RESEARCH AND DEVELOPMENT

Extended Reach Breathing Apparatus System (ERBAS)

Stork continually develops its product and service offering to include new innovations that improve the health, safety and performance of the company, its operatives and its clients' operations.

Stork currently has the largest number of confined space operations in the North Sea and over the last two years we have actively sought to improve and support these operations by initially creating our own dedicated in-house breathing apparatus and gas detection department.

Stork is proud to develop a unique soltuion to an industry wide challenge; Extended Reach Breathing Apparatus System (ERBAS). This system would be used for operations beyond the range of the 10 mnutes escape cylinder, predominately platform legs and FPSO tanks where an escape can take considerably longer than 10 minutes.

Using a newly designed and developed cylinder High Pressure (HP) connector, ERBAS solves the industry challenge of awkward and difficult cylinder changes and is easily deployed in the work area. ERBAS quite simply refills the Air cylinder with one connection in under 60 seconds.

Benefits include:

- Improved safety
- Ease of use, one hand operation while gloved
- Eliminates cylinder change
- Compact design for rapid deployment
- Cylinder refilled in under 60 seconds
- Entry to vessel now possible on cylinder, eliminating airline trip hazards
- Minimal daily maintenance

The hazardous working conditions operatives face.

Stork's ERBAS technology can be utilised in four different ways.

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Full research, development, trialling and testing with major North Sea Operators is currently underway by our experienced in-house Breathing Apparatus (BA) team; to improve the system and deliver an innovative approach to confined space entry.

ERBAS addresses several safety concerns:

- Compared to other cylinder exchange systems, which involve winching substantially more equipment into the confined space which is both time consuming and dangerous, Stork's ERBAS refill stations are very compact and have everything protected within a rugged case making it faster, easier and safer to deploy
- ERBAS significantly reduces cost to the client and requires almost no maintenance, whereas the old system required constant refills after each safety drill. This would be an operation that could take an entire shift to perform and can even involve winching the cylinder out to refill them
- ERBAS is simple to operate whilst wearing all appropriate PPE in difficult working conditions
- The system is much faster than the conventional method and will result in shorter evacuation times and ultimately may save lives

ERBAS emergency cylinders.

ERBAS consists of the following components:

- One high pressure air bank unit capable of delivering air at 220 bar continuously
- One hose reel of 200m HP airline with connection points for the refill units every 20m
- Multiple refill stations, with refill panel and 6 backup 2ltr cylinders

Stork's ERBAS Refill stations.

ERBAS refill operation:

In the event of the main airline failing the BA operative immediately switches on their escape cylinder. The operative would then disconnect the failed airline from their BA set and begin their escape up the platform leg, after 6-7 minutes or cylinder gauge showing half full, the operative will locate the nearest refill station, remove the rubber cap from this cylinder connection, pull the nozzle out of its holder and push it onto the cylinder connection.

The air will flow into the cylinder and after approximately 40 seconds the gauge will register full. The nozzle can now be pulled off to disconnect it from the cylinder and returned to its holder. The BA operative can now continue their escape up the leg.

Essentially, the system is easier to use and quicker to operate. In turn, this ensures a safer and a more efficient method of refilling essential air supplies.