

## **3D LASER SCANNING**

360-degree data capture using high-speed Laser Scanners

### Areas of Application:

- ▶ As Built Documentation
- ▶ Retrofit/ Conversion
- ▶ Ship repair
- ▶ BWTS- Retrofit
- ▶ Historical Monument
- ▶ BIM Modelling

**Certified**  
ISO 9001:2015  
ISO 27001:2013



# 3D LASER SCANNING

## How it works?

3D Laser Scanning is an advanced surveying /as-built data capturing technique that employs reflected laser beams to generate high-resolution 3D point cloud databases and enables the creation of dimensionally accurate as-built 3D digital (CAD) models of scanned objects or structures. BUOYANCY CONSULTANTS is equipped with X130m Laser Scanner and can have the data capture accurately with a tolerance of  $\pm 2\text{mm}$ .

They allow for a diverse usage in numerous application areas, such as:

- Ship & Industrial design engineering
- Development of 2D documentation from an 3D inventory of the architectural - Digital Heritage & Preservation
- Quality control including the preparation of technical reports
- Intelligent 3D modeling based on point cloud data
- Visualization and animation of 3D models
- Reverse engineering



## SERVICES

- Refurbishment & Extensions
- Scan to BIM
- Oil & Gas Revamping projects
- Intelligent Modelling
- 2D drawing creation, validation & extraction
- Clash Checking
- As-built Verification & Drawings
- P & ID, Isometric Drawings
- Tank Volume Calculations
- Actual construction progress tracking
- Architectural 3D Scanning
- Site Survey using Drone

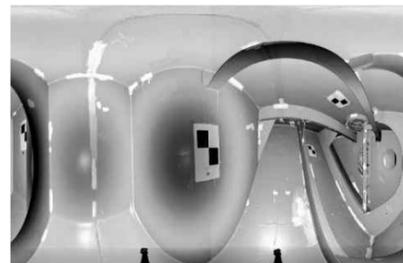


## SOFTWARE EXPERTISE

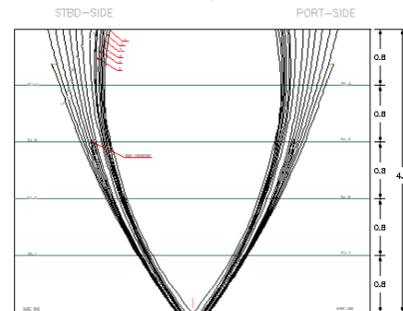
- LFM Modelling Suite
- Cadmatic
- Solidworks
- AutoCAD
- Revit
- Microstation
- PDS
- SP3D
- AVEVA PDMS (E3D)

## TECHNOLOGY

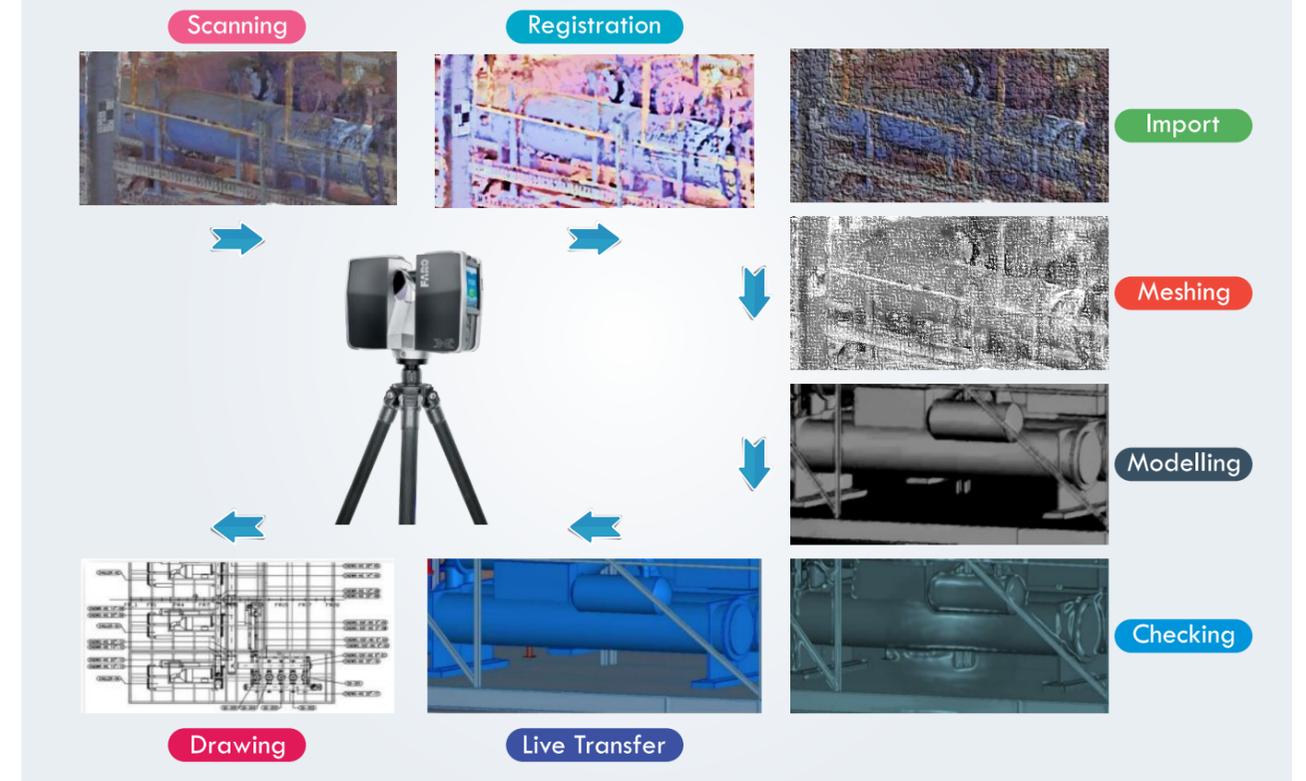
- 360 degree data capture using high-speed laser scanners
- High accuracy localized surveys ( $\pm 2\text{mm}$ )
- Scanning diameter up to 260m
- Rapid data capture minimizes time on site
- Cost efficient
- Remote access to hazardous areas



Reverse engineering



## WORKFLOW



## BENEFITS

- A fast and reliable technology to capture complex as-built status in any type of entity or surface
- Detailed 3D information of the actual conditions
- Risk minimization in projects where access is difficult and schedules are tight
- Greater automation and fast visualization increase collaboration anywhere in the world
- 3D laser scanning is quicker and more accurate than traditional manual measurements. Time can be shortened from days to a few hours
- Measurements can be made while at any point of location.



## PROJECTS FLOATED



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