

CASE STUDY

Overview:

WHY?

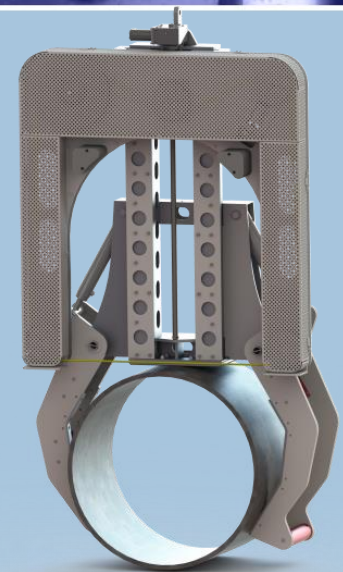
Vessel time is one of the major economic factors our Clients have to consider, and UCS realise that the action of reducing equipment day rates alone does not offer sufficient cost saving factors so focus should be made to the efficiency and effectiveness of the equipment utilised. UCS have spent a lot of time and financial resources on ensuring that its cutting equipment performs at a world class efficiency.

HOW?

A question that is regularly asked is: "how can UCS cut as efficiently and effectively as they do?" The answer is simple - UCS have a wide spectrum of cutting disciplines. As such they can offer the best solution for the operation required. When Diamond Wire Cutting technology (as in this case study) is dictated, the reason for exemplary cut times is down to the in-house design and in-house manufacture of the tooling. This gave the advantage of controlling the design and build process to suit the needs of the harsh environments and project scenarios that many years' experience has shown us is required.

Extensive R&D trials have produced tooling set ups and parameters that have set UCS apart from the competition. UCS Technicians also play a major role in the design and manufacturing process, with this in turn providing them with an in-depth knowledge and skill set in the setup, operation, trouble shooting and functional understanding regarding tooling capabilities and limitations.

Throughout the R&D phase UCS were not satisfied with simply picking a wire off the shelf and have worked hard with the wire manufactures to produce a wire designed to work specifically in conjunction with UCS's tooling, which is why the same wire will not have the same superior results when used with another make of tool.



Cutting Equipment Utilised

42" Diamond Wire Saw

Required Supporting Equipment

Hydraulic Power Unit

Hydraulic Umbilical Reel (Twin Line)

Test Set Up 1:

Multi String Product Specifics

String No	Material	WT	Pipe OD	Coating		Product OD
				Type	Thickness	
1 (outer)	Carbon Steel	25mm	30"	Fully Cemented	N/A	N/A
2	Carbon Steel	12.7mm	20"	Fully Cemented	N/A	N/A
3	Carbon Steel	19mm	14 3/8"	Fully Cemented	N/A	N/A
4 (inner)	Carbon Steel	12.7mm	10 3/4"	Fully Cemented	N/A	N/A

Test Set Up 2:

Single Pipe Product Specifics

String No	Material	WT	Pipe OD	Coating		Product OD
				Type	Thickness	
1	Carbon Steel	25mm	18"	Concrete	38mm	21"

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Trial Test 1 Results March 2017:

Trial Test was conducted on a recovered offshore multistring conductor at UCS's yard. The Diamond Wire Saw was set up with the same reliable parameters that have shown consistency over the years. The resulting cut on the product performed in an impressive time of under an hour.

Trial Test 2 Results March 2017:

A second trial test was performed on a single string offshore recovered pipe with the dimensions of **18" OD x 1" W.T c/w 1 1/2" Concrete**, again with the same parameters using the dependable auto feed function delivered an exceptional cut time that was industry noteworthy.



TOTAL CUTTING TIME
57mins and 20secs



TOTAL CUTTING TIME
11mins and 44secs

Summary

UCS will continue to perform Client trials and in-house testing trials with the view of maintaining and improving current technology. These trials also ensure continuity and repeatability in the effectiveness of the tooling.

Examples of offshore cutting times

- Carbon Steel XL60 - **42" OD x 1/2" W.T** – 26 minutes
- Carbon Steel Water Injection Pipe – **12" x 38mm W.T** – 18 minutes
- Carbon Steel S355 – **12" x 22.2mm c/w 30mm PU coating** – 21 minutes
- Carbon Steel XL 60 – **24" x 1" WT** – 27mins
- Carbon Steel SML415 - **16" x 22.5mmWT c/w 3mm 3LPP** – 23 minutes
- Carbon Steel XL60 – **32" x 19.1 c/w 50mm concrete + 7.2mm 3LLP** – 30 minutes
- Carbon Steel XL60 Spool - **24"x 20.6mm WT c/w 50mm concrete, cut at 7 degrees** – 31minutes

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