

Subsea Wellhead Removal

NCA's Subsea Wellhead Picker offers an environmentally friendly alternative for severing and removing subsea wellheads without the requirement for a costly drilling rig.

The Wellhead Picker is a combination of a connector that latches onto the wellhead and the Internal Multistring Cutting Tool (IMCT). The IMCT uses the extremely effective Abrasive Waterjet Cutting method to sever all the layers of casing in one go.

The Subsea Wellhead Picker can be run from a vessel and is deployed from a heave compensated crane over the vessel side or a module-handling tower over the moon pool. At the seabed, the IMCT is stabbed into the inner casing and lowered to cutting depth, typically 15ft (5m) below the mudline, where it performs the multistring cut. As soon as the cut is completed, the wellhead can be lifted off and recovered to surface with the connector.

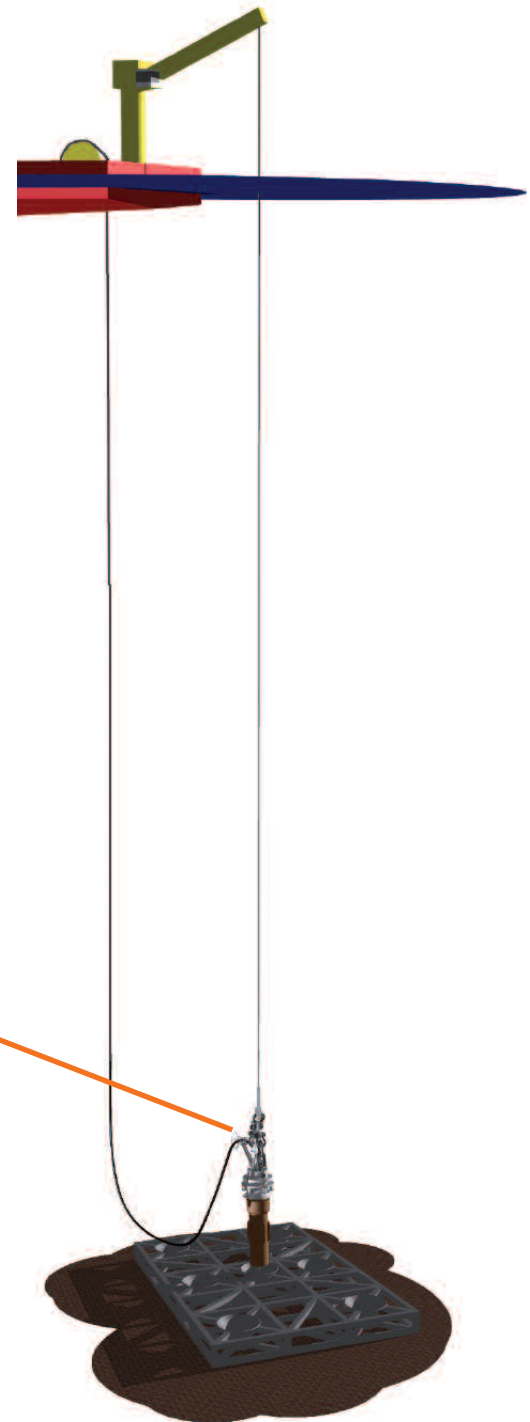
The system has been field proven for cutting from 7" to 36" and capable of cutting at water depths down to 1500ft (500m).

Applications

- Removal of redundant subsea wellheads
- Individual wellheads or wellheads installed in templates

Features and Benefits

- Can be operated from a vessel and does not require drill pipe or work string
- Cutting and recovery of wellhead in one deployment
- No need to reposition vessel during the operation
- The IMCT produces a clean and even cut for easier and safer recovery and handling of the wellhead at the surface
- Eliminates hazardous handling of drill pipe or explosive charges
- Cutting is insensitive to compression in casing and works on centric or eccentric casing, with or without cement in annuli
- Superior cutting speed – typically 1-2 hours efficient cutting time or 6-10 hours roundtrip time deck to deck
- Stand alone, rig less surface package
- Computer based control and monitoring system



Specifications

Lifting capacity	200 MT (can be upgraded)
Cutting medium	Water (salt or fresh water) and environmentally friendly abrasives
Pressure	500-2,000 bar / 7,000-30,000 psi
Water flow rate	30-120 lpm / 8-32 gpm
Utility requirements from vessel (typ.)	Sea water (120 lpm / 32gpm @ 2 bar / 30 psi) Fresh water for cleaning Deck crane (15T capacity) and rigging assistance for handling of equipment Electric power (110 V and 220V) Work air Main crane or module handling tower capable of lifting wellhead and casing stack incl. suction forces (typ. 100-200T)
Deck space requirement	Approximately 100 sqm / 1,000 sqf



Typical Equipment List

Equipment	Quant.	Eqt. weight	Dimensions (LBH)
High pressure water pumps	1*	6,800 kg 15,000 lbs	4.3 x 2.0 x 2.5 m 171 x 77 x 99 in
Abrasive Mixer Units (AMU) (item is split during transport)	1*	13,000 kg 28,660 lbs	1.9 x 1.9 x 5.1 m 76 x 76 x 200 in
Internal Multistring Cutting Tools	2	750 kg 1,650 lbs	2.2 x 0.8 x 0.7 m 85 x 32 x 27 in
Deployment skid with winches	1	7,800 kg 17,000 lbs	1.2 x 2.4 x 1.8 m 144 x 96 x 96 in
Hydraulic Power Unit	1	1,500 kg 4,100 lbs	2.6 x 1.2 x 1.6 m 100 x 45 x 62 in
Air compressor	1	5,900 kg 13,000 lbs	4.9 x 2.4 x 2.2 m 165 x 95 x 87 in
Control and / workshop container	1	4,500 kg 10,000 lbs	4.9 x 2.4 x 2.6 m 192 x 96 x 102 in
Subsea Wellhead Picker, incl. transport frame	1	4,000 kg 8,800 lbs	Ø1.3 x 3.7 m Ø51 x 145 in

*Backup recommended

The system is patented

Typical Equipment Layout



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