Exoskeletons debut at Ford factories

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Ford

Following successful trials, Ford will now offer employees the use of exoskeletons to reduce the strain of factory work.

Despite the emergence of Industry 4.0, smart factories, sensors, and data analytics, much of the heavy-duty operations of today's industrial and manufacturing still rely heavily on human input.

Over time, the physical demand of such work can cause injury, muscle stress, and accidents.

However, Ford hopes that by augmenting our bodies, exoskeletons may be able to reduce some of the strain.

Last year, the US automaker began trials at select factories that revolved around the use of the EskoVest, an exoskeleton designed by Ekso Bionics.

The company describes itself as a "leading developer of exoskeleton solutions that amplify human potential by supporting or enhancing strength, endurance, and mobility across medical, industrial and defense applications," and when it came to Ford, strength, and endurance were the top priorities.

According to Ford, the firm's assembly line workforce lift their arms during overhead tasks roughly one million times per year -- which, at that rate, results in substantial risk for fatigue and upper-body injuries.

In order to combat the problem, Ford tasked Ekso Bionics with developing an exoskeleton to reduce the risk of work-related medical problems.

The exoskeleton created for the task elevates worker's arms during overhead tasks, and while allowing wearers to move their arms freely, also provides up to 15 pounds of life assistance and support per arm.

The higher the wearer has to reach, the more support is offered.

The exoskeleton can be adjusted for users between 5 and 6.4 feet tall, and as the device is mechanical, no battery pack or heavy gear is required, keeping the device lightweight.

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Ford piloted the EksoVest in two US plants successfully and now plans to launch the exoskeleton in facilities worldwide.

As reported by Engadget, the EksoVest will be offered to employees at 15 factories.

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While it is only a total of 75 skeletons that are on offer, which will only impact a small part of the assembly line, this should reduce the physical strain felt by staff working on overhead tasks.

A small project it may be, but it does show that Ford is keen to reduce worker injury -- and long term, this might only be the beginning for the use of exoskeletons in factories globally.

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"Our goal has always been to keep the work environment safe and productive for the hardworking men and women we rely on across the globe," said Bruce Hettle, Ford group vice president, Manufacturing, and Labor Affairs. "Investing in the latest ergonomics research, assembly improvements and lift-assist technologies have helped us design efficient and safe assembly lines, while maintaining high vehicle quality for our customers."

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