

**CASE STUDY**

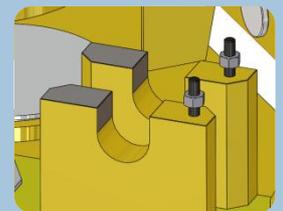
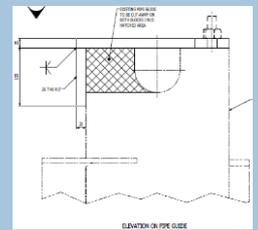
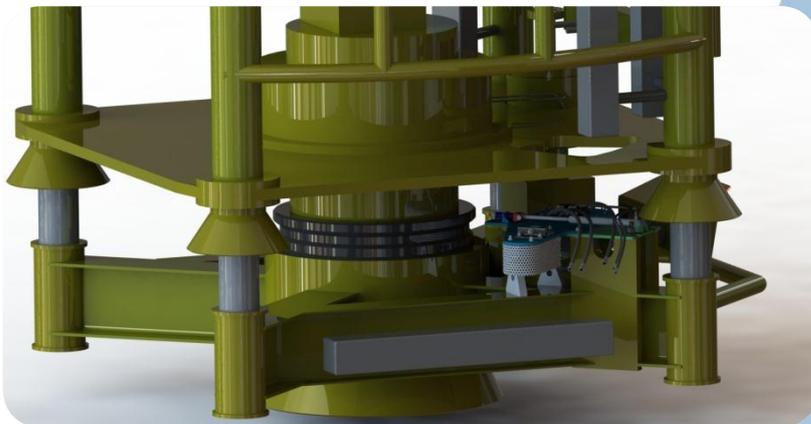
**Overview:**

After developing and manufacturing our 42" Diamond Wire Saw we carried out several months of R&D to source the best Diamond Wire on the market. Through extensive research and working very closely with Diamond Wire Manufacturers we provided the specifications for them to commission our own Diamond Wire which has proved to provide the best results to date. Not content with this we then continued trialing various off the shelf Diamond Wires and have sourced a couple of reliable suppliers which can supply Wires at short notice and provide an efficient cut on both cost and performance.

After numerous successful projects completed, on various product sizes and material of pipe, the feedback received was all very positive with UCS achieving cutting results which surpassed both UCS and our Clients expectations for both speed of cut and efficiency of wire. As UCS gained greater experience and grew ever confident with diamond wire cutting technology and methodologies a decision for progression was made to fulfill bespoke diamond wire cutting solutions.

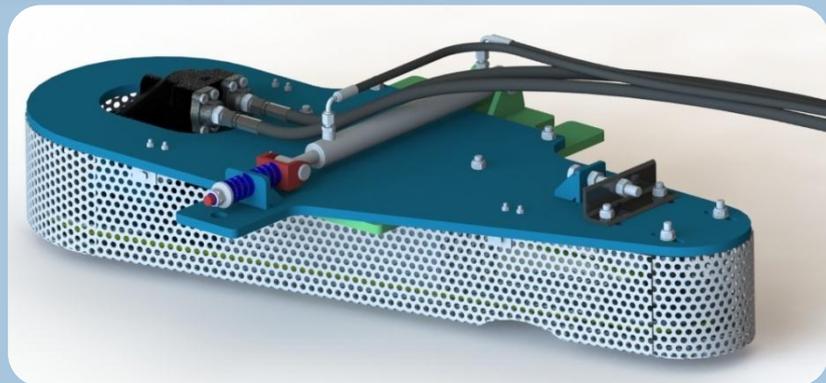
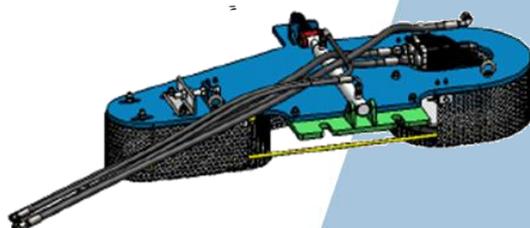
**Grayloc:**

UCS received an enquiry for the cutting of Gas Lift Spool support brackets (Steel BSEN-10225: 2001(E), S355G7 + (N) Plate – approx. 190mm long x 90mm deep to be removed per bracket). As a standard UCS pillar and clamp design would not be suitable for this application, UCS proceeded to design bespoke diamond wire tooling suitable for the required task.



