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## Study on Integration Management and Control System of Port Cranes

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### ABSTRACT

This paper proposes the design scheme of Integration Management and Control System (IMCS) using the integration and optimization design theory of port cranes' management and control system based on Enterprise Resource Planning (ERP), Manufacturing Execution System (MES) and Process Control System (PCS). The functions, interface and software design of the three sub-modules of IMCS are presented. Outcomes of this research are being employed to practical port cranes' operation and management, which eliminates the island phenomenon of cranes' storage and application conditions between the management and control department. Hence, IMCS makes the integrated automatic port cranes system come true and it significantly improves the core competitiveness of the port.

### KEYWORDS

Port Cranes; IMCS; ERP; MES; PCS; Island Phenomenon

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