

BERMAD

FIRE PROTECTION CONTROL VALVES

OFFSHORE APPLICATIONS



THE HEART OF YOUR SYSTEM



EXPERIENCE, RELIABILITY, COMMITMENT

Whether in the depths of the ocean or just miles from the shore, the marine environment is always a hazardous place to work.

With globally proven fire protection solutions for offshore facilities, BERMAD Deluge Valves safeguard valuable life and property.

BERMAD

PROTECTING THE HEART OF YOUR SYSTEM



COMPANY PROFILE

AT BERMAD, THE PRIME FOCUS IS ON RELIABILITY, EXPERTISE AND INNOVATION. THAT'S WHAT'S BEEN DRIVING US SINCE 1965. THE RESULT IS THAT TODAY, BERMAD IS INTERNATIONALLY ACKNOWLEDGED AS A LEADING SUPPLIER OF CONTROL VALVES FOR FIRE PROTECTION SYSTEMS.

Reliability. When all hell breaks loose, fire protection systems must perform. Sitting at the heart of the system BERMADs valves are devised to be absolutely fail proof. That's why BERMAD valves are the first choice when it comes to the most extreme fire fighting environmental conditions around the globe. BERMAD systems are employed in Oil & Gas high risk facilities, Offshore platforms, FPSO and other drilling & production vessels, refineries and storage facilities.

Expertise. The BERMAD Fire Protection engineering team has been involved in the leading Offshore projects around the globe. With vast knowledge and experience in fire fighting systems, BERMAD is your partner from system design to installation and commissioning, and ongoing service and support. With a firm reputation for reliability, BERMAD products are enhancing fire protection safety in the US, Australia, Mexico, Brazil, China, Singapore, Thailand, Italy, North Sea, South Africa, West Africa, Middle East, North Africa and many more locations both Offshore and Onshore.

Innovation. Known for setting the market standard, BERMAD was the first to introduce a compact deluge valve designed for service within the line allowing minimum production downtime. Other innovations include the Direct Position Indicator, the EasyLock™ manual reset that allows quick reset with no need to open the valve and a remote reset that allows installation in protected areas thus saving infrastructure cost. Driven by industry needs BERMAD is committed to your safety and productivity.

4 **BERMAD'S dedication to its core values, together with meticulous attention to details has enabled us to provide the Oil & Gas industry with durable solutions for reliable fire protection, delivered on time.**