**Product to be cut:**

Gas lift spool support brackets (Steel BSEN-10225: 2001(E), S355G7 + (N) Plate – approx. 190mm long x 90mm deep to be removed per bracket



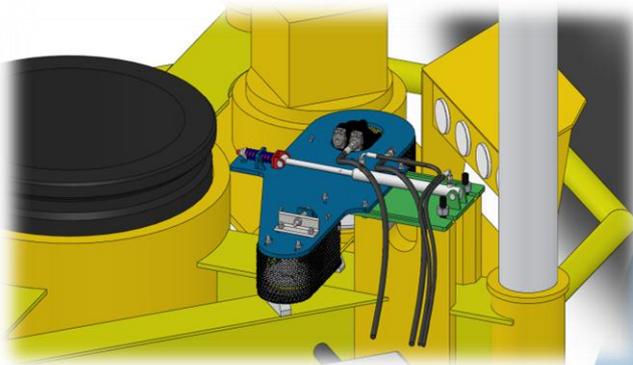
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### Tooling Specification:

	Metric	Imperial
Cutting Capacity	Ø100mm to Ø558mm	Ø4" to Ø22"
Diamond wire	Length 2691mm	105.94"
Hydraulics Systems Requirements	Minimum 50 - 60lpm @ 270 bar	13 - 16 US gpm @ 3045 psi
Hydraulic oil type	ISO VG32 or Equivalent	ISO VG32 or Equivalent
Blade Speed	Variable to 22 m/s	Variable to 72 ft/s
Typical Cutting Speed ( Dependant on pipe wall thickness)		
Max. Carriage Travel Speed	37.5mm/min	1.47 ins/min
Mass in Air	85kg	551lbs
Length	1246.89mm	49"
Width (without buoyancy installed)	918.5mm	36.16"
Height	342mm	13.5"

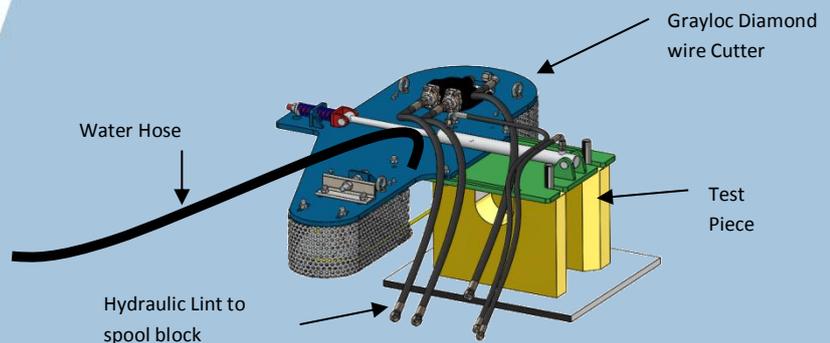
### Operational Set Up:

Grayloc Diamond Wire Cutter:



### Trials:

Client Trials – Qualification Test		
Test Piece	Cutting Equipment	Supporting Equipment
2x 90mmx190mm plate	Grayloc Diamond Wire Cutter	Hydraulic Power Unit Hydraulic Hoses / Water Hose



### Results:

All Testing Satisfactory and completed with no issues in a respectable time of 47 min.

### Summary:

UCS were competing with other subsea cutting and decommissioning companies to win this job and have provided a cost effective and efficient solution within a small timescale to win the contract. This is one of many bespoke cutting solutions that UCS has fulfilled to meet client requirements, highlighting UCS capabilities and commitment to meeting the need of current or potential clients, be it with 'off the shelf' tooling or specifically designed and manufactured tooling.