

EDITORIAL

Open Access

# Editorial for thematic series: 1st Luso-Brazilian conference on adhesion and adhesives

Lucas FM da Silva<sup>1\*</sup> and Silvio de Barros<sup>2</sup>

\* Correspondence: lucas@fe.up.pt

<sup>1</sup>Departamento de Engenharia Mecânica, Faculdade de Engenharia, Universidade do Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal

Full list of author information is available at the end of the article

This special issue of *Applied Adhesion Science* (AAS) contains selected papers presented at the 1<sup>st</sup> Luso-Brazilian Conference on Adhesion and Adhesives (CLBA 2012) held in Rio de Janeiro, Brazil during November 8–9, 2012. CLBA 2012 was chaired by both of us and was co-organized by the Brazilian Association of Adhesion and Adhesives (ABAA) and the Portuguese Association of Adhesion and Adhesives (APAA). The goal of the conference was to join the Portuguese and Brazilian communities to discuss issues related to adhesive bonding research lately developed in both countries. Approximately 60 papers were presented by researchers from many universities and research centers. In order to disseminate the work presented in CLBA 2012, selected papers were prepared which resulted in the present Special Issue.

In the first paper, Queiroz et al. study the creep behavior of single-lap joints (SLJ). They developed a pneumatic creep equipment capable of testing ten specimens simultaneously. Results show that the average tensile strength is not enough to guarantee project safety, for long term applications. An initial model for the creep behavior of bonded joints was also proposed. In the next paper, Sales et al. investigated the effect of periodontal disease on the bond strength of fiberglass posts. Push-out tests were performed in specimens prepared with different adhesive systems and resin cements. It was possible to conclude that periodontal disease did not affect the bond strength mean values of fiberglass posts cementation. In the third paper, Silva Neto et al. present a numerical and experimental investigation on the adhesion between the steel tube and cement paste in petroleum wells. Push-out tests were performed with three different interface conditions in order to validate the numerical model. They observed the influence of the different conditions used in the experiments and the sensibility of the model variables to these changes. Antunes et al. worked on the characterization of FeCr and FeCoCr alloy coatings of carbon steels for marine environment applications. The adhesive strength of alloy coatings using thermal spray process was studied and related to chemical composition. Five combinations of wires and intermediate bonds were used. The coatings were characterized by morphological aspects, corrosion and adhesion tests. They concluded that the FeCoCr deposition, with an epoxy sealing, is suitable to be used as an efficient coating of carbon steel in aggressive marine environments. The last paper by Souza and Reis is related to the thermal behavior of DGEBA (Diglycidyl Ether of Bisphenol A) adhesives. Three different epoxy adhesives used in the offshore industry are characterized by Differential Scanning Calorimetry (DSC), Dynamic Mechanical Analysis (DMA) and Thermogravimetric Analysis (TGA). The

work shows that single lap joints tests at different service temperatures cannot be neglected when epoxy adhesives are intended to be used in field applications.

The review process of this Special Issue gave a deeper insight into the various aspects of adhesive joints and the chance to discuss in detail the manuscripts directly with the authors. We would like to thank the authors for their patience with the process and the reviewers for providing critical evaluations of these manuscripts. This special issue was sponsored by the Brazilian Federal Agency for the Support and Evaluation of Graduate Education (CAPES).

**Author details**

<sup>1</sup>Departamento de Engenharia Mecânica, Faculdade de Engenharia, Universidade do Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal. <sup>2</sup>Department of Mechanical Engineering, Federal Center of Technological Education (CEFET/RJ), Av. Maracanã 229, 20271-110 Rio de Janeiro, RJ, Brazil.

Received: 25 March 2014 Accepted: 26 March 2014

Published: 01 Apr 2014

10.1186/2196-4351-2-12

**Cite this article as:** da Silva and de Barros: Editorial for thematic series: 1st Luso-Brazilian conference on adhesion and adhesives. *Applied Adhesion Science* 2014, 2:12

**Submit your manuscript to a SpringerOpen<sup>®</sup> journal and benefit from:**

- ▶ Convenient online submission
- ▶ Rigorous peer review
- ▶ Immediate publication on acceptance
- ▶ Open access: articles freely available online
- ▶ High visibility within the field
- ▶ Retaining the copyright to your article

---

Submit your next manuscript at ▶ [springeropen.com](http://springeropen.com)

---