PLATFORM

Power Generation Units - Deluge valves for water mist systems

Wellhead area - Automatic deluge systems

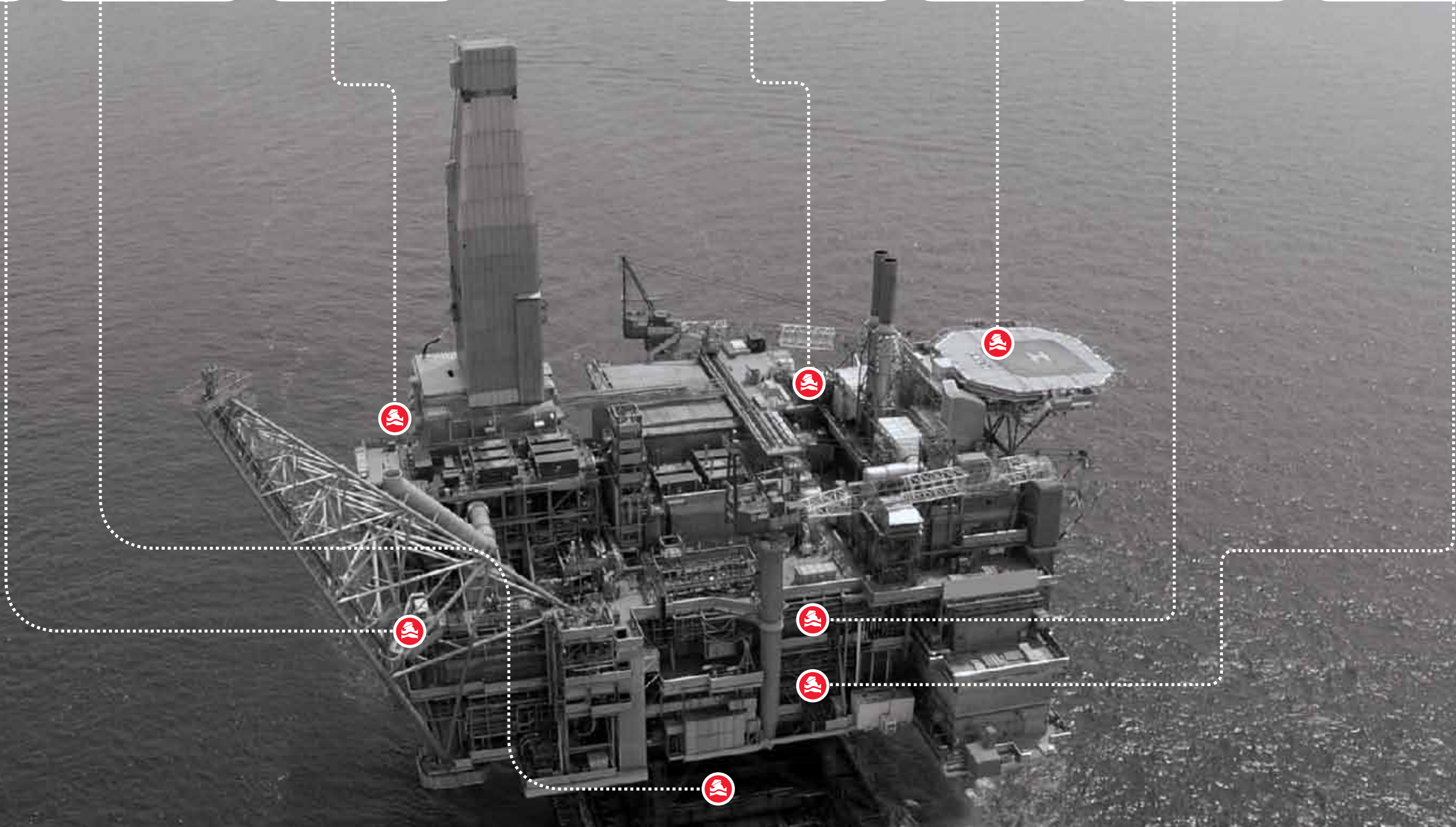
Fire Pump - Pump control & pump relief valve

