

Are humans 'made' for sitting?

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Are humans 'made' for sitting? The answer is no. Human beings are not made for sitting, but many of us do it for many hours a day without the right instructions and tools. Because of this, many people suffer from back or neck problems. This is especially the case for drivers working in container cranes, and continuously looking downwards increases these problems. It is clear that sitting this way in moving machines results in fatigue, physical complaints, loss of efficiency and even sometimes damage and dangerous situations.

Specific crane characteristics

Besides drivers having to look downwards, each type of container crane has its own specific characteristics as well.

STS cranes have high accelerations and decelerations when both moving forwards and backwards, shocks at the boom junctions and an impact of a possible E-stop. Meanwhile, the RTG cabin has a different field of vision, compared to a STS crane. The typical problems a RTG driver faces are highly underestimated. Looking around while driving the machine and looking sideways under beams while searching for trucks leads to difficult postures. Because the spreader is closer to the cabin and the drivers' spread legs are often an obstruction, the driver uses his side windows to look at the corner-castings. Movements sideways, in combination with the RTG's rubber tires, create a swinging motion to the machine and the driver when starting and stopping.

A comparable situation is experienced with straddle carriers. However, with straddle carriers the speed is higher, and the sitting position is often perpendicular to the driving direction. The driver is seated upright with his head turned 90 degrees to the left or the right. A combination of trunk inclination with lateral flexion and/or axial rotation takes place in all type of cranes.

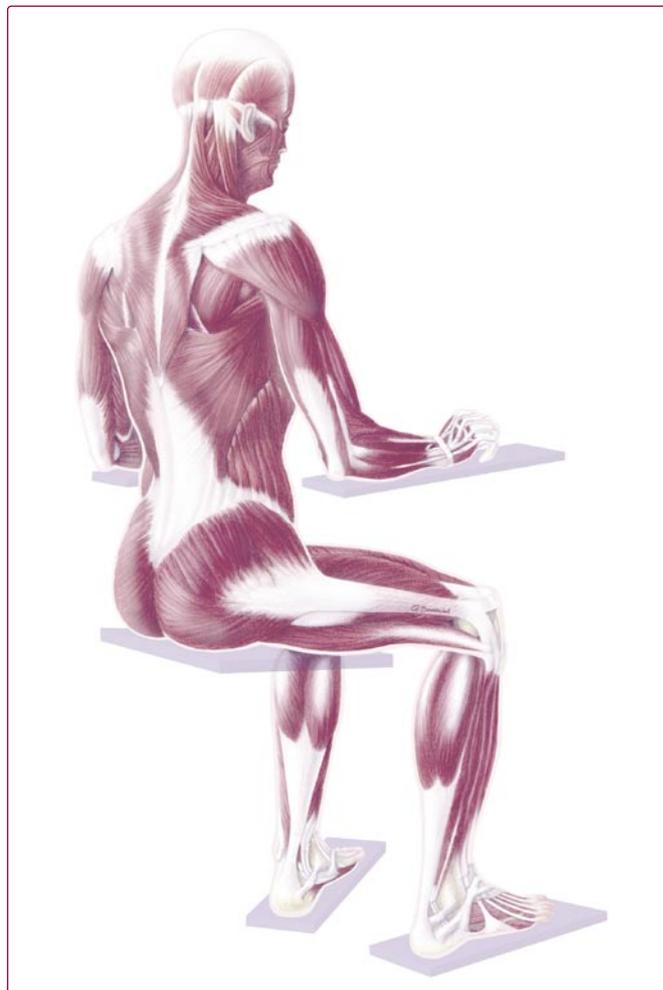
Solutions

Unmanned equipment would be the best solution for these kinds of problems. The question is: is this a realistic scenario for all container terminals worldwide? For now, the answer again, is no. Many aspects such as flexibility, efficiency, labour, and culture require man-operated cranes for at least the coming ten years.

The solution to prevent fatigue, physical complaints, loss of efficiency, damage and dangerous situations is to analyse the typical circumstances, to provide the drivers with the right devices and to give them suitable instructions.

For example, considering the working posture in STS, RTG and RMG cranes and the ISO Standard 11226, 'Evaluation of Static Working Postures', we have to conclude that the crane driver requires a full trunk support.

About 10 years ago, Merford, a Dutch cabin supplier, began developing solutions for the above mentioned problems. Together



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with crane drivers, engineering and management of container ports, and supported by scientific institutes and industrial designers, several products have been successfully introduced in the last few years. One well known example is the Ergoseat for STS cranes.

In mid 2007 a new cabin and a matching seat arrangement specific for RTG and RMG cranes will be launched. Moreover, Merford is testing a new product called MDS, which is part of a seat arrangement, in close operation with ECT Rotterdam. Scientific research has proven that this system prevents and reduces lower back pain and fatigue when sitting for prolonged periods of time. It will be suitable for all types of industrial equipment and easy to build in existing crane seats.

ABOUT THE COMPANY

Merford Cabins develops, produces and supplies operator cabins and cabin components for various types of cranes, specific vehicles, machines and installations all over the world. It is Merford's philosophy to create an optimal working environment for its client's employees. Merford Cabins is part of the Merford group. Besides cabins, Merford specialises in Noise Control and Climate Control.

ENQUIRIES

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