

SpanSet®

Solutions for
Marine Operations

04

Height Safety
Lifting
Load Control
Safety Management



SpanSet and the Oil and Gas Industry

SpanSet has gained a reputation in the provision of work at height solutions for use on ships in the oil and gas industry. Complementing our extensive knowledge in Height Safety and work on both onshore and offshore oil and gas installations this area has become a SpanSet speciality.

The solutions began with an understanding of the common problems encountered on vessels and included assistance with work methods, equipment supply and training.

Areas We Consider

The work on a vessel has many similarities to work at height in other industrial locations, but with the added complications imposed by the isolation of the vessel and the cargo it carries.

Solutions

- Access and security at height in plant rooms and over machinery
- Controlled access systems for maintenance and cleaning of vertical areas
- Confined space access to tanks and vessels including rescue and recovery
- Access to masts, antennas and structures for maintenance and repair.

A Common Approach

The aim when setting up solutions is to utilise as few variations as possible to cover as wide a range of applications as possible.

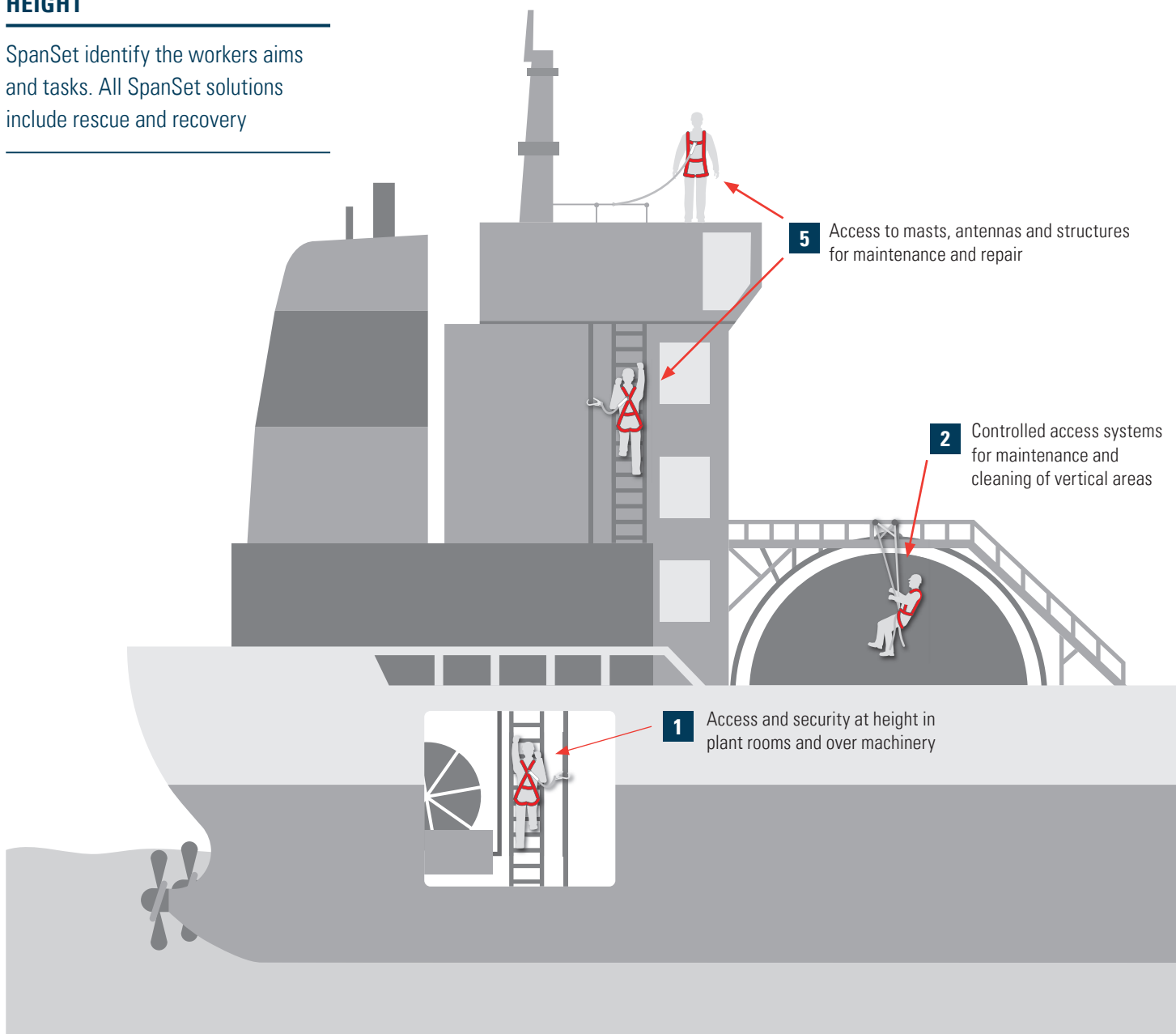
Benefits

- The total equipment required is kept to a minimum
- Commitment for inspection and maintenance reduced
- Staff training is simplified by the use of base items that are included in as many of the solutions as possible
- Staff safety improved
- Controls are easy to implement and manage for work at height as the solutions break the process down into simple, easy to understand layers.

