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Motion-Compensated Intervention Tower

Expedite rigless well intervention on deepwater tension-leg platforms

APPLICATIONS

- Logging and downhole measurements with CT, slickline, or wireline
- Stimulation through CT
- Underbalanced perforating
- Plug and packer setting

BENEFITS

- Saves time
  - Enables simultaneous drilling and well intervention operations
  - Supports wireline or slickline operations without rigging down the CT
- Increases flexibility with integrated skidding system to move the tower from well to well
- Minimizes equipment footprint
  - Incorporates cranes and a hoist for rig-up and tool deployment
  - Fits under or alongside of rigs
  - Integrates CIRP* completion insertion and removal under pressure equipment

FEATURES

- Nitrogen-compensated frame for vertical heave
- Track stack
- Extendable A-frame over well center to hook wireline or slickline stackup
- Platform to accommodate CT injector head
- Hydraulic jacking frame
- Gib crane to deploy and reverse-deploy tools
- Knuckle boom crane to help rig up the stack and pressure control equipment
- Integrated hoist to deploy tools on braided line with depth and weight-measurement device
- Stand-alone Zone II hydraulic power unit
- Transfer carts to skid over transverse beam
- Integrated stabbing winch
- Fall arrestors and handrails
- ATEX Zone I area

The motion-compensated intervention tower saves time and minimizes risk for deepwater operations by enabling precise perforating and other CT, wireline, and slickline operations concurrent with drilling activity. Designed specifically to fit on the limited-space deck of a tension-leg platform and compensate for moving seas, the tower can skid easily from one well slot to another and convey a long string of perforating guns even while working below the drilling mast equipment package (MEP).

The tower also maximizes safety in operations because of the design of the upper platform, fall arrestors, and handrails. By enabling safer and simultaneous drilling and intervention operations, the tower delivers considerable time, cost, and risk reductions.

The motion-compensated intervention tower reduces deepwater operation time and risks.

Enabling advanced intervention operations

Intervention scope for the tower covers a wide range including slickline, wireline logging, acid stimulation through CT, installation of the CoilFLATE* coiled tubing through-tubing inflatable packer, operations using ACTive* real-time downhole coiled tubing services, completion, and underbalanced perforating. To enable perforating operations without killing the well, the tower includes remotely operated CIRP equipment, which inserts and retrieves long gun strings under wellhead pressure.

Motion-Compensated Intervention Tower Specifications	
Design	API4F
Lifting certification	DNV 2.7-3
CT table vertical load, lbm [kg]	136,555 [61,940]
A-frame vertical load, lbm [kg]	35,100 [15,920]
Dimensions (length × width × height)	
Retracted, ft [m]	13.1 × 13.1 × 34.8 [4.0 × 4.0 × 10.62]
Fully extended, ft [m]	13.1 × 13.1 × 58.9 [4.0 × 4.0 × 17.95]
Length of 5/16-in braided line cable, ft [m]	1,476 [450]
Compensator stroke, in [mm]	96 [2,438]
Top section vertical stroke, in [mm]	54 [1,371]
Top section horizontal stroke, in [mm]	50 [1,270]
Top section lateral stroke, in [mm]	24 [609]
Skidding cylinder stroke, in [mm]	18 [457]
Injector head footprint (length × width), in [mm]	48 × 50.5 [1,219 × 1,282.7]

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