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1.

Authors: Swapnil S. Managule, Sanjay Dabhole, Sanjeev Gupta

Paper Title: The Shunt Active Power Filter to Compensate Reactive Power and Harmonics with Optimized PI controller in a 3 Phase 3 Wire Distribution Network

Abstract: In this paper is to study the denomination Power quality and large refers to maintaining a proximal sinusoidal power distribution bus voltage at rated magnitude and frequency. This is mainly affected by the generation of harmonics. Even though electronic and non-linear devices are flexible, economical and energy efficient, they may degrade power quality by creating harmonic currents and consuming excessive reactive power. A family of various shunt hybrid active power filters has been explored in shunt and series configurations to compensate for different types of nonlinear loads. They provide controlled current injection to remove harmonic current from the source side of electric system and also can improve the power factor. This paper shows the method of improving the power quality using shunt active power filter with proposed optimized PI. The proposed topic comprises of PI controller, filter hysteresis current control loop, dc link capacitor. The switching signal generation for filter is from hysteresis current controller techniques. With the all these element shunt active power filter reduce the total harmonic distortion. Its source current, compensating current and THD values are studied, then PI control strategy is applied then the differences in THD are compared. The PI feedback compensation design starts with the small signal system's transfer function. Then an optimum constant of PI for a Shunt-APF is proposed and implemented to enhance its response to compensation of harmonics of linear and non-linear loads. The obtained results have demonstrated the ability to compensate the current harmonics effectively under distorted source conditions. The fluctuation in the dc bus voltage of the filter depends on the compensation speed of the outer loop that regulates the dc bus voltage. The proposed shunt active filter model uses balanced linear and non-linear load works successfully lowers the THD within IEEE norms and satisfactorily works to compensate current harmonics. The model is made in MATLAB / SIMULINK and successfully reduces the harmonic in the source current.

Keywords: (Active Power Filter, threshold harmonics distortions, quality factor, transfer function, hysteresis etc.)

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2. **Authors:** Shadrack Mutungi Simon