Layered controls are easy to implement and manage for work at height. Where there are multiple vessels included in a fleet, then the solutions should be easily transferable from vessels making it easier to move staff without the need for retraining.

CONSIDERING ALL THE IMPLICATIONS OF WORK AT HEIGHT

SpanSet identify the workers aims and tasks. All SpanSet solutions include rescue and recovery



5 Access to masts, antennas and structures for maintenance and repair

2 Controlled access systems for maintenance and cleaning of vertical areas

1 Access and security at height in plant rooms and over machinery

1 Access and security at height in plant rooms and over machinery

The majority of tasks in plant rooms can easily be achieved from walkways or standard access routes.

Where personal fall protection is required, the close proximity of machinery and equipment is a major consideration. Equipment and techniques selected must take into account:

- Restricted safe clearance heights below the worker
- Communication in noisy environments
- Preventing workers from becoming isolated at height
- Emergency planning and recovery of a worker from a complex area.

2 Controlled access systems for maintenance and cleaning of vertical areas

Gaining access to vertical areas using work positioning systems enables workers to carry out cleaning, painting and maintenance.

Assess the environment, proposed equipment and techniques to prevent workers accessing areas they are unable to get back from.

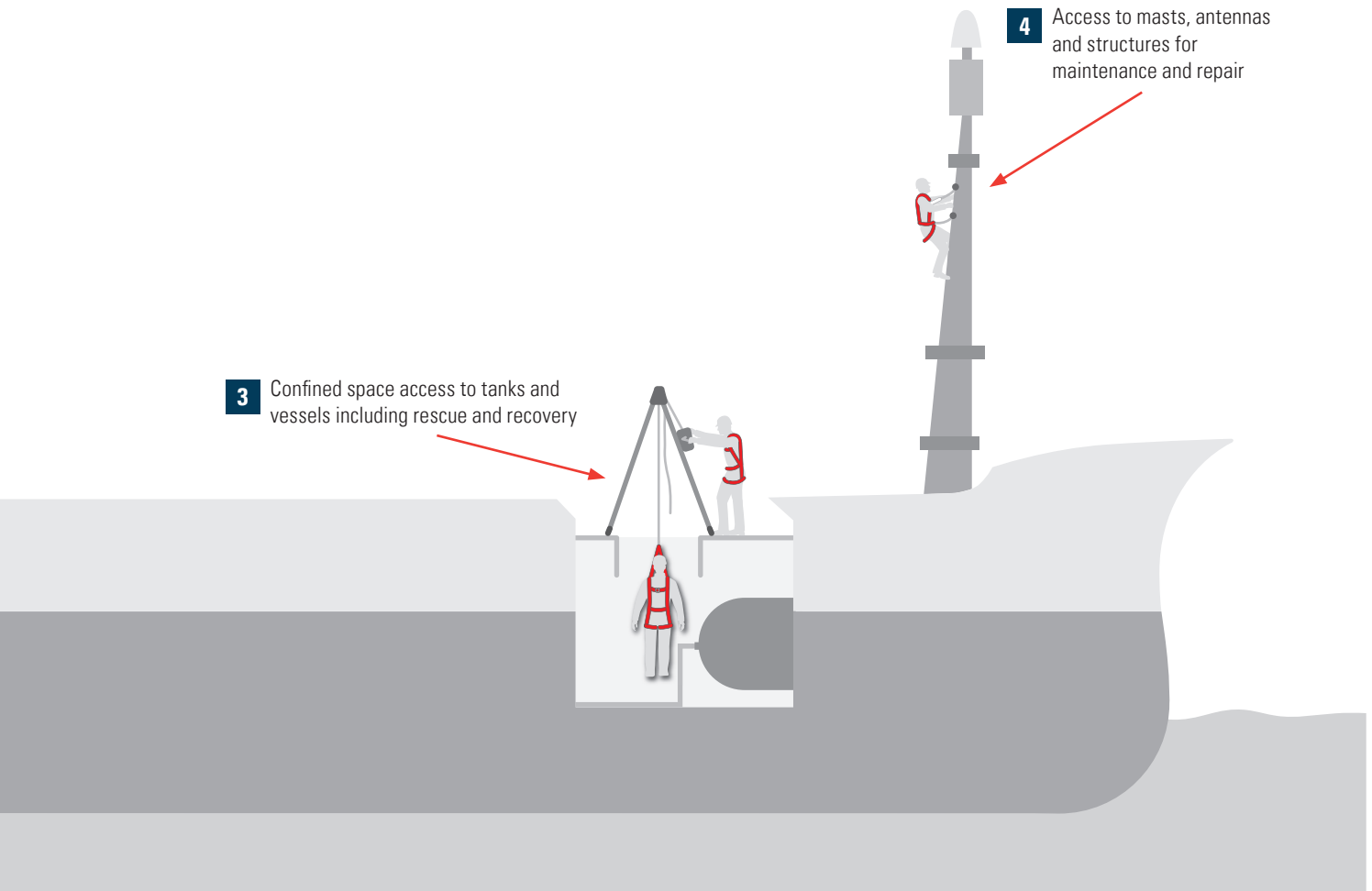
Controls to Consider

- The worker will require a safe area and access to the top of the works to set up the system
- Works can be accessed by lowering or being lowered into a position, but egress may require a raising capability
- As the user is fully committed to the work positioning system a secondary back up is required
- The rescue solution must have the same raising and lowering capabilities as the working system and be compatible with the main working system and the back up system.

SOLUTIONS FOR MARINE OPERATIONS

Pre-assembled kits covering key activities

Bespoke solutions for specific applications



3 Confined space access to tanks and vessels including rescue and recovery

4 Access to masts, antennas and structures for maintenance and repair

3 Confined space access to tanks and vessels including rescue and recovery

