Web of Science

Additional Resources

Search Cited Reference Search

Advanced Search Search History

Marked List (0)

Web of Science® - now with Conference Proceedings

<< Back to results list

Record 30 of 54

Record from Web of Science®

Optimisation of the strength of aluminium foam sandwich (AFS) panels by different heat treatments

Print E-mail Add to Marked List Save to EndNote Web

Save to EndNote, RefMan, ProCite more options

Author(s): Shabestari SG (Shabestari, S. G.), Wanderka N (Wanderka, N.), Seeliger W (Seeliger, W.), Banhart J (Banhart, J.)

Editor(s): Poole WJ; Wells MA; Lloyd DJ

Source: ALUMINIUM ALLOYS 2006, PTS 1 AND 2 - RESEARCH THROUGH INNOVATION AND TECHNOLOGY **Book Series:** MATERIALS SCIENCE FORUM **Volume:** 519-521 **Pages:**

1221-1226 Part: Part 1-2 Published: 2006

Conference Information: 10th International Conference on Aliminium

Alloys (ICAA-10)

Vancouver, CANADA, JUL 09-13, 2006

Abstract: Aluminium foam sandwich panels (AFS) made of a low-density aluminium alloy AlSi6Cu6 foam core and two dense 6082 alloy face sheets were fabricated, after which the panels were subjected to two different heat treatments. First, the AFS panels were aged to increase their strength without further solution heat treatment and fast quenching, a process which resembles a T5 treatment. Second, to define a reference point the face sheets of AFS samples were cut off the foam and subjected to a full T6 treatment. Hardness profiles were measured across the thickness of the face sheets after the two different treatments and the microstructure was investigated. The main conclusion is that mechanical performance of AFS panels can be considerably increased by heat treatment without full solution heat treatment (T5), but without reaching the level of a full T6 treatment. The potential use of an easy to apply T5 treatment is an important cost reducing factor.

Document Type: Proceedings Paper

Language: English

Author Keywords: aluminium foam; 6082 alloys; transmission electron

microscopy (TEM); micro-hardness

KeyWords Plus: MG-SI ALLOYS

Reprint Address: Shabestari, SG (reprint author), Iran Univ Sci &

Technol, Tehran 16844, Iran

Addresses:

- 1. Iran Univ Sci & Technol, Tehran 16844, Iran
- 2. Hahn Meitner Inst Berlin GmbH, D-14109 Berlin, Germany
- 3. Appl Light Weight Mat GMBH, Saarbrucken, Germany

Cited by: 2

This article has been cited 2 times (from Web of Science).

Banhart J, Seeliger HW Aluminium Foam Sandwich Panels: Metallurgy, Manufacture and Applications POROUS METALS AND METALLIC FOAMS: METFOAM 2007 3-6 2008

Banhart J, Seeliger HW Aluminium Foam Sandwich Panels: Manufacture, Metallurgy and Applications ADVANCED ENGINEERING MATERIALS 10 9 793-802 SEP 2008

[view all 2 citing articles]

Create Citation Alert

Related Records:

Find similar records based on shared references (from Web of Science).

[view related records]

References: 10

View the bibliography of this record (from Web of Science).

Additional information

 View the journal's impact factor (in Journal Citation Reports)

Suggest a correction

If you would like to improve the quality of this product by suggesting corrections, please fill out this form.

1 von 2 27.11.2009 11:59

E-mail Addresses: shabestari@iust.ac.ir, wanderka@hmi.de, w.seeliger@alm-gmbh.de, banhart@hmi.de

Publisher: TRANS TECH PUBLICATIONS LTD, BRANDRAIN 6,

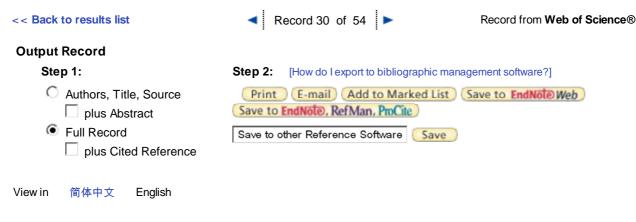
CH-8707 ZURICH-UETIKON, SWITZERLAND

Subject Category: Materials Science, Multidisciplinary

IDS Number: BEZ41

ISSN: 0255-5476

ISBN: 0-87849-408-1



Please give us your feedback on using ISI Web of Knowledge.

Acceptable Use Policy
Copyright © 2009 Thomson Reuters



Published by Thomson Reuters

2 von 2 27.11.2009 11:59