CRANES AND LIFTING

THE DEDICATED RESOURCE FOR THE CRANE INDUSTRY / SEPTEMBER/OCTOBER 2020

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FEATURES

Making a stand for Australian Manufacturing
Family business celebrating 40 years
Resolute approach to tower cranes and technology

CRANES AND LIFTING SHOWCASE 2020

WELCOME TO THE SEPTEMBER/ OCTOBER ISSUE OF CRANES AND LIFTING

ALTHOUGH OUR VISION THROUGHOUT 2020 has proved to be anything but clear, for many in the crane sector there has been plenty to cheer about. A number of crane hire businesses celebrate milestones this year. We speak to a few in this issue including Borger Cranes who celebrate 40 years in business. Many of these companies recognise Gerhard Baden as the 'Crane Father' of all terrains and he reflects on the introduction of all terrains to the local market.

The $5.1 billion Snowy Hydro 2.0 project is just kicking off and already companies are seeing the benefit. A number of hire companies have supplied fleets of equipment, a well-known Chinese brand has been purchased by the project's contractor and a local, family-run crane hire business is lending its expertise to the early set-up stages of the project.

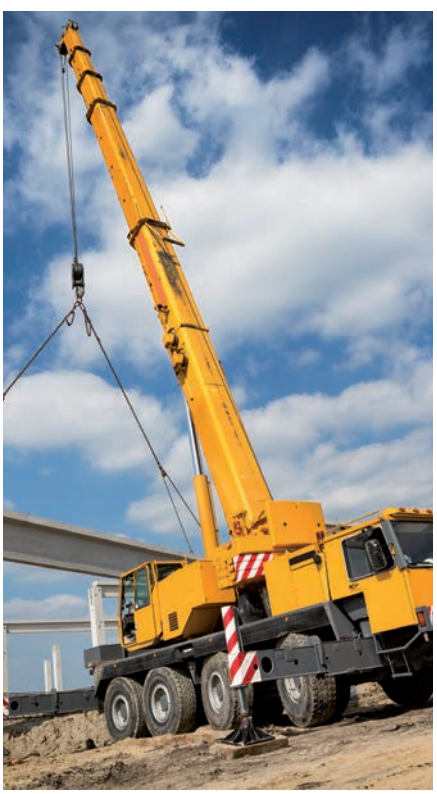
The age-old argument of quality versus quantity is also examined in the issue. We speak to a passionate Australian manufacturer who stands by the traditional values reflected in the "Australian Made" logo.

Increasingly, technology is playing a defining role in the crane sector. Telematics provides the opportunity for office personnel to "dial in" and see how a crane is performing, how many lifts it has performed, the weight of the lifts – from and to where. It also analyses whether the crane is over or under specified for the job, how well utilised the crane is and how much time it spends idle. This information will help a crane hire business tender for future work from a more educated perspective.

Crane companies enjoy reading about lifts, and we have introduced a new section in this issue to celebrate everything that is good about the industry. All companies are encouraged to submit photographs of recent lifts, with a brief description, for inclusion in the Lift of The Month; the best will be run in each issue and on our digital products. We also encourage companies to enter the best of their lifts for the Lift of the Year competition. We know the *Cranes and Lifting* SHOWCASE, which dominates a large section of the issue, will prove to be a useful vehicle for promoting the crane sector to other industries.

It takes a coordinated effort by the members of the *Cranes and Lifting* team to put together a magazine of this size. On their behalf, I hope you enjoy the read and decide to participate in the new initiatives we have introduced.

