Intelligent Clothing to Improve Safety at Work and Support Production

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1. Theme description

In order to reduce costs, to improve worker productivity, some companies are driving the development of smart wearables and sensors in industrial environments[1].

Currently, the safety on work is guaranteed through PPE (personal protective equipment) like safety eyewear and other. The technology upgrades could make the standard do an even better[2].

Examples of possible Wearable technology that can greatly improve workplace safety are[3]:

- Smart bands and sensors embedded in clothing and gear that monitor workers' health and wellbeing by tracking factors such as heartrate, heat stress, respiration, fatigue and exposure. The data obtained could be sent to workers when critical levels are reached;
- In case of dangerous environments, machine and environmental sensors that provide contextual information to field workers to help them to know from what they are surrounded and wearable GPS tracking to help to know their spatial position;
- Smart glasses and other HUDs (Head-Up Display) that

allow workers to access specific instructions and manuals in the field, in addition to allow remote guidance;

- In the insurance sector, clothing with camera-equipped could be used to document a job or incident for later review.

In the following, a review based on intelligent clothing, with future developments, are reported.

[1]http://www.ehstoday.com/eye-face-head/ppe-and-internet-things

[2]https://blog.safetyglassesusa.com/technology-impacting-workplace-safety/

[3]https://brainxchange.io/3-great-use-cases-wearable-tech-ehs/

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