(43) Publication Date: 17/10/2025

(19) INDIA

(22) Date of filing of Application:07/10/2025

(54) Title of the invention: SYSTEM AND METHOD FOR AUTOMATED SAFETY DOCUMENT MANAGEMENT IN CONSTRUCTION USING BIM (SMS-BIM)

(51) International classification	:G06Q0050080000, G06Q0010100000, G06Q0050160000, G06Q0010063100, G06Q0010000000	(71)Name of Applicant: 1)National Institute of Technology, Durgapur Address of Applicant: Mahatma Gandhi Avenue, Durgapur-713209, West Bengal, India. Durgapur West Bengal India (72)Name of Inventor:
(31) Priority Document No	:NA	1)GHOSH, Bittu
(32) Priority Date	:NA	2)KARMAKAR, Somnath
(33) Name of priority country	:NA	
(86) International Application No	:	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract:

The present invention discloses a system (100) and method for managing construction safety documents within a Building Information Modeling (BIM) environment. The system comprises a processor, a memory, and a plurality of modules including an inspection request module (101), an automation module (102), a record management module (103), a documentation control module (104), and an audit module (105). The inspection request module enables authorized personnel to initiate safety inspections, while the automation module records inspection data in real time using digital checklists aligned with project safety standards. The record management module organizes and stores inspection outcomes in a centralized, traceable database. The documentation control module streamlines and integrates records across stakeholders to support compliance and minimize delays. The audit module facilitates third-party audits by providing access to safety records, verifying compliance, and generating audit reports, thereby enhancing transparency, accountability, and efficiency in construction safety management. (to be published with figure 3)

No. of Pages: 30 No. of Claims: 12