ADVANCED 3D LASER SCANNING AND SURVEY
UNIQUE 3D SCANNING AND SURVEYS THAT SAVE VALUABLE TIME AND INCREASE PRECISION

Ramboll has an integrated department of trained surveyors and data specialists to perform 3D scanning and surveys. With substantial experience in using this cutting-edge technology, our services can save you hours of costly shutdown time as well as the expensive human errors that invariably follow traditional methods or occur when the 3D technology is misapplied.

Quicker implementation
The scans can be used for controlling new components before their assembly, thereby enabling quicker assembly with fewer problems, less offshore welding and shorter shutdown time for process systems.

3D surveying is ideally suited for quick implementation of projects allowing for substantial financial benefits.

Ramboll uses and develops specialised 3D laser scanning and survey tools. We offer precision surveys to engineering, design and construction project activities.

The surveys help reduce and even eliminate the inherent geometrical problems associated with new or retrofit design and construction projects.

Cutting edge technology
Our skilled personnel and state-of-the-art equipment capture real scenes with an unprecedented combination of speed, accuracy, completeness and safety. The technology is utilised in most of our process and production area projects.

3D laser technology facilitates the capture of physical objects such as structures, pipe work and mechanical components. Through survey analysis this is converted to a virtual but true to life as-built 3D model.

From this model existing component geometries and physical relationships can be extracted within a tolerance of few millimeters.

Modeling in India
3D scanning can be used for modeling of as-built models. Our modeling team at our office in Chennai, India, is specialised in modeling projects.

A real life example
In one week Ramboll’s surveyors performed 130 scans on five levels on the Gorm E platform in the North Sea. Based on the 130 scans, Ramboll’s modeling team in Chennai, India modeled all details from two inches and above and delivered a complete model of the platform which serves as as-built documentation.

Within six weeks from start up of the project Ramboll delivered a full concept design layout.

Selected references

2012
• 3D scanning of IG platform in the Al Shaheen field, Maersk Oil Qatar
• Scanning of 53 underground stations for reconstruction purposes, London Underground Limited
• 3D scanning and modeling for installation packages and redesign on Maersk Inspire, Volvo field
• Visualisation of installation packages, Shell
• Complete 3D scanning and modeling of Dan Bravo field, Maersk Oil
• 3D scanning for DTM (digital terrain model), Copenhagen Airport/Lundbeck project
• Scanning of bridges and production of drawings for installation, Tyra platform, Maersk Oil
• Scanning and modeling of water treatment plant for flow calculations, Nordvand

2010-2011
• 3D scanning and modeling of Svanemølle Barracks for preservation purposes, Municipality of Copenhagen
• Scanning and modeling of Gorm Platform, Ramboll
• Static GPS survey on South Arne, Hess Denmark
• Scanning of Tyra East – Platform A as part of Tyra optimization project, Maersk Oil
• Scanning and modeling of the topside on FPSO Petrojarl I due to major upgrade, Ramboll
• Scanning of keel building at Studstrupværket, Ramboll/DONG Energy
• Scanning of trace from two tanks to pump. Scanning will be used as basis for detailed design of new pipe and supports, Ramboll
• Scanning of Dan Bravo platforms A, B, C and D for Rig Access, Maersk Oil

2008
• Documentation and entire area layout, Q8 Denmark
• Laser and 3D survey of turbine exhaust on Great Ekaoff Field, ConocoPhillips
• Rig process module, laser and 3D survey of flowlines and well hookup of Volve field in North Sea, Maersk Contractors
• Rig access and laser scanning of all wellhead platforms, Maersk Oil
• As-built survey and approval of dimension of equipment in workshop in Scotland, Maersk Oil

2004-2007
• Flowl ine upgrade, separator hookup, laser and 3D scanning, Hess Denmark
• 3D laser scanning of industrial plant for rebuilding project, Amersham, Norway

More information and contact
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