Digest Demo of IEEEtran.cls [1] for COBEP 2015

Abstract

The Brazilian Power Electronics Conference – COBEP is a conference held every odd year in Brazil, since 1991, supported by the Brazilian Power Electronics Society – SOBRAEP. Due to high technical and scientific levels COBEP has long been technically sponsored by the IEEE. For 2015 we are pleased to introduce the first IEEE Southern Power Electronic Conference – SPEC along with COBEP in a unique event of power electronics in the Southern hemisphere.

I. Introduction

The conference covers the fields of interest of the power electronics community, providing a forum for sharing theoretical and practical developments related to power electronics, featuring strong participation of industry and academia. The main topics of the conference include.

1) Power converters topologies and design;
2) Electrical machines and drive systems;
3) Modeling, simulation and control in power electronics;
4) Devices, packaging, integration, magnetic materials and passive components;
5) Industrial, commercial and residential applications;
6) Renewable energy systems;
7) Smart grid and utility applications;
8) Energy efficiency, power quality and electromagnetic compatibility;
9) Education and special topics.

II. The Venue

Fortaleza is a seaside town in the Northeast of Brazil, in Ceará State, with 300 days of sunshine per year, an average annual temperature around 27 °C (80 °F) and beaches with warm water. A constant and pleasant wind makes the place ideal for sports like windsurf and surf, as well as to produce electricity from wind parks. Fortaleza has many attractions that you can discover them just being there.

1) The conference will be held at: Ponta Mar Hotel (http://www.praiacentro.com.br) 740 Av. Monsenhor Tabosa – Fortaleza – CE – Brazil

III. Paper Submission Guideline and Format

Prospective authors are requested to submit a digest no longer than five (5) pages, single column, double spaced, font size 12, summarizing the proposed paper. The digest should include key equations, figures, tables and references as appropriate, but no author names or affiliations. The digests must clearly state the objectives of the work, its significance in advancing engineering or science, and the methods and specific results in sufficient detail. Papers presented at COBEP/SPEC must be original material and not have been previously presented or published. Reviewers value evidence of completed experimental work. Authors should obtain any necessary company and governmental clearance prior to submission of digests.

TABLE I
A WRAPPED TABLE GOING NICELY INSIDE THE TEXT.

Header-1	Header-1	Header-1
2	3	5
2	3	5
2	3	5

Contributing authors may submit digest written in English following all details on digest and final manuscript format available on-line at www.cobepspec2015.ufc.br.

If a digest is accepted, authors must submit a final manuscript before the deadline or the manuscript cannot be published in the Proceedings or presented at the conference. Final manuscripts may be subject to charges if their papers are over the page or file size limit. At least one of the authors listed on a paper must be registered for either a Full Registration or for the Technical Sessions Only registration, per paper.

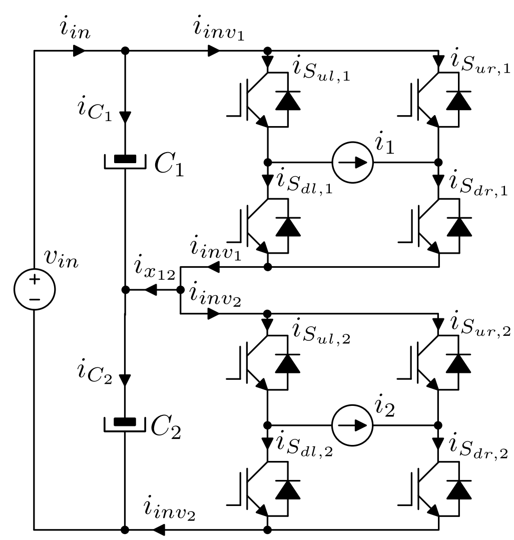

Fig. 1. Equivalent circuit used to analyze the capacitor voltage for two sub-modules.

IV. Important dates

PAPER SUBMISSION: MARCH 30th to MAY 1st

Notification of Acceptance: Jul. 29, 2015 Final Version: Aug. 28, 2015

LOCAL COMMITTEE

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V. SOME LATEX TEST

A. Equations

$$\Delta I_L = I_o + \frac{\sqrt{3}}{2} . \frac{V_i}{Z} \tag{1}$$

Where:

ΔI_L - Peak value of resonant current.

I_o - Load current.

V_i - Input voltage.

