



PER/IADR

Congress, Helsinki, Finland,
September 12-15, 2012

PROGRAM BOOK

PER/IADR Congress & Exhibition

Finlandia Hall
Helsinki, Finland

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Badge ID: 769133
Makdad Chakmakchi

Thank you for registering for the 6th Annual Congress of the Pan European Region of the International Association for Dental Research (PER/IADR). The conference will take place from September 12-15, 2012, in Helsinki, Finland.

As you have registered in advance of the meeting and paid all fees in full, your PER/IADR meeting badge, any applicable tickets and/or guest badges will be available to print onsite at a scanner kiosk.

Please print this email and bring your bar code to the meeting to pick up your meeting materials. The bar code cannot be scanned via a smart phone or mobile device.

Scanner kiosks will be open for badge printing during the on-site registration hours listed below. IADR staff will be available onsite to assist delegates who wish to add items to their existing registration (such as event tickets or accompanying persons) and/or make changes to their badges.

ON-SITE REGISTRATION LOCATIONS AND HOURS

Registration will be open during the hours below in the Entrance Foyer of Finlandia Hall, located at Mannerheimvägen 13, Helsinki, Finland 00100.

Tuesday, September 11
12:00 – 17:00

Wednesday, September 12
7:30 – 18:00

Thursday, September 13
7:30 – 18:00

Friday, September 14
7:30 – 18:00

Saturday, September 15
7:30 – 13:00

Once you print your badge, you may proceed directly to the bag and USB pick up counter to receive your badge holder, lanyard, USB and conference bag of meeting materials. You DO NOT need to stand in line at the PER/IADR registration counters once you have printed your badge, unless you need to make any changes or add additional items.

Please remember to print out and bring this email, which contains your unique bar code to print your meeting materials, with you to Helsinki.

Thank you for registering for the 6th Annual PER/IADR Congress. We look forward to seeing you in Helsinki!

Sincerely,

IADR Registration
Email: registration@iadr.org
Phone: +1.703.548.0066
Fax: +1.703.548.1883



IADR

International Association
for Dental Research

Dear makdad chakmakchi,

The International Association for Dental Research verifies that makdad chakmakchi has attended the PER/IADR Congress (September 12 -15, 2012) in Helsinki, Finland for a total number of 1.0 Continuing Education (CE) credit hours of activities. Please note that the maximum number of continuing education hours available for this meeting is 30.5. One hour of attendance at a scientific session equals one CE hour. You have attended the following sessions:

87 - Dental Materials: Prosthodontics-Provisional/Impression/Materials - Educational Method: Poster Session, 60 minutes, 1 CE hours

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Best regards,

Christopher Fox, DMD, DMSc Executive Director, IADR/AADR

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JOINT CONFIGURATION AND MECHANICAL PROPERTIES OF LASER WELDED Co-Cr ALLOYS

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Introduction and Aim

Laser welding is extensively used for repairing Co-Cr frameworks. The aim of this study was to investigate whether the different design of the joint affects the mechanical properties of laser-welded Co-Cr alloys. The testing hypothesis was that there are no significant effects of the design in bond strength.

Materials and Methods

Dumbbell cast specimens (n:30) were divided in 3 groups (R, I, K, n:10). Group R consisted of intact specimens, Group I of specimens sectioned with a straight cut and Group K of specimens with a 45° bevel made at the one welding edge. Specimens of Groups I and K were laser-welded and all groups were loaded in tension up to fracture. The ultimate tensile strength (UTS) and elongation were determined for each specimen. Statistical analysis was performed by one way- ANOVA and SNK multiple comparison test ($\alpha:0.05$). Weibull analysis was also carried out to compare the survival probability of each group population. Fractured surfaces were imaged by a SEM.

Results

Representative tensile stress-strain graphs are given in Fig.1. The numerical results and failure probability are summarized in Table 1 and Fig. 3. Group I was inferior to R. Group K showed no significant differences from R, apart from elongation. SEM study of fractured surfaces (Fig. 3, 4) showed extensive dendritic structures in R group, whereas amorphous surfaces with pores and un-melted regions were identified in K and I groups, probably due to gas entrapment and shallow penetration depth of laser beam respectively. Therefore, the testing hypothesis was rejected.

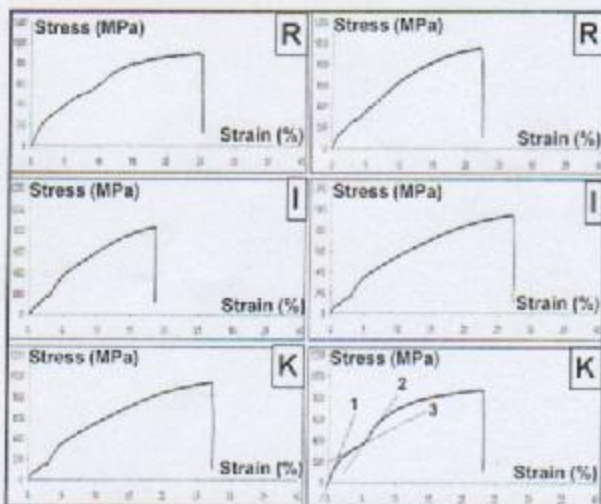


Fig. 1: Representative tensile curves of all groups tested. All curves demonstrate an abrupt change of slope within the elastic stage (red dotted lines). This finding is attributed to the antagonistic phenomena of void/pore growth and strain hardening during testing.

