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(54) Title of the invention : WEARABLE CONSTRUCTION SITE SAFETY AND WORKFORCE MANAGEMENT DEVICE

(51) International classification	:G06Q0050080000, H04N0007180000, G01M0005000000, G06Q0010100000, H04N0023510000	(71)Name of Applicant : <b>1)Chitkara University</b> Address of Applicant :Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Rajpura Punjab India <b>2)Chitkara Innovation Incubator Foundation</b>
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(57) Abstract :

A wearable construction site safety and workforce management device, comprising of a wearable body 101 configured to be worn by a site supervisor over a head portion, a user-interaction interface for enabling authorized personnel to upload construction site blueprints, assign daily tasks, and schedules, a dual-lens camera 102 integrated with an infrared sensor for continuously capturing live visual data of the construction site, and the captured data is cross-referenced with the uploaded blueprint to verify compliance with design specifications, a display unit 103 to flag detected abnormalities or non-compliances and alert the supervisor, a structural integrity analysis module 104 integrated on a contact plate 105 to perform non-destructive structural health monitoring of construction site elements upon physical contact, an alert module to notify the site supervisor of detected anomalies.

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