

(54) Title of the invention : METHOD FOR ASSESSING OPERATING STATUS OF ELECTRICAL MOTORS USING MACHINE TRAINING (ML) MODELS

<p>(51) International classification :G06N0020000000, G06N0003080000, G06N0003020000, H02P0023120000, G06N0003000000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)R. V. R & J. C COLLEGE OF ENGINEERING Address of Applicant :R. V. R & J. C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR – 522019, ANDHRA PRADESH, India ----- Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)DR. N. C. KOTIAIAH (PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 2)Y. SURI BABU (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 3)M. ANITHA (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 4)B. V. VASANTHA RAO (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 5)P. SIVA KRISHNA (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 6)Y. SUMANTH (ASSISTANT PROFESSOR) Address of Applicant :ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ---- ----- 7)P. VENKATA MAHESH (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 8)DR. P. TRIPURA (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 9)Dr. KORRAPATI RADHA RANI (PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE ----- 10)Dr. NIMMAGADDA CHAITANYA (ASSOCIATE PROFESSOR) Address of Applicant :DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, R.V.R & J.C COLLEGE OF ENGINEERING, CHOWDAVARAM, GUNTUR-522019 ANDHRA PRADESH STATE -----</p>
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(57) Abstract :
 ABSTRACT METHOD FOR ASSESSING OPERATING STATUS OF ELECTRICAL MOTORS USING MACHINE TRAINING (ML) MODELS The present invention provides an approach for utilizing machine training (ML) models for assessing operating status of electrical motors. The present invention provides a state observing unit comprising a current sensor configured to acquire actual current of a motor, the state observing unit configured to acquire an integral gain function and a proportional gain function in a current control loop of the motor, and detect state variables which include at least one of an amount of overshoot, an amount of undershoot, and a rise time of the actual current occurring in response to a stepwise torque command, wherein the machine learning apparatus is configured to apply a result of the learned condition based on the integral gain function and the proportional gain function to control the motor in accordance with the result of the learned condition.

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