Simon Gould
Editor, *Cranes and Lifting*



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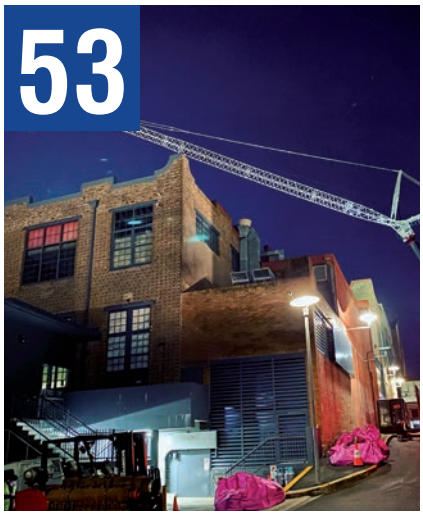

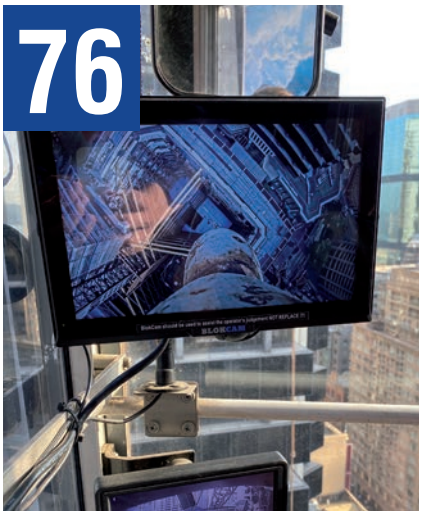

FEDERAL MEMBER FOR LINDSAY ESTABLISHES ADVANCING MANUFACTURING TASKFORCE

Federal Member for Lindsay, Melissa McIntosh MP has established an Advancing Manufacturing Taskforce aimed at investigating, promoting and advocating for policies that create local, national and international opportunities for manufacturing in Western Sydney.

"I've brought together representatives in manufacturing, industry, business and education so we can tackle the obstacles facing Australian manufacturing and form practical solutions that create local jobs, for local people," said Ms McIntosh.

"Australian innovation, value and quality set us apart and give us a competitive advantage. By educating and training our kids in the jobs of the future, we can create and sustain generations of local jobs through advancing manufacturing."

Taskforce member Don Wright, Head of Launch Pad Innovation Program at Western Sydney University, said, "Western Sydney has an opportunity to establish itself as an advanced manufacturing innovation leader in the Asia Pacific region by embracing technology such as Industry 4.0 to compete on value, not cost."


Melissa McIntosh MP and Managing Director Kristian Pritchard

Kristian Pritchett, managing director of local manufacturer SpanSet, echoed the capability of Australian manufacturers to beat the competition on value and quality.

"With advanced manufacturing, we will bring about the efficiencies required to lower production costs and allow Australian manufacturers to compete against comparable imported products," said Pritchett.

"The time is now to make the change and buy Australian Made."

Lead Scientist at the Royal Institute of Australia, Professor Alan Duffy, emphasised the importance of education and training.

"It's critical we teach all our students as well as existing employers on the opportunities and excitement that advanced manufacturing presents us," said Duffy.

McIntosh said the Taskforce "will work across sectors to bring together local and national experience to explore new and exciting ways to create local jobs by backing Australian manufacturing. Western Sydney holds the key, if we are willing to fight for it."

The Taskforce also includes representatives from the Sydney Science Park, Schools Industry Partnership, universities and tertiary education, and local manufacturers.

TRT EXPAND KOBELCO COVERAGE

Tidd Ross Todd Limited (TRT) recently announced the expansion of the Kobelco Crawler Crane sales and customer support network in Australia with the appointment of a sub-distributor for New South Wales and ACT, Baden Davis Crane Connection Pty Limited.

The Crane Connection will provide the full range Kobelco Crawler Cranes in these States, as well as service and parts support for cranes operating locally. TRT will manage all product imports and will continue Kobelco Crawler Crane distribution, parts and service across the rest of Australia.

Robert Carden, TRT's technical director explains, "This appointment was a very natural development for TRT, especially for a product range that The Crane Connection are knowledgeable about. Our organisations work well together; we have a similar company ethos, outlook, and approach. Engineering and service is the backbone of both our businesses."

"The Crane Connection are already doing such a great job with distribution of our TIDD Pick and Carry Cranes, it was such a good fit for both companies. They have a sizeable service operation and facilities based in Sydney and we know they will provide excellent support for Kobelco customers", said Carden.