Vessels have areas that can be classed as confined spaces. Access to which may be required for inspection or maintenance, eg tanks or pits.

Where no access equipment is in situ a work position system can be added to raise and lower the worker.

It is important to be able to recover the worker back to the point of entry:

- Work positioning systems for accessing the side of the vessel are also suitable for many confined space applications
- A rescue and recovery system that can be operated outside of the confined area will avoid placing rescuers at unnecessary risk
- Assessment of the environment for issues relating to gasses and heat or humidity should also be carried out.

4 & 5 Access to masts, antennas and structures for maintenance and repair

The majority of vessels include masts, antennas or structures that require ongoing maintenance and inspection, eg navigation or warning lights.

The worker will require:

- **Fall protection during access and egress:** A harness and twin leg lanyard for one off tasks, with the option of temporary vertical line systems or fall arrest blocks for more involved tasks
- **Fall protection and support whilst carrying out the task:** Use fall protection equipment for security, adding a work position device to support the worker in location will free up their hands
- **Post fall rescue and recovery procedures:** The procedures must address rescue during access and egress or recovery from the work site.

MARINE OPERATIONS

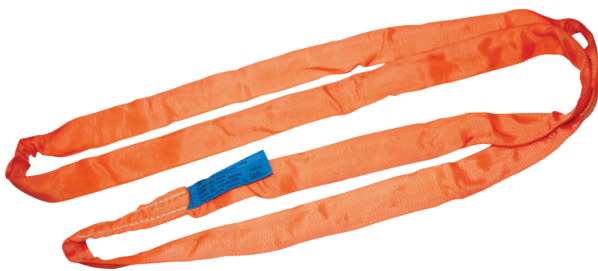
Core Kit

- 1107 WaterWorks Harness
- 4000 Entry and Egress Pulley System
- 3506 Anchor Sling
- 4006 Spreader Bar



1107 WaterWorks Harness

- Suited to the extreme environment of oil and gas tankers
- Oil, water and abrasion resistant webbing
- Stainless steel fittings.



3506 Anchor Sling

- High tenacity 100% polyester attachment round sling
- Rated to 7 tonnes
- 1.5m in length
- Weighs 450g.

4000 Entry and Egress Pulley System

- 4:1 mechanical advantage
- Free wheeling when hauling, adds friction when lowering
- Locking, spring loaded, toothed cam
- One or two person operation



4006 Spreader Bar

- For use in tight confined space entry applications
- Enables a worker to be lifted and lowered with a vertical profile which is impossible with a D ring connection
- A wrist restraint is provided to enable further narrowing of the shoulders, especially during a rescue situation
- Stainless steel bar and 44mm webbing construction with two heavy duty snap hooks.





