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PREVENTION OF CIRCULATING CURRENT IN PARALLELED BIDIRECTIONAL AC/DC CONVERTER

K. ESAIVANAN[1], M. SUDHAKARAN[2] & P.AJAY-D-VIMAL RAJ[3]

[1]M.Tech Student, Department of Electrical and Electronics Engineering
Pondicherry Engineering College Puducherry, India
[2]Professor, Department of Electrical and Electronics Engineering
Pondicherry Engineering College Puducherry, India
[3]Assistant Professor, Department of Electrical and Electronics Engineering
Pondicherry Engineering College Puducherry, India

ABSTRACT

In this paper, bidirectional ac/dc converters are paralleled and circulating current is prevented. The converter used here is boost type ac/dc converter and it is controlled by novel PWM technique which reduce the switching loss, as only one switch operating per cycle. This PWM techniques combined with feed forward controller enable to get better current shaping and current sharing. This converter is connected in parallel to increase the power transfer capacity between AC grid and DERs. By connecting converters in parallel, circulating current arises and it affects the system performance. These ac, dc, self-generating and synchronous circulating currents are analysed and prevented by novel control strategy

KEYWORDS: Circulating current, PWM Strategy, AC/DC bidirectional converter, AC grid.

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