Anthony Davis from The Crane Connection explains, "The Kobelco Crawler range fits perfectly with our existing product lines. We have tele crawlers and rough terrains, truck cranes and all terrains with Link Belt. We also look after the TIDD range of articulated pick and carries manufactured by TRT."

TRT will provide ongoing support and training to The Crane Connection team in relation to the Kobelco range of product.

"We are working closely with the TRT teams in Australia and New Zealand. We are also working directly with their Australian Crane sales manager, Troy Hand who has a high level of Kobelco product knowledge," Davis said.

TRT were appointed the new Kobelco Crawler Crane distributor for Australia, NZ and the Pacific region in February 2020. TRT are supporting the existing Kobelco Crane customer network and supplying new cranes in Australia and New Zealand.

www.trt.co.nz and www.trtaustralia.com.au

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SpanSet®

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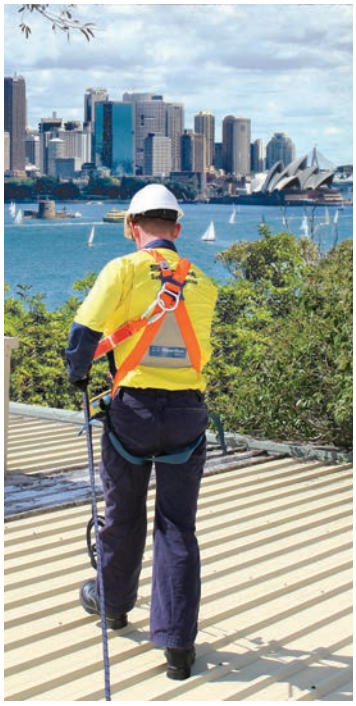
HEIGHT SAFETY - LIFTING - LOAD CONTROL - SAFETY MANAGEMENT



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AUSTRALIAN MADE

SpanSet AUSTRALIA – TAKING A STAND FOR LOCAL MANUFACTURING

SpanSet is an Australian manufacturer and it wants the crane industry to support Australian manufactured over imported products.

SpanSet is an agile manufacturer and understands the demands on the crane industry.

SpanSet HAS BEEN MANUFACTURING quality synthetic products for the crane and related industries globally for over 50 years. Kristian Pritchett is the managing director and has been with the organisation for 17 years. He is passionate about Australian manufacturing. Pritchett wants the crane industry to understand more about SpanSet, what it offers, and he is encouraging the industry to support Australian manufactured over imported products.

SpanSet's head office and purpose-built manufacturing facility is located in Emu Plains, Western Sydney. Approximately 50 employees work in the facility, with 40-plus working on the manufacturing aspect of the business, says Pritchett.

"We support more than 50 employees, that's over 50 families in NSW. In addition, we have a branch in Perth and specialist sales representatives around the country. We predominantly use Australian manufactured webbing with the balance being specialised webbings, produced by SpanSet in Germany.

"Wherever possible we use Australian made products throughout our manufacturing processes, which means we are supporting Australian families across our entire supply chain, we consciously purchase Australian Made wherever possible; for me this is very important" he said.

"At SpanSet, safety is the major driver throughout the business. The company ethos, "SpanSet Certified Safety", is at the core of everything we do. We place a tremendous emphasis on the quality of our products to ensure end user safety.

This is why we have all the required ISO accreditations including ISO 9001-2015 Quality Management System, ISO 14001 Environmental Management, OHAS 18001 Occupational Health and Safety Management and AS/NZS 4801 Occupational Health and Safety Management. We are also NATA accredited to ISO 17025 for tensile testing," he said.

"A number of our products are third party certified by British Standards Institution (BSI), these include lifting slings and height safety products. It is our compliance credentials that provide our customers comfort when using our products. Third party certification and accreditation is essential and expensive, and this is often overlooked by customers, who often, only purchase on price," he said.

