

**Ibracon Structures  
and Materials Journal**  
is published quarterly  
(March, June, September and  
December) by IBRACON.

**IBRACON**  
Instituto Brasileiro do Concreto  
Founded in 1972

R. Julieta do Espírito Santo Pinheiro, 68  
Jardim Olímpia, São Paulo – SP  
Brasil – 05542-120  
Phone: +55 11 3735-0202  
Fax: +55 11 3733-2190  
**E-mail:** arlene@ibracon.org.br  
**Website:** <http://www.ibracon.org.br>

**Editors**  
Américo Campos Filho  
(Brazil)

José Luiz Antunes de O. e Sousa  
(Brazil)

Luiz Carlos Pinto da Silva Filho  
(Brazil)

Romildo Dias Toledo Filho  
(Brazil)

**Cover Photo:** SÁ CARNEIRO AIRPORT TERMINAL,  
PORTO, PORTUGAL

**Courtesy:** L.C.P. SILVA FILHO,  
PORTO ALEGRE, RS



**Volume 4, Number 3**  
**August 2011**  
**ISSN: 1983-4195**

# **REVISTA IBRACON DE ESTRUTURAS E MATERIAIS**

## **IBRACON STRUCTURES AND MATERIALS JOURNAL**

### **Contents**

***Study of the compressive strength of concrete block prisms  
– Stack and Running bond***

G. MOHAMAD, P.B. LOURENÇO and H. R. ROMAN

**347**

***Performance evaluation of mechanical properties of  
self-compacting concrete prepared with different cements  
types submitted to steam curing***

L.F.SANTOS and M.P.BARBOSA

**361**

***Environmental variables in the concrete saturation degree  
modelling***

M. G. T. PERAÇA, A. T. C. GUIMARÃES and H. C. PICCOLI

**386**

***Effects of temperature changes on load transfer in plain  
concrete pavement joints***

G. M. COLIM, J. T. BALBO and L. KHAZANOVICH

**407**

***Determination of rheological parameters of mortar and  
concrete by alternative techniques***

M. P. BARBOSA, G. F. MACIEL, A. L. CASTRO, J. F. A. REIS and K. A. A. LEMOS

**440**

***An educational tool for design and detailing of reinforced  
concrete columns***

A. B. COLOMBO, W. S. ASSIS and T. N. BITTENCOURT

**481**

***Stability of reinforced concrete buildings with flat slabs: influence  
of frames with flat slab layers and inverted edge beams***

L. A. B. CICOLIN and J. R. FIGUEIREDO FILHO

**501**

***Efficiency evaluation of Branson's equivalent inertia to  
consider physical nonlinearity of beams in simple form***

D.M. OLIVEIRA and N.A. SILVA

**530**