

CASE STUDY

Shell Exploration, their rig partner Apache North Sea and rig contractor Diamond Drilling.

Shell UK have installed an industrial ballistic, blast & frag safety curtain on its Ocean Patriot semisubmersible drilling rig operating in the UK sector of the North Sea with great impact on cost and safety performance.

The idea of using this technology on the Ocean Patriot came after a Value Creation event between Shell, their rig share partners Apache North Sea and the rig contractor Diamond Drilling.

The rig high pressure manifolds need to be pressure tested every 14 to 21 days to verify the well control barrier is in order. Normally, the rig floor had to be completely cleared of personnel which delays operations until the testing is complete (ref: API standard 53 - 4th Edition, Blowout Prevention for Drilling Wells).

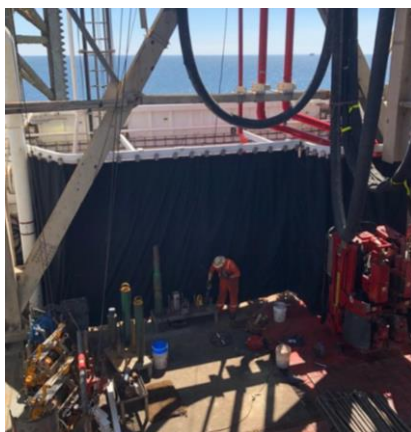


By installing a certified non-flammable blast & frag safety curtain using the JBS impact resistant ballistic curtains, the crew are protected from any potential manifold failure and can continue working during pressure testing thereby improving performance and reducing crew exposure.

According to Shell UK, the installation of the blast & frag curtains on the Ocean Patriot both reduced crew exposure to high pressure operations and identified a potential cost saving of over \$4.8 million in just 18 months.

This is an example of how operational safety and safety performance goes hand in hand, reducing crew exposure and making significant time and cost savings.

In pursuit of Shell's Goal Zero and Top Quartile Performance the Shell team collaboratively worked the idea supported by Shell Technical Safety and Wells HSSE, putting together a demonstration, financial justification, ordering and ultimately installing the blast & frag safety containment system.



JBS are the approved global distributor for the BlastTac curtains and blankets. BlastTac is unmatched in innovation and performance. The SB series offers superior effectiveness in extreme applications where frag, ballistic, fire or arc protection is required.

Blast containment fabric is a Shell International approved technology. The technical team from Shell performed their own testing on the blast containment fabric before authorising the fabric as a Shell International approved technology. For offshore use in a hazardous area the fabrics must be non-flammable hence the SB72FM series containing Firemax is mandatory – SB72FM is the only blast containment fabric approved for use in an oil & gas hazardous area.

- Independently tested and certified by **Chesapeake Testing Labs** in North Carolina.
- Truly non-flammable with Firemax and certified for oil & gas use.
- Tested in accordance with **U.S. Military, UL standards.**
- Tested in accordance with **ASTM International Test Standards.**
- Thoroughly tested in-house by **Blastac (Breton Industries).**
- Independent assessment performed by **DNV GL** for oil and gas blast curtain application. 3rd party approved by Lloyds Register.
- Approved by oil majors such as Exxon Mobil, Shell, Chevron, Conoco Phillips, TOTAL, BP Amoco.