Oil Storage Tanks - Foam systems

Helicopter Landing Deck - Automatic / remote control Deluge and Monitor valves

Seperators / Storage Tanks - Automatic water deluge systems

Workshops - Deluge water spray systems



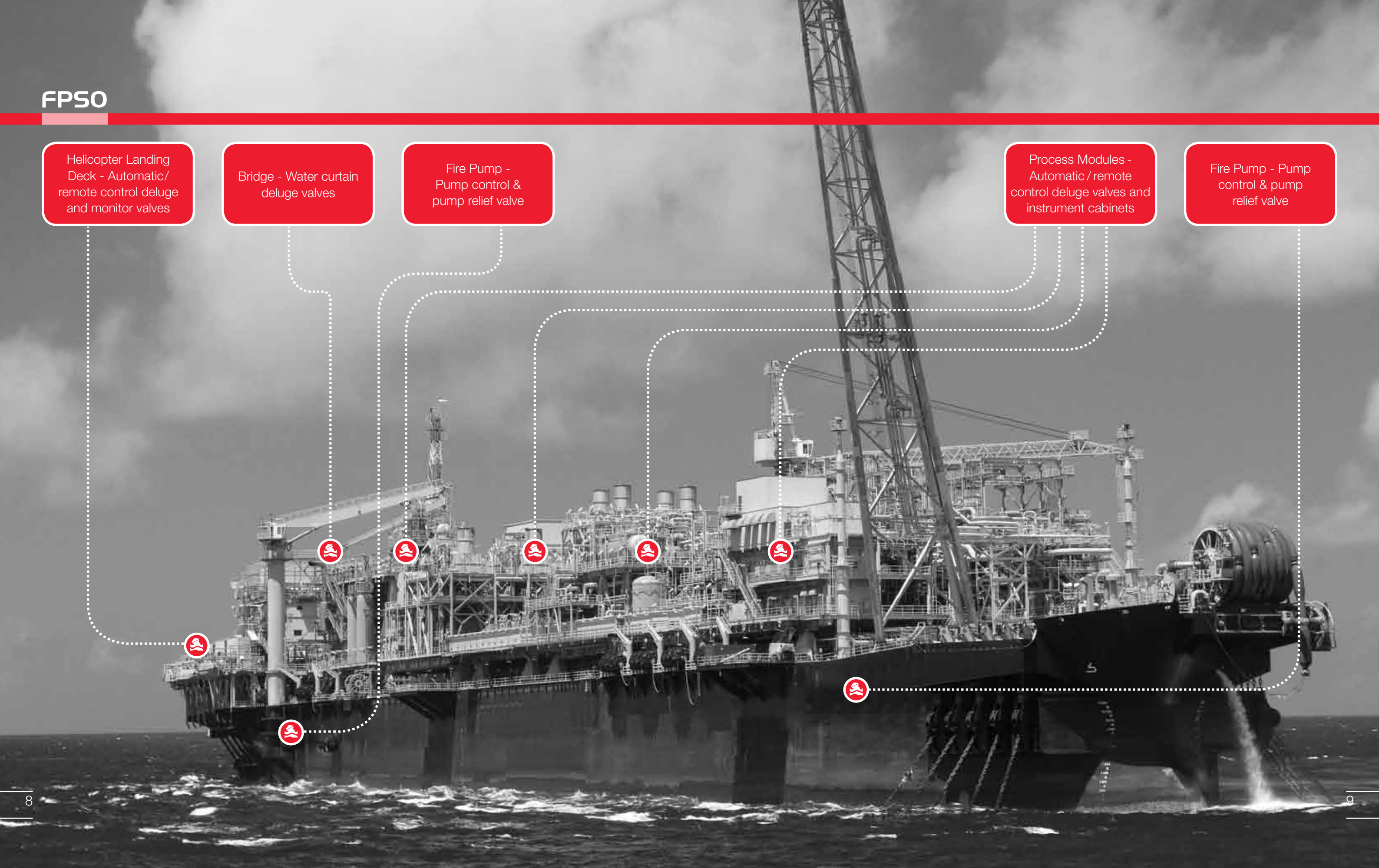
Helicopter Landing
Deck - Automatic/
remote control deluge
and monitor valves

Bridge - Water curtain
deluge valves

Fire Pump -
Pump control &
pump relief valve

Process Modules -
Automatic / remote
control deluge valves and
instrument cabinets

