

Coiled Tubing Cable Installation System

INSTALLS / REMOVES CABLE WHILE COILED TUBING IS ON THE REEL



Coiled Tubing Cable Installation System

The NOV® CTES® coiled tubing cable installation system, or cable injector, pumps cable into and out of coiled tubing (CT) while the CT is still on the reel. The cable injector system greatly reduces costs when compared to vertical or horizontal installations. The system also has the benefit of quickly installing cable without reducing the fatigue-life of the CT.

FEATURES AND BENEFITS:

- No impact on fatigue life of CT
- Fast (up to 200 ft/min)
- All CT sizes
- Small footprint (79" x 73")
- Installs small-diameter control line/capillary tube
- Installs plastic-coated cable
- Rugged, field-proven design
- Third-party certification/registration available

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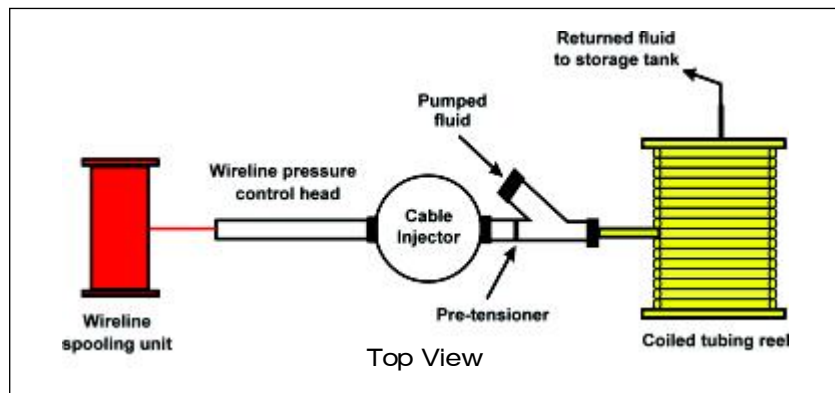
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The NOV CTES coiled tubing cable installation system (cable injector) uses the following equipment to pump (inject) cable into a reel of coiled tubing:



CABLE/WIRELINE SPOOLING UNIT**

1. Rotates the spool of cable (to remove cable torque on entry to the cable injector) around the vertical axis by way of a sheave wheel, which is also located on the vertical axis above the cable spool.
2. The cable then enters another sheave wheel to align the cable with the cable injector.



**Spooling Unit Available Separately

CABLE INJECTOR UNIT

1. A mechanical counter measures the amount of cable installed.
2. The cable advances through the stuffing box/line wiper and the wireline grease-injection control heads.
3. The cable enters the cable injector, where it is wrapped around a housing-contained capstan. This capstan-wrapping generates a "capstan effect," in which the tension/force to pull the wire from the spooling unit through the cable injector is amplified.
4. Leaving the cable injector, the cable enters a cable accelerator (pre-tensioner), where a pressure-drop causes a small tension in the cable, providing the capstan with an input tension for amplification.

REEL-MOUNTED CT

1. The cable and a pumped fluid (water) enter the reel-mounted CT.
2. When the fluid velocity is high enough to cause the cable to fluctuate inside the CT, the viscous shear drag on the cable pulls it forward through the CT.



Cable Injector Unit

Specifications

CABLE/WIRELINE SPOOLING UNIT

Axle Shaft Diameter	3"
Dimensions (LxWxH)	110" x 84" x 74"
Maximum Spool Load Limit	6,000 lbs

CABLE INJECTOR UNIT

North Sea Certified Unit

Weight	7,500 lbs
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Non-certified Unit

(Hoist included)

Weight	8,000 lbs
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Common Properties: Certified and Non-certified Units

Work-surface Dimensions (LxW)	79" x 73"
Maximum Working Pressure	10,000 PSI

NOV CTES cable injection systems are skid mounted for ease of transportation offshore. Using the system, a CT string may be lifted onto a platform without the cable inside, therefore reducing the total weight of lift. The cable can then be installed before a job and removed after a job.

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