Emergency Disconnect During Subsea Intervention

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Webtool – Hydraulic Cutters & Systems

- High performance subsea and topside cutters and systems
- Cutting tool of choice for ROVs for over 30 years
- Webtool is designed and manufactured exclusively by Allspeeds Ltd in the UK.
Webtool – Guillotine Cutting

- Simple deployment
- Hydraulic operation
- ROV tools – Traditionally stainless steel or lightweight aluminum construction
- No depth limitation
  - Steel wire rope
  - Armoured electrical cables/EFL
  - Hydraulic lines/hoses/HFL
  - Softline (Dyneema, Spectra etc)
Subsea Intervention

Type 1 (Class A) - Light (riserless) Intervention
Type 2 (Class B) - Medium Intervention
Type 3 (Class C) – Heavy Intervention

• Well and manifold installation
• Maintenance
  – scale squeeze
  – chemical injection
• Increasing demand for mature fields
Subsea Intervention - Issues

- Drift off/Drive off
- ROV response time
- Catastrophic damage to assets and environment
- High vessel costs against background of tighter budgets
Emergency Disconnect - Challenges

- Cost of integration
- Complexity
- Mixed material bundles
  - Steel tension member
  - Fibre rope
  - Reinforced hoses
  - Electrical conductors
- Power source
- Actuation
- Single use application

Image Ref – FMC via World Oil
Webtool – Overcome the Challenges

- Ultra reliable
- Suitable for long term deployment
- Easy integration/retrofittable into LMRP or FLDF
- Power source and control options
- Rapid cutting of multiple fluid transfer lines, electrical jumpers and tension wire
- Easily function tested

Image Courtesy of AKOFS Offshore
Case Study – AKOFS Offshore

- AKOFS Subsea Equipment Orientation System (SOES)
- Webtool cutters integrated for quick disconnection of 10,000 PSI HFL and EFL at 3,000m
- Jumpers cut in a single operation in less than 10 seconds
AKOFS SOES

Image Courtesy of AKOFS Offshore
Case Study – Shah Deniz 2

- Well intervention and workover for major operator in the Shah Deniz 2 field in the Caspian Sea
- Rapid cutting of umbilical multiple fluid transfer jumpers, electrical lines and steel wire tension member
- Webtool cutters hold sacrificial cable and hose bundles ready to cut
Self Powered · Automatic · Subsea Resettable

- Automatic actuation
- No external power source
- Resettable in a simple ROV operation
- Blade and anvil reusable – no change needed
- Long term deployment
Emergency Disconnect - Topside

- Towing and tugging lines
- Portable equipment
- Self contained power source

Image Ref – USA Today
Winch Release – The Rules

• Standard ISO7365:2012 (introduced in 1983), section 4.8.1

4.8 Emergency release

4.8.1 The winch shall be designed to allow drum release in an emergency when hauling or rendering, or when the drum brake is applied. A maximum delay of 10 s from the moment the release is actuated to the drum being disengaged is acceptable.

4.8.2 Emergency means of releasing the drums shall be provided in the wheelhouse, if agreed between the manufacturer and purchaser.

4.8.3 The emergency release shall be effected by the actuation of one identical control in all situations, even if the usual power sources fail. It shall always be possible to carry out the emergency release, even during a black-out.
Integrated Emergency Disconnection Systems

- Proven technology readiness
- Easily integrated - Retrofittable to any system
- Simple and reliable operation
- Rapid cutting of mixed materials
- No need for an expensive ROV

WEBTOOL
HYDRAULIC CUTTERS & SYSTEMS
How Many Cuts in 30 Seconds?
Thanks for listening
Come and visit us at Stand 62

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