

A better habitat

Hot-Hed International discusses safely undertaking offshore platform repairs without halting production.

Since the first successful North American oil well was established in Oil Springs, Ontario, Canada in 1858, through the multiple American oil rushes and the Middle East petroleum boom until now, the petroleum industry has had a host of hazards to contend with.

These hazards seriously affect the health and safety of oil company employees, global environmental safety and conservation, operations of oilfields, offshore rigs and pipelines, infrastructures which support them and companies' revenue and production losses.

Whether oil and gas projects are located onshore, offshore or are pipeline-based, these health, safety and



environmental (HSE) hazards are a constant, universal concern for operators globally. With millions of kilometres of pipelines around the world, as well as a vast number of oilfields and offshore rigs, HSE is a top priority for petroleum industry companies in all sectors – upstream, midstream, downstream, brownfield and greenfield.

This is where Hot-Hed and its highly experienced engineers, crews and technicians excel, and where Hot-Hed's Habitat® Hot Work Safety Enclosure (HWSE) has played a key role in ensuring operations are maintained and executed to exact petroleum industry safety standards.

Controlling hazards in oil and gas

Before the days of HWSE, operators were required to shut down production platforms while repairs and other potentially hazardous activities took place. This greatly affected the bottom line of many oil and gas companies.

Hot-Hed introduced its original pressurised Habitat HWSE to the petroleum industry in 1991 – the first Habitat HWSE ever, which was designed specifically for safely enclosing wellhead installations on live production platforms. This revolutionary invention enabled operators to continue production while welding, completely eliminating the need to shut down. Hot-Hed's Habitat was a first in terms of improving oil industry safety in this manner, which propelled the company's global expansion that same year.



Figure 1. Hot-Hed's Habitat® HWSE deployed on a major offshore platform.

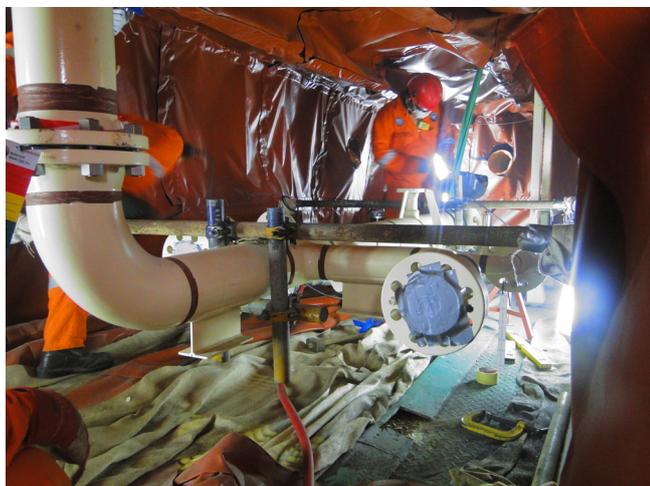


Figure 2. Offshore welding in safety inside a custom configuration of Hot-Hed's Habitat.

Since then, the Hot-Hed Habitat HWSE has undergone further modifications to keep up with continuously changing industry safety standards.

Experts and innovators

Hot-Hed was established in 1981 in Houston, Texas when the company's founder invented its patented, signature product which is still utilised by petroleum industry companies today – the well-known and expertly engineered Hot-Hed pre-heating/post-heating system for wellhead installations. This was the company's first revolutionary oil tool – an exothermic heater designed to uniformly raise wellhead and casing temperatures to API Standards in 5 - 10 min., while maintaining those temperatures long enough to complete inner and outer welds.

Hot-Hed's founder was known as an inventor and forward-thinking innovator with a reputation for conceiving better, safer, more efficient procedures in which to perform oilfield work. His unique manner of approaching, inventing and designing much-needed products and services for the petroleum industry, along with his engineering expertise, resulted in his being recognised for Engineering Innovation by Petroleum Engineer International in 1988.

This and the founder's drive to improve then-current petroleum industry safety standards, as well as his subsequent inventions, helped Hot-Hed become a globally trusted oilfield services company; which is still recognised today for its industry expertise and exacting attention to safety requirements and standards.

Hot-Hed's Habitat launch

Hot-Hed launched its Habitat HWSE in 1991 – just 10 years after releasing its Hot-Hed pre-heating/post-heating system – and realised global expansion that same year. This was the birth of the first Hot-Hed Habitat HWSE on the market and it was engineered for use in conjunction with wellhead installations on live production platforms, which poses many hazards. The Hot-Hed Habitat HWSE has since been successfully used by petroleum industry companies worldwide for over 25 years, consistently saving their clients immeasurable time, money and resources.

Hot-Hed Habitat history

Before the invention of Hot-Hed's Habitat, operators were forced to completely shut down, resulting in significant revenue and production losses. Hot-Hed's HWSE changed all that, suddenly allowing operators to continue production while safely keeping welders and associated dangers – such as sparks, flames, hot splashes and volatile fumes – contained, preventing vapours and gaseous materials from igniting or exploding. This was revolutionary for the oil and gas industry, and for Hot-Hed as an oilfield services company.

As the petroleum industry changed, introducing new technology and related safety standards and operations procedures, Hot-Hed's Habitat changed right alongside it. Since Hot-Hed's founder first designed and engineered the original Habitat, he wanted to ensure its HWSE was continuously upgraded, reengineered and redesigned to reflect, meet and exceed ever-changing oil and gas industry safety standards, while allowing for hazardous but crucial activities to be undertaken.



Figure 3. Hot-Hed's Habitat in use offshore Trinidad and Tobago.



Figure 4. Fully customised Hot-Hed Habitat utilised on offshore platform.



Figure 5. Hot-Hed Habitat client demo at the company's Trinidad and Tobago location.

The company soon introduced its modular Habitat, which was even more ground-breaking and flexible, permitting repairs, all types of welding and other potentially hazardous activities to be undertaken in Hazardous Zones 1 and 2 without the need to shut down. This was another industry first, which greatly increased oil and gas operations, productivity and revenue, while adhering to and surpassing current OSHA and OHSAS 18001 standards. Hot-Hed's Habitat continues to be manufactured, certified and operated – complying with industry safety standards – to the present day.

Enhancing operations safety in other industries

Since Hot-Hed's invention of the original HWSE, other industries – including petrochemical, mining, blasting, aviation, electrical, civil engineering, construction, defence contracting, welding, shipping and maritime – have also adopted the Hot-Hed Habitat HWSE to enhance safety while undertaking potentially hazardous repairs and operations. There seems to be no limit to how this innovative, problem-solving company's inventions and talented engineers and technicians can be utilised to further fulfill countless industries' safety standards, all while saving companies significant time, money and resources. 

Core features of the Habitat HWSE:

- Saves time, money, resources.
- Significantly reduces need for shutdown of operations.
- Portable, positive pressure safety enclosure enables faster, safer repairs.
- Provides physical protection in extreme climates.
- Completely customisable to operator's requirements.

Key safety features:

- Multi-gas sensors, calibrated and certified per client's requirements.
- Fire-retardant modular panels.
- Flame-retardant spiral ducting.
- Positive pressure prevents infiltration of potentially hazardous outside gases and other agents.
- Safe barrier between all types of hot work/welding and flammable materials.
- Hot-Hed's multi-sensor and power shutdown units.
- Continuous fresh air with high air-exchange rate.

The convenience and ease of dismantling and repacking Hot-Hed's Habitat also cannot be understated. Once all hot work has been completed, the Habitat HWSE is torn down and all components of the Habitat system are repacked, ready to be returned to the company. 