Zoomlion launches industry's 1st intelligent construction solution, achieving full-process unmanned ops in digital close-loop

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Zoomlion Heavy Industry Science & Technology Co., Ltd. (Zoomlion) releases the industry's first intelligent construction packaged solution on December 15 in the Earthmoving Machinery Smart Park of the Zoomlion Smart Industrial City in Changsha, Hunan.

Zoomlion has created the most advanced and comprehensive intelligent construction machinery fleet with 11 pieces of intelligent construction equipment that can coordinate full-process, unmanned construction, covering excavation, concrete pumping, hoisting and installation. View video: https://youtu.be/CLIItvVXsIk.

"The 'super brain' of intelligent construction, built by Zoomlion's independently developed iCES intelligent scheduling system, MAS multi-intelligent equipment cooperation system and 4DT digital twin system, is giving the construction machinery the 'superpower' and ability to 'speak' and coordinate construction tasks autonomously," said Yu Xiaoying, deputy director of technology research center, Zoomlion Central Research Institute.

The brand-new intelligent construction system is enabled by full-information digital connection, full-task intelligent scheduling, full-process autonomous coordination and full-scenario three-dimensional visualization, empowering full-process unmanned intelligent construction:

- *The **iCES intelligent scheduling system** resolves Building Information Modeling (BIM) tasks in milliseconds with 100 percent accuracy;*
- *One-click construction task dispatch and full-digital delivery reduces delivery time by 90 percent compare to manual operation;*
- *Compact and efficient construction can cut waiting time by 28 percent, achieving streamlined staff arrangement and safer construction.*
- ***MAS multi-intelligent equipment** cooperation system can predict and coordinate the operation path of intelligent equipment to realize the precise collaboration of actions and full-scope active collision prevention;*
- *4DT digital twin visualization system enables all-around monitoring of the construction site's digital twin, with one information network, one management spreadsheet and one*

monitoring map; the system can reduce construction period by 30 percent through aided intelligent decision-making, improving manpower efficiency by 300 percent.

Zoomlion has continually carried forward the intelligent development of construction machinery, making breakthroughs from intelligent technologies that give individual 'thinking' to machinery equipment, multi-mode human-computer interaction technologies that allow equipment to understand and learn, to intelligent cooperative technologies enabling all equipment to interact and work as one. Its pioneering technological roadmap, which has evolved from an intelligent unit to an intelligent cluster and now is capable of delivering intelligent construction solutions in full scope, has realized an all-new construction model of operation, with full-process unmanned operation in a digital close-loop.

With strong belief in the power of technology, Zoomlion is committed to pushing forward the intelligence transformation of the industry.