

## 3D Modeling

Albion Marine Solutions provides 3D laser scanning, 3D modeling, design and drafting services to offshore, construction, maritime and oil and gas industries.

Our designers use the latest 3D CAD Modeling software to prepare 3D Concept models and detailed fabrication drawings for ship conversions, and plant upgrades including custom part and assembly modeling, prototype design, complex construction design, structural layouts and machinery.

Our team carries extensive research before conceptualizing the final job. This help us to offer accuracy while identifying the clients' needs.



## Industries

- Architecture and Construction
- Oil & Gas
- Shipping
- Medical
- Wind Energy
- Offshore
- Mining
- Aerospace



## As-Built Documentation

Our team has expertise to provide services for large scale scanning such as ship building, process industry, steel plants, power plants, piping layouts, platforms, oil rigs, civil engineering, digital factories and much more. We use 3D Scanning Technology to obtain Point Cloud data. The three dimensional Point Cloud that is created can be navigated, drafted, and modeled in popular CAD and other applications.



## 3D Laser Scanning

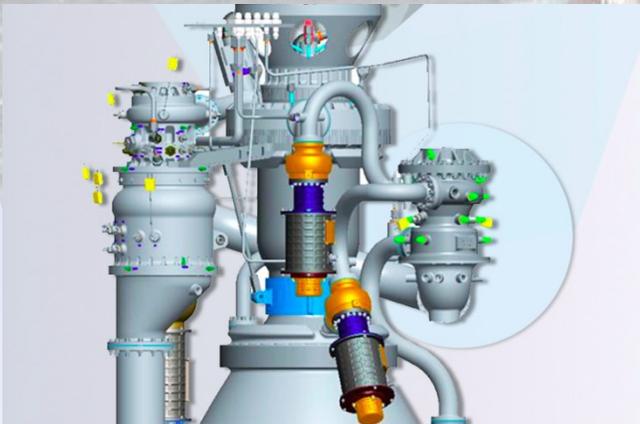
Our team are factory trained and experienced professionals specializing in 3D Scanning. We utilized top of the line scanners with sub-millimeter accuracy. A number of 3D Scans are combined in a Point Cloud and represent the exact geometrical detailed of the surrounding objects. From a Point Cloud the designers develop a model of the machinery, plant, piping, structure, equipment for the concept design, basic, detailed and as-built engineering.

## Laser Track Measurement

Using Laser Track our team offers our clients an unmatched range of measurements. The laser track uses CAM2/Measure X measurement software that enables CAD based analysis.

## Engineering Drafting

The 3D laser scan data is an irreplaceable tool in developing engineering design packages. Our designers combine the processed scan data, 3D models, existing arrangements, engineering design, and client requirements to create the required engineering deliverables: Conversion Specifications, Plans, and Detailed Fabrication drawings.



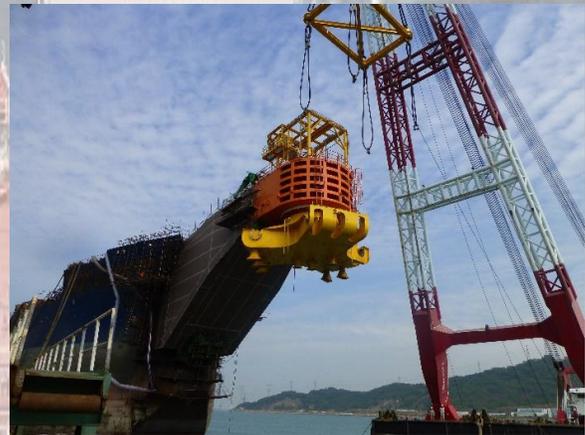
## Reverse Engineering

Albion Marine Solutions offers reverse engineering services which include drawings of the physical object. Our high technology software enables us to apply manufacturing skills, functional skills and knowledge to deliver product model and quality drawings.

## Offshore Conversion

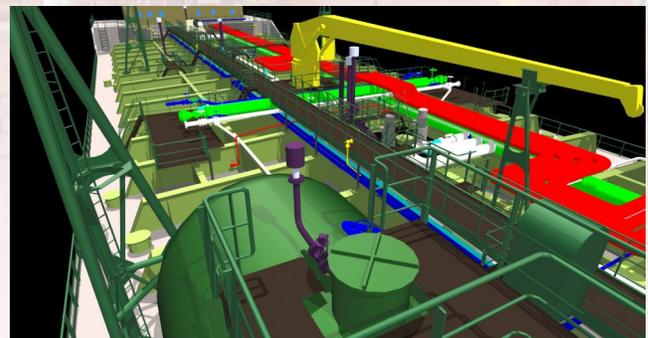
3D scanning and modelling is a valuable tool in complex, multidisciplinary projects where precise cut out and fitment of new offshore equipment is a common Scope of Work.

