IDENTEC SOLUTIONS

WALK TO WORK:

FOR SAFER OFFSHORE WORK

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In today's offshore industry, where workers face challenging and often hazardous conditions on a daily basis, ensuring their safety is of utmost importance. Traditional methods of transferring crew between installations and vessels, such as helicopter transfers or basket transfers, have long been the norm. However, with those methods, huge risks and excessive costs come along, that cannot be ignored.

Thankfully, an innovative solution has emerged in the form of the Walk to Work (W2W) approach. By utilizing specialized vessels equipped with motion-compensated gangways, this approach has revolutionized offshore crew transfers, enhancing both safety and efficiency.

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BECAUSE IT WORKS

GOOD OL' DAYS

Gone are the days of relying solely on helicopters or baskets to transport crew members. With the W2W approach, workers can now be safely transferred between installations and vessels without having to face the dangers associated with traditional methods.

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The motion-compensated gangways ensure stability and reduce the risk of accidents that can occur during transfers Walk-to-work systems have been used successfully in the UKCS since early 2006, and globally have transferred over 800,000 personnel.

Moreover, the Walk-to-Work approach also brings about significant cost savings. By eliminating the need for expensive helicopter transfers or complex basket systems, companies can allocate their resources more effectively. This not only benefits the bottom line but also allows for investment in other areas that can further improve worker safety and operational efficiency.

The specialized vessels used in the W2W approach are designed specifically for offshore crew transfers, considering the unique challenges faced in these environments. From advanced stability systems to state-of-the-art safety features, every aspect has been carefully considered to provide the highest level of protection for workers.

CHALLENGES IN CREW TRANSFER

One of the main obstacles faced in offshore crew transfer is the relentless battle against harsh weather conditions. Offshore installations are often positioned in secluded areas, exposing them to severe weather phenomena like storms, strong winds, heavy rainfall,

and turbulent seas. These challenging conditions pose significant risks to crew members during transfer operations, making it a constant struggle to maintain safe and efficient procedures.

To conquer this challenge, the implementation of advanced weather monitoring systems becomes crucial. These systems provide real-time data on weather conditions, enabling decision-makers to determine the optimal periods for crew transfer. By conducting operations during relative calm, the risks associated with harsh weather can be minimized. Additionally, the utilization of cutting-edge vessel stabilization technologies, such as active motion compensation systems, can help counteract the effects of rough seas, enhancing the stability and safety of transfer operations.

The remote locations of offshore installations also present unique safety concerns. With limited access to medical facilities and emergency services, the well-being of crew members becomes a top priority. By investing in dedicated support vessels with accommodation facilities, offshore operators not only address the logistical complexities but also provide a safe and secure environment for their crew.

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These floating hotels are designed to meet the specific needs of offshore operations. Equipped with modern amenities, such as comfortable living quarters, dining areas, and recreational spaces, they offer a home away from home for the crew. This ensures that they can rest and recharge in between their shifts, promoting their overall well-being and reducing fatigue-related risks. Moreover, these support vessels can also serve as a hub for various support services.

From medical facilities to maintenance workshops, they provide a centralized location for essential operations. This eliminates the need for multiple trips to the shore or relying on external resources, saving time and ensuring prompt assistance in case of emergencies.

By eliminating the daily commute between shore and offshore, these floating hotels also contribute to a more sustainable approach to offshore operations. With reduced fuel consumption and emissions, they help minimize the environmental impact of crew transfer, aligning with the growing emphasis on eco-friendly practices in the industry.

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GANGWAYS

Ensuring the safety of crew members during offshore transfers was and is one of the biggest importance in the maritime industry. With traditional crew transfer methods carrying inherent risks, it becomes imperative to explore alternative solutions that prioritize the well-being of the crew.

One such innovative solution that has gained significant traction is the “walk-to-work” concept. By utilizing specially designed gangways, this concept revolutionizes offshore transfers by providing a safe and efficient means for crew members to traverse between the vessel and the offshore installation. These gangways are equipped with advanced safety features, including non-slip surfaces, sturdy handrails, and state-of-the-art fall protection systems. Such enhancements greatly mitigate the risks associated with conventional transfer methods.

The walk-to-work systems not only address the potential dangers of falling objects and equipment malfunctions but also minimize the likelihood of accidents during hoisting operations.

By eliminating the need for personnel baskets and crane transfers, crew members are no longer exposed to the uncertainties and hazards that come with these outdated methods.

Moreover, these gangways offer enhanced stability and security, even in challenging weather conditions. With their robust design and engineering, they ensure a steady and reliable connection between the vessel and the offshore installation, allowing crew members to carry out their tasks with confidence and peace of mind.

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BUT WHAT DOES IT BRING?

The integration of Walk to Work systems into offshore operations has completely transformed the way personnel move between offshore installations and support vessels. Historically seen, helicopters were the favourable method for personnel transportation, both, to and from offshore facilities. But now, those systems have stepped in as a safer and more cost-effective alternative. They have significantly reduced the risks associated with helicopter operations while also boosting work efficiency and minimizing downtime.

