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An Algorithm for Preventing the Irregular Operation Modes of the Drive Synchronous Motor Providing the Ore Grinding

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Abstract : The current scientific and engineering interest concerning the problems of preventing the emergency manifestations of drive synchronous motors, ensuring the ore grinding technological process has been justified. The analysis of the known works devoted to the abnormal operation modes of synchronous motors and possibilities of protection against them, has shown that their application is inexpedient for preventing the impermissible displays arising in the electrical drive synchronous motors ensuring the ore-grinding process. The main energy and technological factors affecting the technical condition of synchronous motors are evaluated. An algorithm for preventing the irregular operation modes of the electrical drive synchronous motor applied in the ore-grinding technological process has been developed and proposed for further application which gives an opportunity to provide smart solutions, ensuring the safe operation of the drive synchronous motor by a comprehensive consideration of the energy and technological factors.

Keywords : synchronous motor, abnormal operating mode, electric drive, algorithm, energy factor, technological factor
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