



CASE STUDY

Safaniya Jacket Removal , KSA

- **60% REDUCTION IN OVERALL CUTTING TIME**
- **JACKET LEG CUTTING COMPLETED AHEAD OF SCHEDULE**
- **ONSITE AGILITY PROVIDED SOLUTIONS TO CHALLENGES**

Utilising its innovative ultra-high pressure (UHP) abrasive water jet internal cutting system, James Fisher Offshore (JFO) has successfully completed jacket removal as part of a wider decommissioning programme on one of the world's largest offshore oilfields.

Project scope specified use of an internal cutting system with capability to cut the piles to a minimum of 1.5mtr below seabed level.

JFO created immediate cost and time savings for the client by mobilising from its base in KSA, deploying its UHP abrasive water jet internal cutting system capable of delivering speed, reliability and accuracy.

JFO's knowledge and experience were ably demonstrated during first deployment with an unforeseen protrusion within the pile at 9mtr. Mitigating risk, avoiding delay and associated cost, the JFO team drifted to guarantee clearance of the downhole cutting head (DCH), performing the first cut at 1.5mtr above the seabed.

Excavation was then launched on the soil plug inside the pile utilising JFO's bespoke Airlift tool to provide clearance for the DCH to perform the clients requirement of severance 1.5mtr below the seabed.



The unique airflow of the JFO cutting system negates the need to de-water, minimising the equipment requirement and delivering an impressive 60% reduction in overall cutting time. In parallel, the cut verification system ensures complete operator and customer certainty, reducing the risk of stitching and, ultimately, reducing risk of over-run on high cost projects.

During cut operations, JFO experienced several insert piles in different locations which had not previously been shown on drawings. JFO were able to adapt to the situation by adjusting the cutting system, utilising a supply of spare parts such as a slower gear box, allowing us to undertake many parameters offshore, efficiently and successfully.

All jacket legs were successfully cut ahead of schedule, using the cut monitoring and advanced control system to perform the cuts without damaging the adjacent live risers.

The combination of the JFO teams' experience, the advanced control system and cut monitoring, enabled the onsite adjustment of cutting speed to ensure successful cut on all piles.

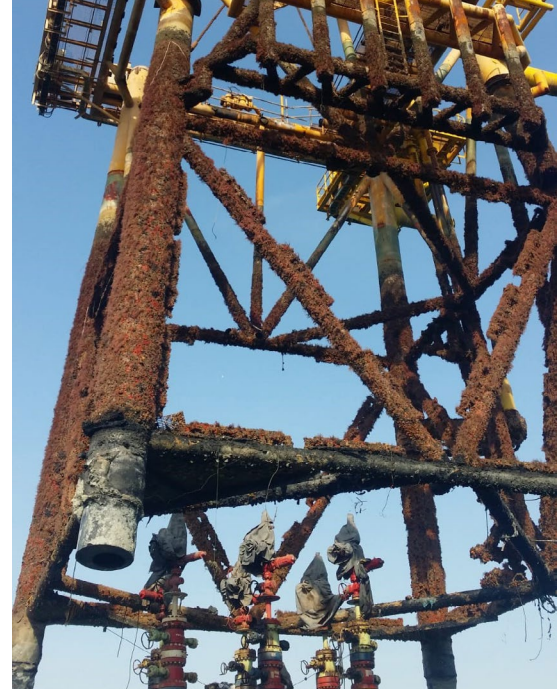
"NPCC appreciate are very satisfied with both the James Fisher Offshore 'abrasive cutting equipment' and 'personnel' whom have been offshore operating the equipment.

The cut verification system has advised exact real time cut data and allows continuous monitoring of the cut throughout the full severance process.

The JFO Supervisors out on the jobs are very knowledgeable with the abrasive cutting equipment and are backed up with competent technicians within each team.

NPCC look forward to keep up the successful cuts moving forward at the up-and-coming slipover locations."

Offshore Construction Manager



CUT DETAILS

Year	Platform	Scope of Work	Location	Cut method	Number of cuts	Cut time
2019	SFNY 65	Multi-string 16" @ 20mm Inner + 37mm grouted annulus + 13mm Outer string	KSA	Internal DCH II	8	19 minutes per cut
2019	SFNY 93	Jacket legs/piles 42" @ 25.4mm WT	KSA	Internal DCH III	4	43 minutes per cut
2020	SFNY 91	Jacket legs/piles 42" @ 25.4mm WT	KSA	Internal DCH III	4	37 minutes per cut
2020	SFNY 72	Jacket legs/piles 20" @ 25.4mm	KSA	Internal DCH II	5	17 minutes per cut
2020	SFNY 610	Multi-string 4 x cuts @ 25.4mm 2 x cuts @ 143mm WT (pile insert @ 20mm + pile leg @ 25.4mm + pile sleeve @ 42.5mm)	KSA	Internal DCH III	6	25.4mm 35 minutes per cut 143mm 65 minutes per cut
2020	SFNY 354	Jacket legs/piles 42" @ 25.4mm WT	KSA	Internal PCH	6	40 minutes per cut
2020	SFNY 378	Multi-string Abrasive internal cut of pile OD 42" + Insert pile of 30" fully grouted between annulus."	KSA	Internal PCH	6	72 minutes per cut
2020	SFNY 281	Multi-string Abrasive internal cut of pile OD 36" @ 38.1mm WT + Insert Pile on 3 legs 20" @ 18mm WT Including 6" grout between annulus Jacket Leg / Piles: Abrasive internal cut of pile OD 36" @ 58.1mm WT"	KSA	Internal PCH	6	248 minutes per cut 50 minutes per cut
2020	SFNY 31	Jacket Leg / Piles Abrasive internal cut of pile OD 36" @ 50.8mm WT"	KSA	Internal PCH	6	65 minutes per cut
2020	SFNY 32	Jacket Leg / Piles Abrasive internal cut of pile OD 36" @ 38.1mm WT"	KSA	Internal PCH	4	42 minutes per cut
2020	SFNY 107	Multi-string Abrasive internal cut of pile OD 42" @ 38.1mm WT + Insert pile of 22" fully grouted between annulus."	KSA	Internal PCH	4	156 minutes per cut
2020	SFNY 210	Multi-string Abrasive internal cut of pile OD 36" @ 38.1mm WT + Insert pile of 20" fully grouted between annulus + 2" grout line	KSA	Internal PCH	3	163 minutes per cut