

ABSTRACT

Master's thesis contains 115 pages of explanatory notes.

Keywords: main haist, induction motor, brake, optimum voltage regulator, static moments, frequency control, transients, performance, energy efficiency, energy loss.

This research is about positioning accuracy in the shaft cage hoisting plant in the combined control systems. The structure includes an analytical review of scientific, technical and patent of national and foreign information. Positioning accuracy for 5-mines lifting installations for open-loop control system with electrodynamic braking and frequency converter with vector control system was received.

At «MATLAB» applications was designed model of system and performed research of dynamic modes for mine-hoisting installations. Open and closed systems of automatic control was received. The resulting recommendations could be used for modernization and the complete reconstruction of existing mines. Calculation and implementation for this master's thesis were provided by using the following software: Mathcad 15, MATLAB R2013, Microsoft Office Word 2013, Microsoft Office Visio 2010.

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| Изм. | Лист | № докум. | Подпись | Дата | Підвищення точності позиціонування шахтної клітьової підйомної установки з використанням комбінованої системи керування | Лит. | Лист | Листов |
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