

6. Conclusion



This dissertation work shows the design and implementation of interleaved boost converter. Comparison between conventional boost converters with the proposed IBC along with their application in running a BLDC motor with the motor speed variation is shown by using MATLAB/SIMULINK. From the obtained results we can conclude that, the IBC has higher boosting capacity, reduced inductor peak current and increased efficiency compared to that of conventional boost converters. The graph of efficiency versus output power is plotted and this graph clearly shows that, the efficiency of the proposed converter increases with increase in output power. And also it is clear that the selection of converter also plays an important role in efficient utilization of the renewable source output. The results also shows us that, the output of IBC is higher with less ripple content than that of conventional boost converter which helps in increasing the speed and efficiency of BLDC motor.



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REFERENCES

- [1] J.S.Anu Rahavi 7 .DQDJDSUL\ D 'U 5 6H\H]KDL 3'HVLJQ and Analysis of Interleaved Boost Converter for Renewable (QH UJ\ 6RXUFH' LQ 3URF ,QWHUQDWLRQDO &RQIHUHQFH RQ computing, Electrical and Electronics Technologies,2012,pp.447-451.
- [2] R.Ramaprabha,K.Bhargav Raj and V.D.Logeshwaran 3\$QDO\VLV RI 3KRWRYROWDLRF 6\ VWHP IHG ,QWHUOHDYHG %RRVW &RQYHUWHU' LQ 3URF ,QWHUQDWLRQDO &RQIHUHQFH RQ FRPSXWLQJ Electrical and Electronics Technologies,2012,pp.399-403.
- [3] Nasir Coruh,Satilmis Urgun,Tarik Erfidan,Semra Ozturk 3\$ 6LPSOH DQG Implementation of Interleaved Boost &RQYHUWHU' IEEE Conference on Industrial Electronics and Applications,2011,pp.2364-2368.
- [4] Po-Wa Lee,Yim-Shu Lee,David K.W.Cheng,Xiu-Cheng /LX 36 WSHD Analysis of an Interleaved Boost Converter ZLWK FRXSOHG LQGXFWRUV' LQ 3URF ,(((7UDQVDFWLRQ RQ Industrial Electronics, vol 47,No 4,August 2000,pp.787-795.
- [5] Chandra sekhar, G.Yognjalu reddy and sanjay Lakshmi 1DUD\DQ 3' HValidation and Validation of solar inverter ZLWK WZR SKDVH LQWHUOHDYHG ERRVW FRQYHUWHU' ,QWHUQDWLRQDO conference on power and advanced control engineering 2015,pp.7-11.
- [6 @ 0 6KDQPXJD SUL\ D 5 %DODVXEUDPDQLXP 3\$QDO\VLV RI multidevice interleaved boost converter for high power DSSOLFDWLRQ' ,QWHUQDWLRQDO &RQIHUHQFH RQ FLUFXLW SRZHU DQG computing technologies, 2014,pp.320-327.