SpanSet boasts three manufacturing divisions including Height Safety/Industrial Fall Protection, Synthetic Lifting Products including round, flat, boat and gang slings, lifting nets, helicopter nets and lifting mats. In addition, SpanSet manufactures load restraints systems, which range from a 25mm Ratchet right up to specialised bespoke, heavy-duty lashing to hold a military vehicle to the deck of a Navy ship, explains Pritchett.

"We also have test beds and a dedicated Height Safety drop test tower that enables us to meet our third-party certification and Australian Standards requirements," he said.

In addition, SpanSet is a Registered Training Organisation (RTO) delivering training programs around safety management processes and procedures. This includes a nationally recognised unit of competency for inspection as per the requirements of AS4497:2018 Round Slings Standards in regard to a competent person.

"Being Australia- based and having Australia-wide representation, we can engage with customers in their offices or onsite. Alternatively, they can visit us with enquiries and see our Australian manufacturing facilities firsthand. With our ability and knowledge, we can take an enquiry from concept, through to prototype, test it in-house and then take it through to production. Importing products can take months with no guarantee the product will meet the customer's needs and safety requirements upon arrival," said Pritchett.

Kristian Pritchett, SpanSet MD is passionate about Australian manufacturing

Pritchett doesn't shy away from educating people on quality. He constantly strives to inform industries about the value of purchasing premium, Australian-made products over cheaper imported ones.

"We are constantly faced with the argument that our locally produced products are sometimes more expensive than inferior imports. With our Australian made products, the test certificate supplied with the goods is not just a "piece of paper", it means the slings have been individually tested on a calibrated test bed, by a trained technician. With some of the cheap imports, we do not believe they have been tested as per the requirements of Australian standards.

"Generally speaking, the industry tends to view smaller imported synthetic slings as disposable. It is frustrating to hear it is cheaper to replace these slings compared to having them inspected and re-certified every three months. I understand that after use in a toxic or dirty environment, slings must be disposed of, but the general throwaway approach needs to change," he said.

"Synthetic slings should not be viewed as disposable. We want the market to know that if they are used appropriately, maintained and serviced properly. Premium synthetic products, like ours, will perform at optimal levels over the long term.

"Don't think of them as a product which is frequently swapped out, as this will cost more in the long term and is false economy. The other aspect to consider when disposing of slings unnecessarily, is the environmental impact. A quality Australian manufactured sling will last and should not end up in land fill after only a couple of lifts," he said.

When buying a premium sling, customers should look at edge protection, as this goes hand in hand to increase sling longevity, says Pritchett.

"Generally speaking, a synthetic sling will be damaged because no edge protection has been used. Our specialised edge protection business, including Secutex and NoCut is growing. The use of edge protection is highlighted and referenced in Lifting, Load Restraint and Height Safety Australian Standards," said Pritchett.

With its German engineered round sling machines, SpanSet has the ability to manufacture slings from 400mm up to a massive 60 metres effective length.

"To our knowledge, this is the longest capacity of any round sling machine in

"SpanSet is an agile manufacturer, and we understand the demands on the cranes industry…We offer customers a fast turnaround on bespoke slings helping them to meet their demanding schedules."

Australia. Our round sling machines are computer controlled to ensure quality and consistency.

"SpanSet is an agile manufacturer, and we understand the demands on the cranes industry. There isn't always a lot of time when planning a lift and there is often a need for us to urgently respond to enquiries. We offer customers a fast turnaround on bespoke slings, helping them to meet their demanding schedules," said Pritchett.

With the advent of larger cranes in Australia, lift loads are getting bigger, which means sling capacity needs to increase to meet these new challenges. SpanSet Australia, in conjunction with SpanSet Germany, has developed several new, high capacity, low weight slings to keep up with market demands.

"Our Magum X and Magnum Force range is a great example of this. A big percentage of our business is bespoke synthetic slings where companies are replacing chains or wire ropes slings with synthetics," said Pritchett.

