



# DIMENSIONAL CONTROL

*T. Baker Smith (TBS) leverages innovation through dimensional control surveying* as an enhanced alternative to our traditional surveying services. Industrial measurement provides real-time three-dimensional results on fabrication projects by utilizing highly accurate total stations, laser trackers, and laser scanners to gather data during pre-weld, post-weld, and as-build stages of fabrication. Results are then compared against the design, theoretical dimensions, and industry standard tolerances to ensure project conformity.



## DIMENSIONAL CONTROL SOLUTIONS

### + Industrial Measurement

- 3D Data Capture

### + Piping

- Clash Checks
- Spool Fabrication Verification
- Pipe/Pipe Rack Interface

### + Alignment

- Structural Steel Interface
- Bearing Pad
- Precision Leveling

### + Offshore

- Vessel Gyro Compass Calibrations
- DGPS Health Checks/Offset Surveys
- Drill Rig Track & Dolly

### + Fabrication

- Construction Support for:
  - Topside
  - Jackets
  - Modules
- 3<sup>rd</sup> Party As-builts

### + Subsea Components

- Manifolds
- Jumpers
- PLETs
- PLEMs
- Umbilical Lengths
- Trees
- Blowout Presenters



### Sub-Sea Components

TBS was tasked with gathering as-built dimensional control data for Technip to aid in the installation of five sub-sea trees for the Nobel Leviathan Field Development. The survey consisted of gathering highly accurate data on the sub-sea hub connections to ensure proper alignment when placed in the field off the coast of Israel. Along with sub-sea trees, TBS frequently conducts dimensional control measurements on PLETs, PLEMs, manifolds, jumpers, and suction anchor piles.



### Vessel Surveys

TBS provides extremely accurate dimensional data on fabricated vessels, ensuring our clients of the correct nozzle placement, bolt-hole orientation, and flange face squareness. TBS gathers field data utilizing highly accurate robotic total stations and industrial measurement software in the field environment for immediate results.



### Industrial Measurement – Pipe Spool Surveying

TBS monitored and performed dimensional control surveying in “real-time” of pipe spool fabrication operations, maintaining 1mm accuracies throughout fit-up and welding process. TBS conducted dimensional control operations utilizing highly accurate robotic total station surveying instruments and industrial measurement software to monitor and measure pipe spools during fabrication operations. Surveyors worked 12-hour shifts day and night to ensure pipe spools were fabricated to within the project specifications of 1.5mm. Lengths, heights, flange face squareness, bolt hole orientation, and isometric redlining were some of the measurements taken in real time on location to allow the fabrication team to quickly resume operations.



### Jackets and Platforms

TBS has over 20 years of dimensional control data gathering experience on jackets and platforms, which began in 1996 for the Shell Offshore Ram Powell project. Since then, TBS has worked on several projects at numerous fabrication facilities, providing quality, accurate, and timely dimensional control measurements to ensure fabrication meets projects’ specifications and client requirements.



### Offshore

TBS was tasked with gathering dimensional as-built data on the Shell Turritella FPSO for existing piping spools and flanges in need of upgrades. TBS measures and processes dimensional data directly on-site, even in a dynamic environment like a floating ship or platform. The client utilized TBS’ gathered measured data to fabricate new piping at an onshore fabrication facility, ensuring the correct fit and proper alignment.

### LOCATIONS

|                             |              |
|-----------------------------|--------------|
| Lafayette, Louisiana.....   | 337.735.2800 |
| Baton Rouge, Louisiana..... | 225.744.2100 |
| Thibodaux, Louisiana.....   | 985.446.7970 |
| Covington, Louisiana.....   | 985.302.0730 |
| Metairie, Louisiana.....    | 504.323.3460 |
| Houston, Texas.....         | 281.240.0113 |
| San Antonio, Texas.....     | 210.892.4700 |
| Corpus Christi, Texas.....  | 361.334.5719 |
| Galveston, Texas.....       | 409.220.1669 |

### CORPORATE HEADQUARTERS

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Scan for more information

