|  |  |  |  |
| --- | --- | --- | --- |
| **Title:** | Improvement of Input Side Current of a Three-Phase Cúk Rectifier | | |
| **Author(s) Name:** | Sikder Mohammad Faruk, Mir Mofajjal Hossain, Ahmed Al Mansur, and Muhibul Haque Bhuyan | | |
| **Contact Email(s):** | muhibulhb@aiub.edu | | |
| **Published Journal Name:** | Southeast University Journal of Science and Engineering (SEUJSE) | | |
| **Type of Publication:** | Journal | | |
| **Volume:** | 9 | Issue | 1-2 |
| **Publisher:** | Southeast University | | |
| **Publication Date:** | December 2015 | | |
| **ISSN:** | p-1999-1630 | | |
| **DOI:** |  | | |
| **URL:** | www.seu.edu.bd/seujse | | |
| **Other Related Info.:** | pp. 45-51, Google Scholar Indexed | | |
|  | | | |

|  |  |
| --- | --- |
| **Abstract:** |  |
| Abstract— Rectification is a very common term in the power electronics sector, where an AC signal is converted into a DC signal. But this process comes up with a problem such as distortion of input current with high amplitude. To solve this problem passive filtering is used to improve the nature of the input current. But filtering brings a lower output voltage. To solve this problem and for higher efficiency, output filtering is used with a DC-DC regulator. In this paper, the input side current of a three-phase Cúk rectifier is improved with respect to output voltage level using passive filters and the PWM technique. Few simulation results and the output voltage versus duty cycle and input current versus duty cycle are presented in this paper to show the effectiveness of the design. | |