very quickly, while providing the tools for automated
targetless or target-based scan positioning.

The smart registration software is extremely
user-friendly, from simple measuring to 3D
visualization to 3D meshing and exporting into
various point cloud and CAD formats. Added
verification steps now allow users to confirm if
a scan registration result is contextually correct
adding an additional level of confidence to their
data quality.

Once the scan project complete, scan data
can be published on a web server at the touch of a
button. With SCENE WebShare Cloud laser scans
can be easily accessed and viewed with a standard
Internet browser. The new version allows viewing
multi-layer overview maps, too.

Also used by Kronospan, PointSense Plant
provides tools for the pattern recognition of plant
assets from point cloud data, this gives users the
ability to move directly into their familiar AutoCAD
based plant design programs (Plant 3D, MEP,
CADWorx, AutoPlant, etc.). Exact tie-in points for
components can also be determined without any
modelling.

PointSense Plant enables industrial facility
design from scan data and provides advantages
such as the auto-recognition of industry standard
components and the ability to achieve ‘best-fit’ to
point cloud data on items such as piping
components.

KRONOSPAN

Established in 1897 in Austria, Kronospan is the
world’s largest wood-based panel manufacturer. The
company’s comprehensive range of manufactured
products includes Particleboard, Medium density
fibreboard and Laminate flooring. Remaining a family
concern, Kronospan currently manufactures wood-
based panels at more than 40 sites across the world
and employs more than 14,000 people.