Advantages vs Challenges of Walk-to-Work

Safety is the top priority in the offshore industry, and these solutions have taken it up a notch compared to traditional transfer methods. By eliminating the reliance on helicopter flights, which are susceptible to adverse weather conditions and mechanical failures, personnel transfers become safer. Additionally, walk-to-work often uses advanced motion-compensated gangways that create a stable and secure connection between the vessel and the offshore installation, thus reducing the risk of slips, trips, and falls during transfers.

Walk-to-work systems streamline personnel transfers, resulting in enhanced operational efficiency. Instead of relying on scheduled helicopter flights, crew members can transfer more frequently, facilitating smoother crew rotations and speeding up project execution. This heightened efficiency directly translates into cost savings and improved resource utilization.

Helicopter operations are often limited by adverse weather conditions, causing delays and potential safety hazards. In contrast, walk-to-work gangways are designed to operate in a broader range of weather conditions, expanding the workability windows and ensuring continuous operations even in challenging environments.

Regardless, if you think about wind farms, fixed platforms, or floating structures, a Walk-to-work solution, with its versatility, can be adapted to many different types of offshore installations. Usually, they have a modular design, allowing for easy installation and integration, making them suitable for both new projects and retrofitting existing facilities or vessels.

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On the other hand, operations which include Walk-to-Work, have their limitations when it comes to sea state conditions. To tackle this challenge, detailed site-specific assessments are crucial during the planning phase. By identifying optimal transfer windows and using advanced weather forecasting technologies, operators can minimize the impact of adverse sea conditions and ensure safe and efficient personnel transfers.

Also, proper training for both offshore personnel and vessel crew is vital for the successful integration of W2W systems. Training should cover emergency procedures, gangway operations, and safety protocols to ensure that everyone involved can respond effectively to potential incidents.

And last, but not least, continuous technological advancements are essential to keep up with evolving industry standards and safety requirements. Regular inspections, maintenance, and upgrades of the systems are necessary to guarantee optimal performance and compliance with safety regulations.

THIS IS THE WAY

One key area of focus is motion compensation technology, which plays a vital role in stabilizing the gangway connection between the vessel and the offshore platform. Moving forward, we can expect advancements in motion compensation capabilities, providing even greater stability during personnel transfers. Utilizing advanced predictive algorithms, real-time data processing, and adaptive control systems will help mitigate the impact of vessel motions, ensuring safe and comfortable transfers in a wider range of sea conditions.

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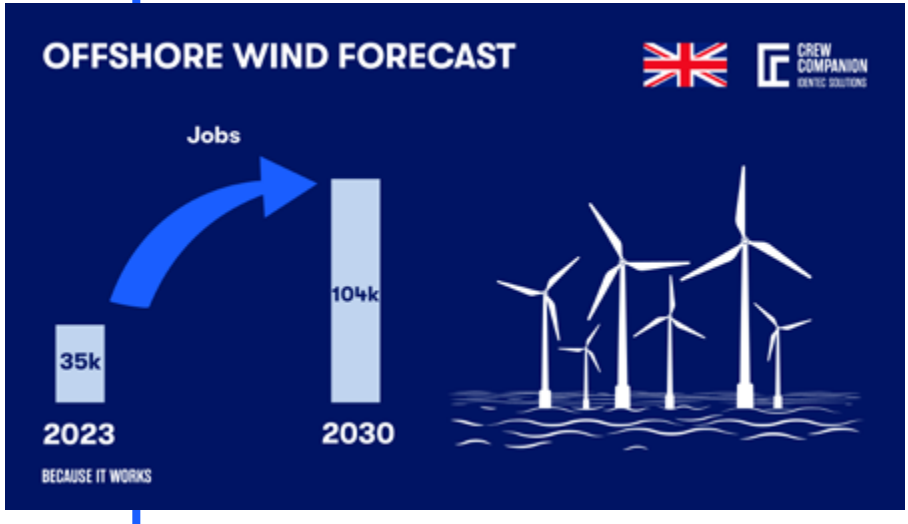
The offshore industry is steadily embracing automation and autonomous technologies. In the future, we anticipate the development of autonomous Walk-to-work systems that reduce the need for human intervention during transfers. Imagine unmanned gangways and remotely operated vessels, optimizing safety by minimizing human exposure to hazardous conditions. Moreover, these autonomous systems can operate around the clock, further improving operational efficiency.

Augmented Reality (AR) and Virtual Reality (VR) technologies hold great promise for enhancing training programs and real-time decision-making during crew transfer operations. By integrating AR into crew training, personnel can simulate various scenarios, practising emergency procedures and safety protocols in a virtual environment.

During live Walk-to Work operations, AR and VR can provide real-time data overlays, assisting crew members in assessing environmental conditions and making informed decisions for safe transfers.

Sustainability and environmental consciousness are becoming increasingly vital in the offshore industry, and Walk-to-Work systems are no exception. Expect a push towards eco-friendly solutions, such as the adoption of electric or hybrid propulsion systems for SOV vessels, reducing emissions and minimizing the environmental impact of operations. Additionally, efforts to use recyclable materials and optimize energy consumption in gangway designs will contribute to a greener offshore sector.