Core Kit

- 3058E ERGO Twin Leg Elastic Lanyard
 - 3055E ERGO Single Leg Elastic Lanyard
 - Gotcha Original Rescue Kit
 - Tuff Bucket Lifting Bags
 - 3109 Anchorage Line
-

**3058E ERGO Twin Leg Elastic Lanyard**

- 1.8m webbing lanyard
- Snap hook at shock absorber end, scaffold hook at free ends
- Weighs 1723g.

**Gotcha™ Original Rescue Kit**

- Pre-assembled remote rescue kit
- For rescuing a suspended casualty
- Kit contains:
 - Upper and lower pulleys
 - Gotcha™ frog
 - Attachment pole
 - Rope controller
 - Australian Standards rescue rope
 - Rope grab
 - Attachment sling
 - Karabiners
 - Back pack gear bag.

**3055E ERGO Single Leg Elastic Lanyard**

- 1.8m webbing lanyard
- Snap hook at shock absorber end, scaffold hook at free end
- Weighs 1310g.

**Tuff Bucket Lifting Bags**

- 5:1 load rated lifting bags for lifting and transporting tools and equipment
- 2:1 load rated roll-down bucket closure
- Manufactured, engineered and performance tested to 500% of its upright capacity without stress or failure
- Reinforced bottom and heavy duty grommets.

3109 Anchorage Line

- For vertical use
- 16mm 3 strand polyester fibre rope
- Double action alloy steel scaffold hook
- 140kg maximum capacity rope grab



MARINE OPERATIONS

Kit Enhancements

1100 WaterWorks Harness

2500 Pole Strap

Heavy Duty Tripod Bundle



1100 WaterWorks Harness

- Suited to the extreme environment of oil and gas tankers
- Stainless steel fittings
- Oil, water and abrasion resistant webbing
- Confined space loops on shoulders
- Fully adjustable padded leg straps and shoulder/back straps
- Fitted with suspension trauma relief straps.

Suitable for:

Fall arrest, confined space entry, roof work, ladder systems, elevated work platforms, maintenance, construction in corrosive environments.



2700 Pole Strap

- Work positioning strap
- 2.5m long with adjuster and snap hooks
- Polyester webbing sleeve.



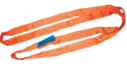








Heavy Duty Tripod Bundle


- For access and security when working in confined spaces
- Tripod comes with a 30m fall arrest and recovery block
- Aluminium rescue tripod (TRIPOD-HD)
- Adjustable from 1.5m to 2.7m
- Rated for use by two persons
- Bracket for mounting the fall arrest block
- Anchor point for 4000 pulley system
- Supplied with clear user instructions
- Individual serial numbered certification for traceability
- CE approved to EN795 Class B
- Recovery block CE approved to EN1496 Class A and B.



Core Kit

		Access and security at height in plant rooms and over machinery	Controlled access systems for maintenance and cleaning of vertical areas	Confined space access to tanks and vessels including rescue and recovery	Access to masts, antennas and structures for maintenance and repair
1107 WaterWorks Harness		●	●	●	●
4000 Entry and Egress Pulley System		–	●	●	–
3506 Anchor Sling		●	●	●	●
4006 Spreader Bar		–	●	●	–
3058E ERGO Twin Leg Elastic Lanyard		Optional	–	–	●
3055E ERGO Single Leg Elastic Lanyard		●	–	–	Optional
Gotcha Original Rescue Kit		●	●	●	●
Tuff Bucket Lifting Bags		–	Training aid for rescue	Training aid for rescue	–
3109 Anchorage Line		●	●	●	●

KIT ENHANCEMENTS

1100 WaterWorks Harness		–	Optional	●	–
2700 Pole Strap		Optional	–	–	●
Heavy Duty Tripod Bundle		–	–	●	–

MARINE OPERATIONS

SpanSet Maritime Training



SpanSet has drawn on its experience in delivering training so some of the world's largest shipping fleets, and developed a series of training courses to enable crew to safely carry out work at height on your vessel.

Working Safely at Heights 1 Day (RIIWH5204D)

Structured to provide candidates with the necessary practical skills and theoretical understanding to undertake work at height on a broad range of vessel environments; as well as working safely in the vicinity of unprotected edges or on steep structures.

Rescue Systems Operator 1 Day (PUAOHS001C, PUASAR022A)

It's imperative that a ship's crew be able to rescue a colleague should they become suspended.

