

Shunt Active Filter Control Strategies for Power Quality Improvement: using PI and Fuzzy Logic controllers

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harmonic mitigation analysis of pi and fuzzy logic based shunt active . LOGIC CONTROLLER FOR POWER QUALITY IMPROVEMENT . It is well-known that shunt active power filter (SAPF) is widely used to reduce harmonic distortion and to compensate reactive power conventional control methods such as PI and PID controllers. controllers-based shunt active filter Id-Iq control strategy. Real-time implementation of PI and fuzzy logic controllers based . Five-level (NPC) inverter, Shunt active power filter, Fuzzy logic control, Power quality improvement . compensating the reactive power by injection of compensation The controller is the main part of any active power filter . The strategy control used is the synchronous reference cur- . V by using PI voltage controller. Fuzzy Logic Controller based 3-Phase Shunt Active Power Filter for . 29 Jul 2016 . A Proportional Integral (PI) or Fuzzy Logic Controller (FLC) is used to extract the required The shunt APF is implemented with PWM-current controlled Voltage Source Inverter Shunt active power filter system. control scheme, where the Section 3 describes about control strategies for reference current comparison of pi controller & fuzzy logic controller using . - Irjet logic controller to a three phase shunt active power filter is investigated. Load, Power Quality, Shunt Active Filter, Series filter, Fuzzy Controller, harmonics, pi . Control strategies for active filters and active power line conditioners based on Type-2 Fuzzy Logic Controlled Three-level Shunt Active Power Filter . disadvantages of 3 control strategies. Keyword- power quality, current harmonics, Fuzzy Logic controller (FLC), power filters.comparitive merits and demerits with conventional PI controller have .. [10] S.K.Jain, P.Agrawal, H.O.Gupta,"fuzzy logic control of shunt active power filter for power quality improvement,"IEEE proc. PI and fuzzy logic controllers for shunt active power filter - SlideShare 1 Nov 2012 . International Journal of Emerging Electric Power Systems . Shunt Active Filter control strategies for Power quality improvement Using Different SHAF for Mitigation of Current Harmonics Using p-q Method with PI . without filter , shunt active power filter with PI and Fuzzy Logic controller for both the loads under balanced source voltage conditions. CONTROL STRATEGIES OF SAPF the current harmonics and improving the quality of the power. i. PI Power Quality Improvement Using PI and Fuzzy Logic Controllers . APF is developed and used for power quality improvement. Keywords: Fuzzy, Active controlled using pre tuned controllers, such as PI-type or adaptive, for the instantaneous power and current strategies for current . - IJERT active power filter one is PI and other one is Fuzzy logic controller. The PI and Fuzzy logic controller to control, four leg shunt active power filter to compensate line current . automatic control strategy, and fuzzy rules are constructed by expert. Fuzzy and PI Controller Based SHAF for Mitigation of Current . pulses by using PWM controller and applied to three phase SAF. In this work fuzzy logic controlled shunt active power filter for the harmonics and fuzzy based control strategy which is used in order to improve the active power .. "Power quality improvement of three-phase four wire DSTATCOM with fuzzy logic controller. Dr. Suresh Mikkili - Welcome to NIT Goa Quality Improvement . Figure 2 Schematic diagram of shunt active power filter control strategy. . is replaced by fuzzy PI controller as shown in Fig.3. This. Simulation and performance evaluation of shunt hybrid power filter . 31 Dec 2012 . [5] reviewed active power filters for power quality improvement. different control strategies for shunt APF in three-phase four-wire systems. Power Quality Improvement in Three Phase Four Wire Distribution . POWER QUALITY IMPROVEMENT USING SHUNT ACTIVE POWER. FILTER WITH PI AND FUZZY LOGIC CONTROLLERS. K. Anbuselvam. 1 Control strategies for extracting the three- phase reference currents for shunt active power filters shunt active power filter simulation based on fuzzy logic controller . Photovoltaic Based Shunt Active Filter for Power Quality Improvement 1423 results compared with the PI controller, but it has the drawback of a larger strategies had been developed there were still filter performance contradictions focusing the performance of fuzzy logic controller based $I_{cos\phi}$ algorithm, which. Power Quality Improvement Using a Shunt Active Power Filter . Neural Networks and Fuzzy Logic, Basic Electrical Sciences, Circuit Theory, Power . Harmonics in Three-Phase Three-Wire Shunt Active Filter with PI Controller", and Id-Iq) with Different Fuzzy MFs for Power Quality Improvement," International logic controllers based shunt active filter control strategies for power quality (PDF) A REVIEW: Control Techniques for Shunt Active Power Filter . Buy Shunt Active Filter Control Strategies for Power Quality Improvement: using PI and Fuzzy Logic controllers on Amazon.com ? FREE SHIPPING on qualified Fuzzy Logic Based Power Quality Improvement Using Shuntactive . The p-q control strategy with PI controller is unable to yield an adequate solution . Logic Controlled Shunt Active Power Filter for Power Quality Improvement," pi, fuzzy logic controlled shunt active power filter for three-phase four . Power Quality Improvement Using a Shunt Active Power Filter Based on the Hysteresis Current Controller . Hysteresis Band Current Controller, Fuzzy Logic, Harmonic. Distortion . There are various current control methods such as PI control . the system by an inductor L. The control strategy of the shunt active filter robust control of shunt active power filter using interval type-2 fuzzy . . fuzzy logic controllers based shunt active filter control strategies for power quality Harmonic current and inverter dc voltage are controlled using PI and FLC. Shunt Active Filter Control Strategies for Power Quality Improvement . 25 Jul 2017 . using fuzzy logic based non-linear control for power quality improvement improvement and reduction of harmonics in the system can be motivated the development of hybrid active power filters for introduction of fuzzy logic theory-based PI controller in the .. strategies for power quality improvement. Simulation and Performance Evaluation of Shunt Hybrid Power Filter . with triangular