"Much of this business is due to manual handling concerns and damage to machinery, but it is also a result of customers understanding the fast turnaround and manufacturing times available when ordering synthetic lifting products manufactured by SpanSet Australia."

SpanSet also offers an expansive range of industrial fall protection products, the majority of which are manufactured in Australia, says Pritchett.

"We manufacture a full range of harnesses from entry level, hot works, water works, tower, wind, mining, all the way up to bespoke climbing products. With products manufactured locally, we can customise for a customer's site-specific requirements," he said.

SpanSet manufacture a range of rescue products, and was the first company to release the Gotcha Rescue Kit, which has become a generic name for pre-assembled rescue kits globally. As a result of this success, several companies are offering a similar product, 'often imitated, but never replicated'."

SpanSet also manufactures bespoke load restraint systems, says Pritchett.

"With our load restraint business, we attract customers who aren't price sensitive about the product, they are looking for a specific solution to their restraint problem. It's generally a customer who understands load restraint and is transporting a specific load. Typically, they expect quality, compliance with the NTC Load Restraint Guide and the regulations associated with securing a load correctly," he said.

SpanSet recently launched a load restraint App which is available for both Apple and Android devices, free of charge. This is designed to assist customers to secure their goods correctly. The App was developed to ensure the outcomes meet the information contained in the NTC Load Restraint Guide.

"The ratchet market is absolutely flooded with cheap imported products. What delineates SpanSet is the quality of our hardware and our patented Tension Force Indicator (TFI), which is fitted to a number of our ratchets. SpanSet promotes pre-tension, which is the major factor in load restraint," said Pritchett.

"The TFI shows true pre-tension, which means it is now objective and not subjective, which takes the guesswork out of pre-tension. We find customers are demanding ratchets and components of a higher quality. We use Australian made webbing in our locally produced ratchets and our customers are happy to pay a premium knowing they will get longevity from our product. We are confident the product will do exactly what they want, and now they have visual indication of pre-tension," he said.

As a local manufacturer, SpanSet Australia wants more industry interaction. Pritchett is encouraging customer/supplier relationships and wants the industry to pick up the phone and talk to him or any one of his passionate staff. "Together, we can find the solution," he said.

SpanSet is also able to draw on a wealth of experience right across the business, says Pritchett.

"We have many long-term employees with 10 to 30 years of service with the company. For example, there is over one hundred years of combined experience on the manufacturing floor.

"Our team draws from the experience and technical expertise of individuals like Jeff Pogson. He has 30 years of industry experience and represents a number of industry bodies on several Australian Standards Committees.

"Jeff has an incredible wealth of knowledge in the lifting and rigging, load restraint and industrial height safety sectors, he is also a licenced rigger and dogman and adds a huge amount of technical expertise to the business. Knowledge is becoming increasingly hard to find in the industry, because it only comes with years of experience. I cannot overstate the importance of having staff who are passionate about lifting and rigging and supplying the right product, for the right job," said Pritchett.

"Our company ethos, 'SpanSet Certified Safety', can only be attained with the help of passionate staff who understand industry and customer requirements. We value our team and the diverse skills and experience they bring to the organisation.

"We are extremely proud to be an Australian manufacturer and a licenced Australian Made business under The Australian Made Campaign Limited. By supporting Australian manufacturing, you are supporting the Australian economy. At SpanSet Australia, we believe now is the time to make the conscious decision to buy Australian Made," he said. ●

WORKING AT HEIGHT FALL ARREST HARNESSES

This is the first in a series of articles written by the Working at Height Association of Australia (WAHA), the peak industry body providing information and support for businesses needing to address working at height issues.

WHEN WORKING AT HEIGHT, WHAT different types of safety harnesses exist? How do these operate? What mistakes are common when wearing/operating with safety harnesses? What are the consequences of these? What are the right ways to use safety harnesses?

