



# CASE STUDY

## Recovery of subsea anchor lines

### SCOPE OF WORK

Our customer needed to recover 10 off 140mm ground wires that had been abandoned in a water depth of 110 meters. The wires were situated on the seabed, with one end connected to a drag embedment anchor and the other end free.

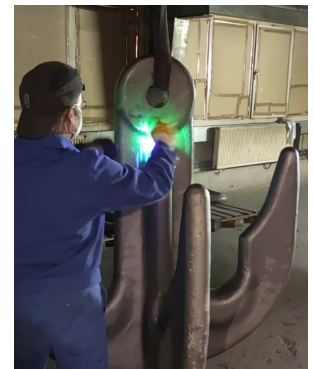
The most suitable method for this operation would be to employ a wire grapnel to retrieve the wires.

### THE CHALLENGES

- 1 Standard grappling equipment was designed with pockets of only 120mm.
- 2 The client specified a requirement for double fluke engagement with the wire rope. However, due to the wire curvature in this formation, the pockets of a standard grapnel would need to be significantly increased.
- 3 The equipment had to be on-site in 12 weeks.
- 4 Considerations had to be made regarding the operational loading of the grapnel while submerged, as well as the forces exerted during deployment and recovery over the stern rollers of the vessel.

### SOLUTION

- Aligning both our engineering and operational teams with the customer provided us with a clear understanding of the precise deliverables.
- As all Crosby Feubo chasing equipment is cast, this allowed for the re-engineering of a conventional grapnel, resulting in an increased pocket width from 120mm to 230mm.
- By utilizing 3D modeling and FEA techniques, we successfully redistributed redundant material to areas with higher stress in the new design.
- This approach enabled us to make minimal changes to the weights and overall dimensions of the unit while maintaining maximum strength and durability.



### RESULTS

Two units were delivered on budget and ahead of schedule with a comprehensive certification package. The innovative grapnel design allowed for successful recovery of the subsea anchor lines, demonstrating the engineering proficiency of Crosby Feubo products and Crosby's ability to provide specific solutions for customers.

### ABOUT US

Crosby, a KKR portfolio company, is a global leader in the innovation, manufacturing and distribution of products and services used to make lifting and rigging safer and more efficient, with premier brands such as Crosby, Gunnebo Industries, Crosby Straightpoint, Crosby BlokCam, Crosby Airpes, Crosby IP, Crosby Feubo, Crosby Trawlex, Crosby Lebus, McKissick, Speedbinders, and ACCO.

With global engineering, manufacturing, distribution and operations, the company provides a broad range of products and solutions for the most demanding applications with uncompromising quality that exceed industry standards.