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As the transition to renewable energy gains momentum, Walk-to-Work systems will play a significant role in the maintenance and servicing of offshore wind farms and other renewable energy installations. The integration between those systems and renewable energy platforms will become more seamless, catering to the specific needs of these structures. This synergy will foster safer and more sustainable offshore operations, supporting the industry's commitment to a low-carbon future.

Incorporating big data and predictive analytics into Walk-to-Work systems will enable better decision-making and maintenance planning. By collecting and analysing data from various sensors and monitoring systems, operators can anticipate maintenance requirements, identify potential issues, and optimize crew rotations based on environmental conditions. This data-driven approach will maximize the system's efficiency, reduce downtime, and enhance safety.

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One of them is real-time monitoring, helping automatically update the Personnel-on-Board list. Equipped with an RFID personal tag, every crew member is added or removed from it while crossing the gangway to perform his duties on a wind turbine, oil rig, or any other offshore installation. Thanks to this the POB list will be always up-to-date, without the need of printing it and trying to figure out if it's the latest version needed in case of an emergency. As a result, the systems will continue to revolutionize the offshore industry, providing safer and more efficient personnel transfers in the years to come.

TAKEAWAY

Walk-to-Work has truly revolutionized offshore operations, offering an efficient and ground-breaking solution to ensure the safety and well-being of personnel. The Industry has completely transformed the way it operates, due to the ability to securely transfer workers to and from offshore platforms. Thanks to their focus on safety and providing a controlled means of transfer, Walk to Work systems have significantly reduced the risk of accidents and injuries, making them a game-changer for the industry.

Yet, introducing a Walk-to-Work solution calls for thoughtful planning and a dedicated adherence to regulations. Companies need to consider several critical factors, such as weather conditions, system capacity, and the specific requirements of their offshore workforce. By conducting thorough analyses and carefully addressing these aspects, organizations can smoothly integrate these systems and guarantee the safety and efficiency of their operations.

In addition to that, continuous maintenance and improvement are absolutely crucial to ensure those systems operate at their best. Regular inspections, repairs, and upgrades are essential to address any issues and maintain the systems in top-notch condition.

By investing in their maintenance, companies can extend their lifespan and make the safety of their personnel a top priority in the long run.

Looking ahead, the future of Walk-to-Work looks incredibly promising, thanks to advancing technology. We can expect the integration of innovative features like autonomous vessels, advanced monitoring systems, and virtual reality training, which will take the efficiency and safety of offshore operations to new heights. Moreover, increased collaboration and knowledge sharing within the industry will further enhance the development and implementation of these systems, creating a safer and more productive offshore environment for everyone involved. The future indeed looks bright for Walk-to-Work!

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Sources - Pictures

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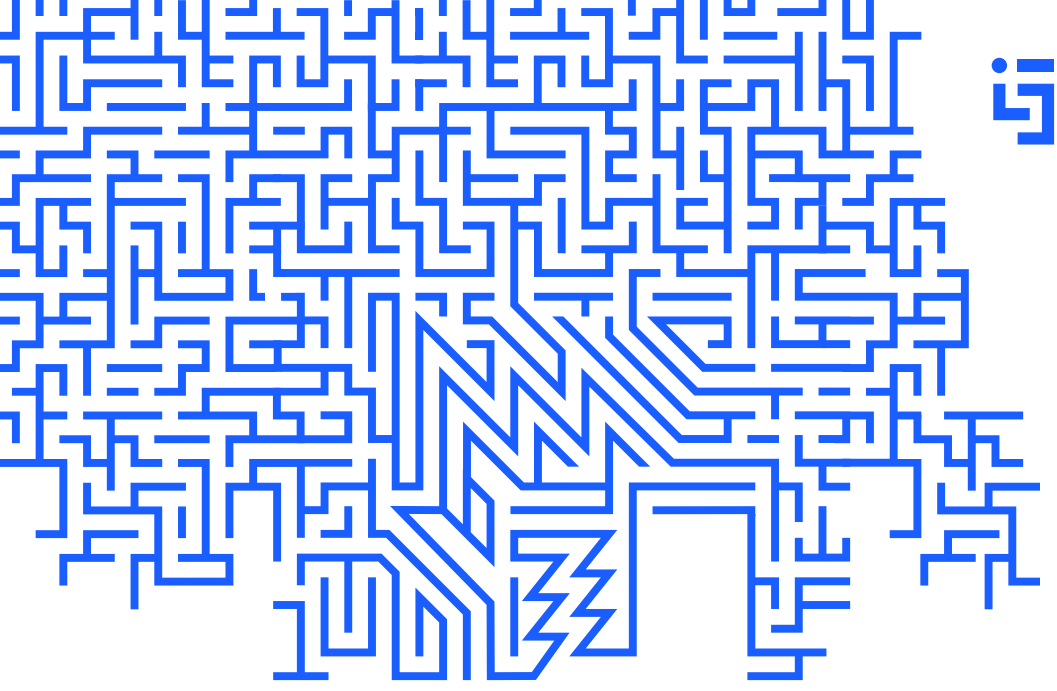

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