Z - Characteristic impedance of the resonant circuit.

$$i_{x_{12}}\left(\theta\right) = \frac{m_o}{2}\left[I_1 \cos\left(\theta_1\right) - I_2 \cos\left(\theta_2\right)\right] + \frac{m_o I_2}{2}\cos\left(2\theta + \theta_2\right) - \frac{m_o I_1}{2}\cos\left(2\theta + \theta_1\right). \tag{2}$$

B. Figures

C. Tables

VI. CONCLUSION

A conclusion might elaborate on the importance of the work or suggest applications and extensions. Clearly indicate advantages, limitations and possible applications.

REFERENCES

[1] M. Shell. (2008) IEEEtran homepage. [Online]. Available: http://www.michaelshell.org/tex/ieeetran/

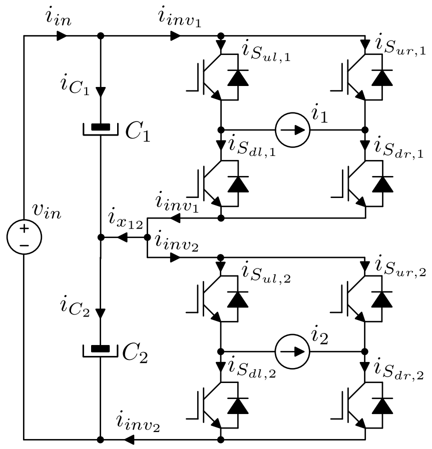

Fig. 2. Equivalent circuit used to analyze the capacitor voltage for two sub-modules.

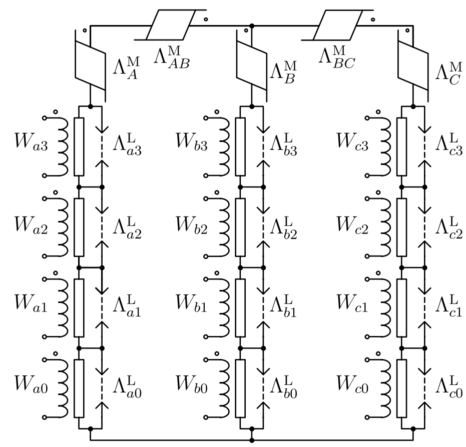

Fig. 3. Magnetic circuit implemented in the software PSIM.

TABLE II

PROTOTYPE VALUES.

Parameter	Value	Description
P_k	2 kW	Output rated power per sub–module
V_k	220 V	Output rated voltage per sub–module
V_{in}	1200 V	Input dc bus voltage
f_s	19980 Hz	Switching frequency
f_o	60 Hz	Fundamental frequency
C_k	1020 μF	Bus capacitor capacitance
L_k	1 mH	Filtering inductance
n_k	1:1:1:1	Transformer transformation ratio per phase
k	3	Number of inverters per phase (sub–modules)
R_0	8 Ω	Load resistance
C_0	15 μF	Load capacitance
L_0	5 mH	Load inductance

TABLE III

SIMULATION RMS VALUES WITH APPLIED PARAMETERS.

Phase A		**Phase B**		**Phase C**	
Parameter	Value	Parameter	Value	Parameter	Value
I_{La1}	9.01 A	I_{Lb1}	9.94 A	I_{Lc1}	9.19 A
I_{La2}	8.95 A	I_{Lb2}	9.90 A	I_{Lc2}	9.06 A
I_{La3}	8.96 A	I_{Lb3}	9.89 A	I_{Lc3}	9.06 A
P_{a1}	2017.56 W	P_{b1}	2200.69 W	P_{c1}	2017.74 W
P_{a2}	2015.97 W	P_{b2}	2199.85 W	P_{c2}	2014.41 W
P_{a3}	2015.85 W	P_{b3}	2199.22 W	P_{c3}	2013.93 W
Q_{a1}	524.75 VA	Q_{b1}	615.94 VA	Q_{c1}	679.69 VA
Q_{a2}	452.40 VA	Q_{b2}	579.60 VA	Q_{c2}	573.19 VA
Q_{a3}	458.57 VA	Q_{b3}	568.68 VA	Q_{c3}	562.90 VA
V_{Ca1}	400.30 V	V_{Cb1}	400.22 V	V_{Cc1}	400.56 V
V_{Ca2}	399.84 V	V_{Cb2}	400.04 V	V_{Cc2}	399.84 V
V_{Ca3}	399.86 V	V_{Cb3}	399.74 V	V_{Cc3}	399.59 V
I_{Ca1}	3.52 A	I_{Cb1}	3.89 A	I_{Cc1}	3.58 A
I_{Ca2}	3.52 A	I_{Cb2}	3.88 A	I_{Cc2}	3.56 A
I_{Ca3}	3.51 A	I_{Cb3}	3.88 A	I_{Cc3}	3.55 A