	Paper Title:	**Evaluation of the Resource Leveling Techniques Employed by Contractors in the Kenyan Construction Industry**	
	Abstract: The purpose of this research was to identify and evaluate the various resource leveling techniques employed by contractors in the Kenyan construction industry. The researcher adopted a survey research design whereby questionnaires were distributed among contractors. A response rate of 76% was achieved. The three most popular Resource Leveling techniques employed by contractors were found to be fast tracking, Microsoft Project and authorizing overtime. The three least popular Resource Leveling techniques were found to be splitting tasks into non-sequential pieces, delaying critical path tasks and doing nothing. The three most effective Resource Leveling techniques as experienced by contractors were found to be fast tracking, Microsoft Project and substituting resource of equal or greater capability. The three least effective Resource Leveling techniques were found to be extending critical path tasks, delaying critical path tasks and doing nothing. Contractors were generally found to be aware of the different available options for Resource Leveling. The techniques found to be least effective in practice are theoretically known to have the highest negative impact on the project schedule. This reinforces the idea that contractors are not only aware of the various resource leveling techniques existing in theory but also understand their effects on the project performance. **Keywords:** Resource Leveling, Construction, Contractors. **References:** 1. Badawiyeh, B. H. (2010). The Effect of Planning and Resource Leveling. 2. Bon, R., & Crosthwaite, D. (2000). The future of International Construction. London: Thomas Telford. 3. Dominguez, B. J. (2010). Project Scheduling And Resource Levelling. Project Schedulling Resource Levelling, 1–3. Retrieved from http://www.projectsmart.co.uk/project-scheduling-and-resource-levelling.html 4. Dubey, A. (2015). Resource Levelling for a Construction Project, 12(4), 5–11. http://doi.org/10.9790/1684-12440511 5. Gido, J., & Clements, J. (2003). Successful Project Management (2nd ed.). Thomson South-Western. 6. Gray, C. ., & Larson, E. . (2006). Project Management: The Managerial Process (3rd ed.). Boston, MA: McGraw-Hill. 7. Hegazy, T. (2010). Resource Leveling Vs Resource Allocation, 59–65. Retrieved from http://www.tutorialspoint.com/management_concepts/resource_leveling.htm 8. Juma, N. (2015). Factors Influencing Implementation Of Constituency Development Fund Projects In Public Secondary Schools In Kiminini Constituency , Trans-Nzoia County. International Journal of Technology Enhancements and Emerging Enginerring Research, 3(5), 44–55. 9. Mendoza, C. (1995). Resource Planning and Resource Allocation in the Construction Industry. University of Florida. 10. Nosbisch, M., Co, K. P., Winter, R., & League, L. (2005). Managing Resource Leveling CPM Schedule Logic. 11. Reddy, B. S. K., & Nagaraju, S. K. (2015). A Study on Optimization of Resources for Multiple projects by using Primavera. Journal of Engineering Science and Technology, 10(2), 235–248. 12. Verzuh, E. (2003). The Portable MBA in Project Management. New Jersey: John Wiley & Sons, Inc. 13. Wibowo, A. (2009). The Contribution Of The Construction Industry To The Economy Of Indonesia: A Systemic Approach. Civil Engineering Department, Diponegoro University, Indonesia. http://doi.org/10.1024/0301-1526.32.1.54	**8-12**
3.	**Authors:**	**B. G. Chhapkhanewala, S. L. Vaikole**	
	Paper Title:	**Fabric Fault Detection using Local Derivative Pattern and Gabor Filter Approach**	
	Abstract: The aim of this is to design a defect detection system using image processing techniques. Inspection process is very important for textile industry. Defects decrease the profits of manufacturers and cause undesirable loses. Therefore, to reduce loses manufactures initially started to employ experts to detect the currently available defects on the fabrics. An effective defect detection scheme for textile fabrics is designed in this article. Interestingly, this approach is particularly useful for patterned fabric. In the proposed method, firstly, Local Derivative Pattern (LDP) is adjusted to match with the texture information of non-defective fabric image via genetic algorithm. Secondly, adjusted optimal Gabor filter is used for detecting defects on defective fabric images and to be detected have the same texture background with corresponding defect-free fabric images. Gabor filter is adjusted to match with the texture information of non-defective fabric image via genetic algorithm. The novel high-order local pattern descriptor, local derivative patterns (LDP), for face recognition. LDP is to encode directional pattern features based on local derivative variations. The (n)th-order LDP is proposed to encode the (n-1)th-orders local derivative direction variations, which can be more detailed information than the first-order local pattern used in local binary patterns (LBP). **Keywords:** Fabric Fault Detection, Gabor filter, Local Derivative Pattern (LDP), Support Vector Machines (SVM) classier. **References:** 1. E.W.T. Ngai, S. Peng, Paul Alexander, Karen K. L. Moon, Decision Support and Intelligent Systems in the textile and apparel Supply Chain Expert Systems with Applications, Vol. 41, Issue 1, pp. 81-91, January 2014. 2. P. Banumathi, Dr. G. M. Nasira, Fabric Inspection System using Arti_cial Neural Networks, International Journal of Computer Engineering Science (IJCES), Vol. , Issue 5, pp. 2027, May 2012. 3. Henry Y. T. Ngan, Grantham K. L. Pang, Nelson H. C. Yung, Automated Fabric Defect Detection, International Journal of Image and Vision Computing, pp. 442 458, Sept 2011. 4. Mahajan P.M., Kolhe S. R.anf Patil P.M., A review of Automatic fabric Defect Detection Techniques, Advances in Computer Research, Vol. 1,Issue 2 , pp. 18 29, 2009. 5. Xuejuan Kang, Panpan Yang, Junfeng Jingr, Defect Detection on Printed Fabrics Via Gabor Filter and Regular Band," Journal of Fiber Bioengineering and Informatics 8:1, pp. 195206, 2015. 6. Parul Parashar, Er. Harish Kundra, Comparison of Various Image Classi_cation Methods," International Journal of Advances in Science and Technology (IJAST), Vol. 2, Issue I, March 2014. 7. K. L. Mak, P. Peng, K.F F. C. Yiu, Fabric Defect Detection using Morphological Filters, Image and Vision Computing, Vol. 27, pp. 1585 1592, 2009. 8. Kazm Hanbay, Muhammed Fatih Talu, Omer Faruk Ozgven, Fabric defect detection systems and methodsA systematic literature review," Optik 127, Vol. 17, pp. 1196011973, 2016. 9. Shweta Loonkar, Dhirendra Mishra, A Survey Defect Detection and Classi_cation for Fabric Texture Defects in Textile Industry," (IJCSIS) International Journal of Computer Science and Information Security, Vol. 13, No. 5, May 2015.	**13-20**

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