WORKING AT HEIGHT FALL ARREST HARNESSES

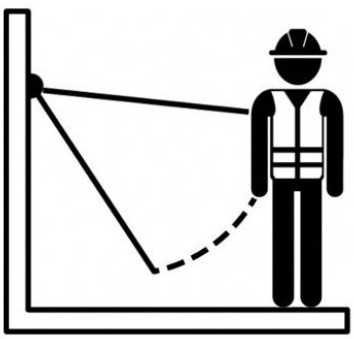
When working at height, what different types of safety harnesses exist? How do these operate? What mistakes are common when wearing/operating with safety harnesses? What are the consequences of these? What are the right ways to use safety harnesses?

Personnel working at height in the construction industry are required by the Regulator to be trained in the safe use of working at heights equipment to ensure they have the appropriate skills to carry out tasks safely.

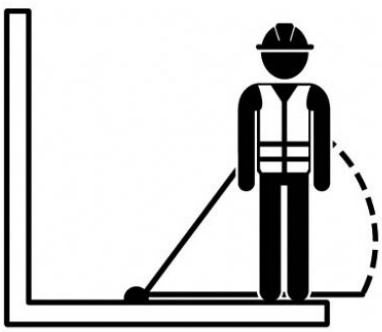
Training is to be provided to workers by competent persons to ensure appropriate instruction on the proper use, type(s) of harness, wearing, storage and maintenance of fall arrest PPE with an understanding of the risks associated with working height.

Such training should provide an understanding of the type of harnesses and lanyards that may be used to help support the worker limiting the risk of a fall from height. Following training, there should be assessment to ensure the worker has the appropriate skills, knowledge and experience to undertake work at height. Refresher training should also occur on a regular basis.

There are varying styles of fall arrest harnesses that can be worn to protect the worker, and whilst we refer to these harnesses as fall arrest harnesses the worker should be using the harnesses to position themselves into work restraint or positioning: when a worker places themselves into this type of positioning they are removing the immediate risk of a fall and a person's ability to get into a place where they can fall.



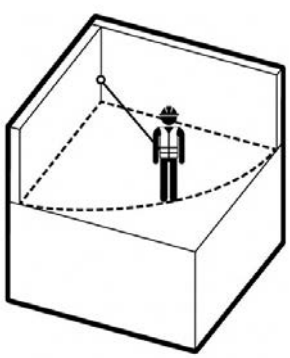
This is restraint in it's simplest form. The lanyard prevents the user from reaching a position where they could free-fall.



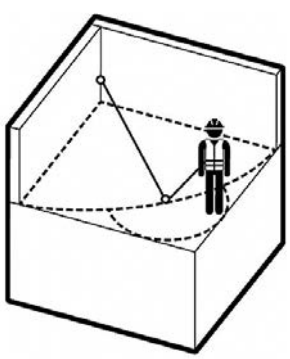
The placement of the anchor in this location allows the user to reach the edge and therefore be exposed to a free-fall risk. In this case, the worker is working in "fall arrest".

A. FALL ARREST WORK POSITIONING – WORKING IN RESTRAINT

The principle of work in restraint is best illustrated through diagrams. It is simplest form, working in restraint means the means by which a person is "restrained" or prevented from being able to get into a place where a fall can occur. When work tasks require a safety harness



There is potential for free-fall if the user adjusts their lanyard beyond the dashed zones. This is the main reason for removing restraint rated equipment from the Standard.



The addition of an extra anchor can enable the user to gain more reach, using restraint technique, removing a potential for fall arrest.

to be worn, the practice of work in restraint is to be used wherever possible to reduce the injury risk from a fall.

B.WORK POSITIONING VIA SUSPENSION (E.G. CONFINED SPACE ENTRY)

For work that may be required to be completed in a confined space, it may be suitable to lower a person into the environment utilising a man-rated mechanical winching system. This is called working in suspension, as the person is literally suspended in the air when the tasks are being complete. Working in suspension in this way means that a rescue can be performed easily by a stand-by rescuer, winching the person to safety.

C. ROPE ACCESS WORK POSITIONING

A rope access technician has the primary intention of accessing a location in a vertical plane, by positioning themselves to perform work while suspended in a harness. This method of access requires specialty equipment and more important significant training to be effective. Rope access involves the use of twin ropes – one which is the primary or main working rope line, the second being the redundant, secondary line that acts as an emergency line in the event of a mainline failure.