Provides candidates with the skills and knowledge to set up and conduct rope rescue of a suspended or injured casualty using a pre-rigged proprietary rope rescue system. Includes necessary skills to respond to a variety of post-fall rescue situations such as high/low anchor rescue, casualty evacuation, rescue off inertia reels, rescue off vertical lifelines and off towers, masts or structures.

Confined Space 2 Days (MSAPMPER200C, MSAPMPER205C)

This enhancement to our Working Safely at Heights course instructs crew in the installation and operation of equipment to gain access to and rescue personnel from confined spaces on the vessel.

Provides practical working skills for all persons who are required to enter and work in confined spaces. Learners will learn a comprehensive understanding of confined space permit

systems, gas detection procedures, roles and responsibilities of standby personnel and the safe use of personal protective equipment.

Competent Person Practical Inspection and Record Keeping 1 Day (MEM15004B)

This course will instruct personnel such as the ship's safety officer to conduct thorough examinations of personal fall protection and rescue equipment as required by various regulations, Standards and laws.

Structured to provide candidates with the necessary skills to adequately perform in the highly responsible role of competent person inspector. Including techniques to undertake detailed periodic inspection of height safety and lifting equipment in line with Australian Standards guidelines and manufacturers' recommendations and the knowledge on how to setup and maintain inspection records and equipment registers.

Height Safety Supervisor 2 Days (PUAOHS001C, PUASAR022A, RIIWH5204D)

The below two courses are targeted at personnel who plan, supervise and manage work at height operations on board ship such as the captain, his officers and boatswain. These courses cover the relevant legislation and laws relating to working at height, planning working at height activities and risk assessment, control of equipment and provision of rescue cover.

As outlined in the ASNZ standard 1891.4, a successful candidate will have the ability to work unsupervised, be able to supervise other operators, as well as being able to participate in first response rescue. Candidates will successfully undertake both 1 day qualifications – Work Safely at Height and Rescue Systems Operator.

Height Safety Manager 3 Days (PUAOHS001C, PUASAR022A, MEM15004B, RIIWH5204D)

As outlined in the ASNZ standard 1891.4, structured to provide training for people involved in the selection, design, manufacture or installation of height safety equipment and installations as well as skills to develop control measures for best work practices. Includes instruction in criteria for inspection, maintenance, record keeping, storage and withdrawal from service of height safety equipment. Incorporates technical skills appropriate to task including risk and systems management. To be found competent as a Height Safety Manager, candidates will successfully undertake three 1 day qualifications: Work Safely at Height, Competent Person Practical Inspection and Record Keeping, Rescue Systems Operator.

Consultancy

More from SpanSet



SpanSet is the Australian arm of a global company operating in 15 countries around the world, and are leaders in height safety, lifting and load control equipment, manufacturing and supply. This background makes us uniquely placed to offer a range of consultancy services to industry.

A SpanSet specialist consultant can be a valuable partner to assist you in achieving a safer workplace

Our services include:

Rescue Planning

If you have selected a method of working that could result in a worker being suspended in a harness, then you must consider the rescue implications. Having an effective and tested rescue preparedness is a legal necessity and SpanSet can assist in the development, testing and site specific training required to meet this obligation.

Site Surveys

SpanSet can undertake workplace site surveys in order to help their clients clearly identify particular site hazards for high risk activities such as working at heights and confined space work tasks.

In order to achieve this we listen to our clients and observe operations to gain a clear understanding of current work practices, policies and procedures as well as key objectives of the operating business and desired outcomes that need to be achieved.

Work Procedure Safety Audits

SpanSet offer safety audits on work environments, procedures, safe work method statements and worker behaviours for both industry and government. Following the safety audit we produce a detailed report identifying areas of safety non-compliance or opportunities for improvement.

In consultation with your organisation SpanSet can assist in the development and implementation of solutions to enhance your workers safety, and to maintain compliance with current WHS legislation.

Equipment Evaluation

SpanSet is committed to ensure our customers are using the correct equipment for their associated tasks. Too often we see equipment being utilised that is under rated for its intended use or not compliant to the relevant Australian or European standards.

By communicating with our customers from the procurement stage through to the training or implementation stages, SpanSet is able to ensure the right products are in place, without bias, to satisfy our customer needs in the most cost effective manner.

To discuss your consultancy needs or to enquire regards consultancy rates please either call our toll free number 1300 301 780 or email to training@spanset.com.au

More from SpanSet

Lifting Solutions



Load Control



Training



Inspector App for
iPhone and Android



Lashing App for
iPhone and Android



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