Fire Pump - Pump
control & pump
relief valve



LEADING PROJECTS



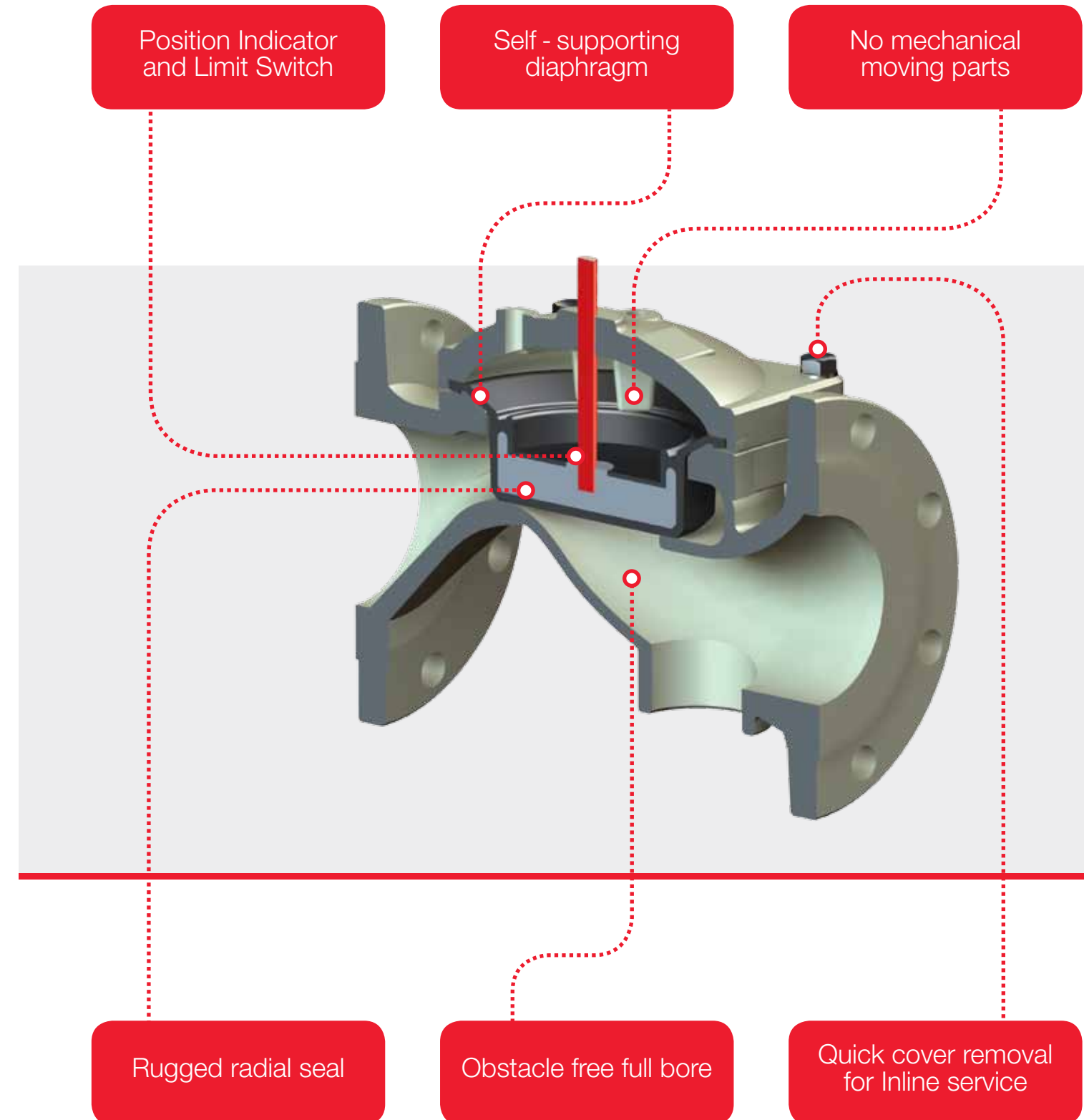
The perfect solution for offshore & marine environments

1. Design

- Fail-safe open design ensuring valve opening under any circumstances
- Hydraulically self actuated
- Designed for operation in seawater environment
- Peripherally supported elastomeric radial seal
- Fail proof: no metallic mechanical moving parts
- Obstacle free, full bore solution for uncompromising reliability
- Fully compatible with electric, hydraulic or pneumatic control
- Solid, one-piece rugged radial seal disc for long life durability
- Designed to be serviced in the line allowing minimum production downtime

2. Materials of Construction

- Nickel Aluminum Bronze ASTM B148 C95800
- Hastelloy C - 276
- Monel
- Stainless Steel 316 ASTM A351 Grade CF8M
- Titanium - Grade 2



3. Operation

- Automatic Deluge Valve with remote on/remote off
- Flow control, enables constant preset flow to the protected area
- Remote reset on command
- In-line serviceable with field replaceable internal parts
- System reset without opening the valve



4. Signal, Indication & Instrumentation Trim

- Direct acting valve position indicator
- Valve position Explosion Proof proximity switches with no moving parts
- All sensors suited with Monel/Hastalloy wetted parts
- Explosion Proof indicators, Pressure Gauges and switches with Monel wetted parts



5. Innovative, Compact, High-End Design Solutions

- Pneumatic pressure maintenance trim
- Custom made solutions for instrument panels
- Compact & Innovative designed control trim cabinets
- A60 Explosion Proof cabinets - ABS certified
- Compact valve - saving space and allowing for flexible system design, installation and service.



6. Standards

- Approved by ABS & Lloyd's Registered
- Fire Resistant, Fire Test to ISO 6182-5
- Allows installation in the protected area
- Infrastructure cost-saving
- Explosion Proof - EExd, EExed, EExia, INMETRO



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