Note; Persons undertaking confined spaces work, or rope access work must attain additional qualification(s) to be deemed competent.

Working in suspension means a rescue can be performed easily by a stand-by rescuer, winching the person to safety.

HARNESSES AND HARNESS CONNECTION POINTS

The harness attachment points are the unsung hero on a full body harness. Without a way to connect the worker to a fall protection system or anchorage point, the full body harness would be useless. Different fall protection applications want different types of connection points. Fall protection equipment will only work properly when it is used correctly. There are three primary points of attachment, depending on the type of harness and are used depending on the type or work being undertaken.

A) Ventral – commonly a point of attachment at the waist
B) Sternal – commonly a point of attachment at the chest
C) Dorsal – commonly a point of attachment at the back

There are also additional attachment points, depending on the harness and application.

To reduce the misuse of a full body harness, we are going to explain the most common types of harness connection points, where they are located, and how they are meant to function.

FALL ARREST

The connection point used for fall arrest purposes is usually a D-ring that is located on the back of the harness between the shoulder blades. This location is ideal for fall arrest purposes because it evenly distributes the forces of fall arrest across a person's body. The dorsal D-ring will typically be connected to a shock absorbing lanyard or a self-retracting lanyard, depending on the location. However, other forms of fall arrest devices can also be attached to the dorsal D-ring.

Without a way to connect the worker to a fall protection system or anchorage point, the full body harness would be useless.

WORK POSITIONING

A harness that is designed for work positioning may have a single, or a pair of D-rings located in the lower waist area at the front of the harness. This type of fall protection allows a worker to have both of their hands free to work while they remain connected to the work area. It should be noted that this system is not the same as fall arrest, but instead this system is a form of fall restraint.

TRAVEL RESTRAINT

If workers need to access an area that is near a fall hazard, a safety manager may decide to use a travel restraint system. A harness designed for travel restraint functions will usually have a D-ring in the centre of the back at waist-level. When a harness is connected in this area, a worker will have reduced access to a potentially dangerous area at height. A

worker will usually be connected to an anchorage location with a lanyard that is long enough to allow them to access the work area, but not long enough to allow them to access a fall hazard.

DESCENT / ASCENT

If a worker needs to be raised or lowered into a work area, their harness will need to have a descent or ascent connection point. Connection points for descent or ascent are either a single D-ring between the waist and chest or a pair of D-rings at the waist level. These connection points can be used to raise or lower a person into or out of a work area. Often times, this harness will also have a dorsal D-ring to allow for a fall arrest device to be connected.

EVACUATION

Harnesses that can be used for evacuation procedures can typically be identified by a pair of D-rings on the shoulders or at the chest level. Usually, there will be a place where a spreader bar can be added to the harness to help distribute the weight of a worker while they are either raised or lowered onto a safe working level. An evacuation harness is slightly different from a harness that can be used for ascent or descent because the evacuation harness is meant for very brief periods of use.

LADDER CLIMBING

Harnesses that can be used with a ladder climbing safety system will have either a single D-ring or a pair of D-rings at chest level. These harnesses are designed to connect to a ladder fall protection system so that a worker can have fall arrest while working on a ladder.
This particular harness attachment is designed to keep a worker relatively close to the ladder to improve the success of the ladder fall arrest device.

Generally speaking, the work environment for which the harness is needed will dictate the number and location of the harness attachment points. Different harness attachment points will help you identify the ways in which the harness can be used. If you need a harness that can perform in a certain way or assist with a certain function, it's important to find a harness that has the appropriate connection points for what you are trying to accomplish

In conclusion; due to the variety of harnesses in the market, it is vital to ensure workers are appropriately trained to use the equipment, and that the equipment selected is appropriate to the task.

Additional information about the harnesses is provided by the manufacturer, including use, maintenance and inspection guidance.