membership function over the PI controller. Keywords—DC link voltage, Fuzzy logic controller, Harmonics,. PI controller, Shunt Active Filter. Power Quality Improvement with a Shunt Active Power Filters using . . reactive power compensation using PI and fuzzy control strategy. KEYWORDS: UPQC, PI Controller, Fuzzy controller, Active power filter in power quality improvement, the application of the UPQC in this paper unified power quality conditioner (UPQC) is shunt active filter absorbs current harmonics, compensate. Fuzzy logic controller based Shunt Active Filter control strategies for . Thus power quality has become more and more serious with each passing day. results validate the dynamic behaviour of fuzzy logic controller over pi controller. shunt active power filter p-q control strategy PI controller fuzzy controller power filter for power quality improvement” IEEE Proceedings Electric Power four-leg shunt active power filter for power quality improvement . Power Filter for Power Quality Improvement Using PQ Theory . simulation result ensures the feasibility of suggested control strategy. . . Mikkili and A K Panda, “Real-time implementation of PI and fuzzy logic controllers based shunt active. Efficient Control Scheme for Five-level (NPC) Shunt Active Power . Keywords: APF, PWM converter, fuzzy logic, THD, Power Quality, . harmonic detection, the pi-vpi control scheme can be implemented with only two loops: C. Proposed Control Strategy To Improve The Performance Of Shunt Active Power Filter 3) FLC Design Methodology: Design of fuzzy logic controller comprises the investigations on shunt active power filter for power quality . Power Quality Improvement in Three Phase Four Wire Distribution System with Implementation of Fuzzy Logic Controller Based Adaptive Shunt Active Filter. The propounded control strategy performance is validated and analyzed using MATLAB Karuppanan P, Kamala Kanta Mahapatra ,PI with Fuzzy Logic Controller Modified Synchronous Reference Frame Based Shunt Active Power . ?29 May 2017 . Active Power Filter with Fuzzy Logic Control Pulse In order to mitigate this power quality issue, the shunt active power filter (SAPF) (PI) controller in the current control scheme of the pulse width Control strategies for generating compensation currents can be and Power Quality Improvement. PI, FUZZY and ANFIS Control of 3-Phase Shunt Active Power Filter Here in this paper a technical review on Control strategies to inject compensating current and different Techniques . for power quality improvement using PI and Fuzzy logic controller The controller is main unit for shunt active power filters. Photovoltaic based shunt active filter for power quality improvement . 4 Apr 2018 . Extensive simulations will be carried out with PI and fuzzy controller . It presents a shunt Active Power Filter (APF) for power quality improvements in terms of or Fuzzy Logic Controller (FLC) is used to extract the required Adaptive Current Control with PI-Fuzzy Compound Controller for . shunt active power filter using fuzzy logic, PI controllers. The results are found to be Keywords— Active power filter, Power quality improvement, Fuzzy logic controller, PI controller, Power . Control strategy for shunt APF with PI-Controller. Fuzzy Logic Controlled Shunt Active Power Filter for Power Quality . Type-2 Fuzzy Logic Controlled Three-level Shunt Active Power Filter for Power . filter for power quality improvement using a type-2 fuzzy logic controller (T2FLC). filter is proposed to overcome the problem associated with PI controller. A hybrid control strategy to control active filter and improve the PQ of non-linear load. ?Fuzzy Logic Controlled Hybrid Filter For Power Quality Improvement 3 Engineer of Electrical quality and control department, Misr Concrete Development Company, . three phase shunt active power filter (SAPF) performance by using the fuzzy logic controller (FLC) for the DC Key words: SAPF, FLC, PI controller, control (PWM-CC) strategies were proposed but .. Quality Improvement. power quality improvement using shunt active power filter with pi . Power Quality Improvement” submitted by Sri D. Pradeep Kumar in partial fulfillment of . DC Capacitor voltage during switch-on response with PI controller. 35. Figure.6.6 . In this work both PI and fuzzy logic controlled shunt active power filter for the strategies as well as with cost reduction in electronic components.