Our personnel have extensive experience in offshore conversions and new builds: FSO, FPSO, FSRU, shuttles, oil rings and platforms.



## Product Development

We offer our clients product development and design engineering services, which includes 2D to 3D conversion, concept design, 3D modeling, reverse engineering and surfacing model. Our team works closely with our clients to understand their design requirements to offer a feasible solution.



## Forensic

3D scanning of a crime scene prior to evidence collection is an important part of documentation .

The use of 3D scanning technology allows investigators to preserve a permanent digital copy of a scene that can be viewed virtually. Police and insurance companies can use 3D scanning to take measurements, inspect evidence, and much more.

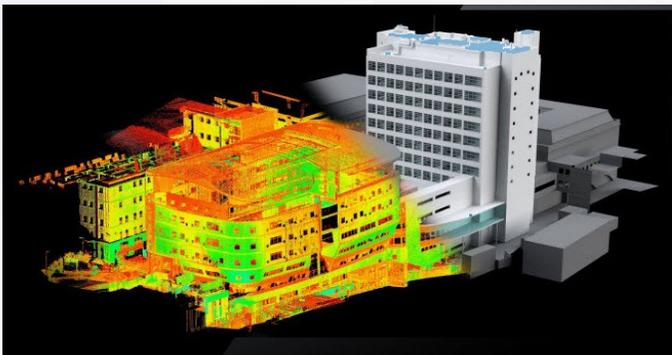
A 3D scanner works smoother and faster than photography at a crime scene, providing critically important data.



## Construction

From the design stage to the inspection stage, 3D scanning and measurement is an integral element of architecture, engineering and construction.

For contractors, laser scanning lowers risk by ensuring complete and accurate as-built drawings and exposing any inaccuracies early in the process.



## Mining

Our scanning services provide civil engineering and construction firms representations of mines and mining machinery. Accurate as-built documentation helps engineers determine measurements, and ensure standards for safety.

3D Laser Scan is designed to measure and monitor the stability of rock faces and slopes to improve safety. This provides an early warning of movement and therefore potential failures in the active mining area that may impact on production, cause damage to equipment or even cause injury to personnel.

From the design stage to the inspection stage, 3D scanning is an integral element of architecture, engineering, and construction applications.



## Oil & Gas

Our team provides 3D laser scanning services in oil and gas applications to produce reliable and high quality data. Laser Scanning is safe, accurate and fast. Our team members accurately and efficiently capture data in locations where accessibility is difficult and areas are unsafe. 3D Scan provides reliable, accurate as-built information for facility upgrades and expansions.



# ALBION MARINE SOLUTIONS

TRUSTED ENGINEERING PARTNER

www.albionmarine.com

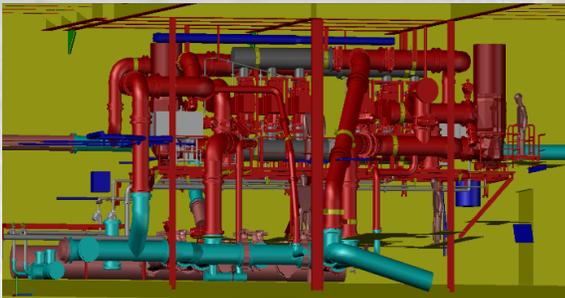
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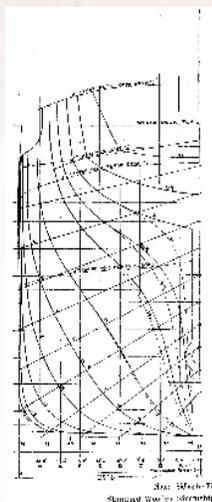
## Plot Plans

The laser scans of the plant, machinery, electrical cabling, piping systems and structure are extracted from the Point Cloud to create isometric drawings. Our designers use AutoCAD software to create these Plot Plan drawings.



## Vessel Hull Lines

The 3D laser scan of the vessel's hull technique is used to develop the hull surface from the laser scan Point Cloud. This data is utilized for development and checking of the hydrostatic and stability.



## Vessel Retrofits Detailed Design

We use 3D modeling to develop an engineering design package and conversion specifications. Engineers prepare detailed machinery, steel work, pipe piece design and layout.

- Provide Material take-off list.
- Complete documentation packages to satisfy the Class and Regulators.

Our team will also develop the Yard Specifications



## Damage Assessment and Survey

Albion Marine utilizes 3D scanning and modeling for a Damage Survey of the hull and machinery. It helps to capture accurate data including changes in hull geometry and the disposition of damaged objects. In conjunction with a survey conducted by our experienced surveyors it provides concerned parties with the information required for investigations and remedial actions .

