

# HOT BOLT REPLACEMENT

## Workscope

Stork was contracted to carry out four bolt flange replacement on the BP Andrew.

Stork were also asked to carry out a pre job survey on the platform to determine a fixed scope of work.

## Solution

A pre-job survey was recommended and agreed with the client. This allowed work to be planned efficiently in line with ongoing work scopes.

All flanges worked were under live working conditions allowing the HBC team to work on the flanges without the need to de-pressurize and purge any lines, removing the requirement for a costly shutdown.

## Innovation

The Hot Bolt Clamps are a set of purpose designed hydraulic clamps that clamp a set of pressurized bolted flanges together so stud bolts can be safely removed.

The clamps have been specifically designed to allow the hot bolting of four bolt flanges (it is not limited this number of bolts).

*"BP contracted Stork to carry out four bolt flange replacement bolt programme and this entailed using hydraulic clamps to change the bolts out on live systems. We found the attitude of the Stork technicians to be of an excellent standard. They displayed a safe and conscientious attitude towards the tasks they were asked to carry out and completed the scope in less time than planned."*

### Alan Love

Andrew Mechanical Engineer  
BP North Sea Region



## Project information:

- Maximum working pressure – 689 bar
- Hand pump operation

## Typical application:

- 4 bolt flanges
- Working from 150 # to 600 # rated joints
- Temperature range up to 90°C

## Works in conjunction with:

- Controlled torque tightening
- Ultrasonic bolt length measurement

## Results & benefits:

- Stork's HBC team replaced the bolts in over 100 flanges in 4 weeks with 100% success rate
- The full work scope was carried out in time and within the CTR budget
- Work scope completed safely and on time and with zero incidents
- Job completion and work pack completion reports given to the client within 7 days of demobilization of the men and equipment