Table 1. Mean values and standard deviations of Ultimate Tensile Strength and plastic deformation.

	UTS (MPa)	E (%)	Weibull mod. (m)	σ_0 (MPa)
R	882 (124) ¹	11(6) ¹	8.3 (5.3-12.8) ¹	939 (878-1003) ¹
I	643 (228) ²	4 (5) ²	2.9 (1.8-4.5) ²	721 (596-872) ²
K	730 (154) ^{1,2}	4 (2) ²	4.9 (3.1-7.8) ^{1,2}	794 (709-888) ^{1,2}

Some superscripts denote mean values without statistically significant differences ($p>0.05$). The values in parentheses for m and σ_0 show the 95% confidence interval as determined by Weibull analysis.

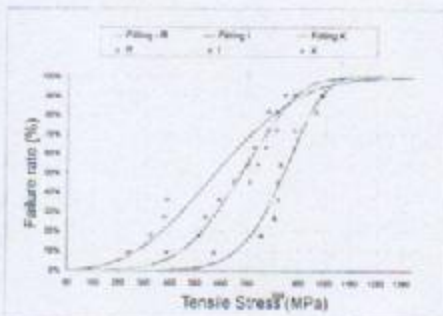


Fig. 2: Failure probability after Weibull fitting for the groups tested (R,I,K).

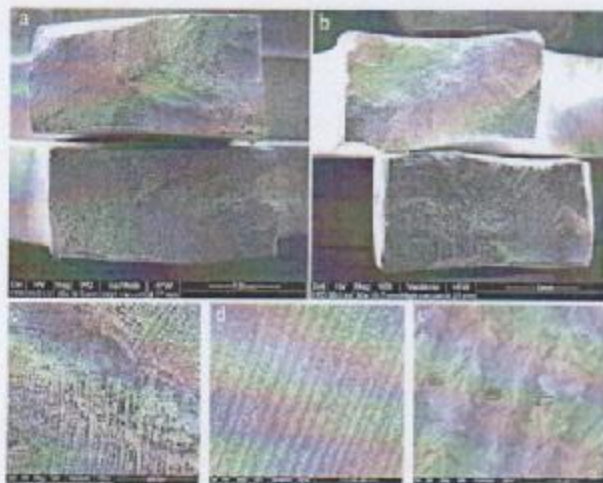


Fig. 3: Representative SEI from the surfaces of Group R specimens: a,b) Mutual fractured surfaces of two specimens. c) Dendrite structures with different orientation. d) Fracture surface within dendrite structure. e) Presence of secondary cracking between successive dendrites.

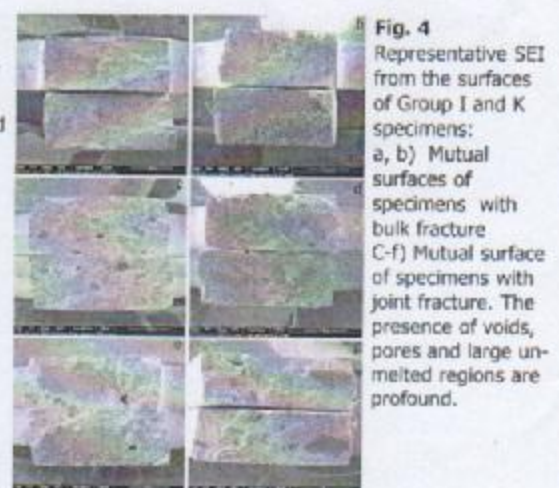


Fig. 4 Representative SEI from the surfaces of Group I and K specimens: a, b) Mutual surfaces of specimens with bulk fracture c-f) Mutual surface of specimens with joint fracture. The presence of voids, pores and large un-melted regions are profound.

Conclusions

The K shape joint configuration must be preferred over the I, as it demonstrates improved mechanical strength and survival probability.

Seq#: 87 Saturday, 15 September 2012, 12:00 – 13:00
Poster Session, Poster Hall

Scientific Groups – Dental Materials: Prosthodontics-Provisional/Impression/Materials

- S0660** Long-term Stability of Interim Restorations Fabricated with Preformed-malleable Composite-based Material. L. VASCONCELOS*, B. MONTEIRO, S. OLIVEIRA, L. MIRAGAYA, and C.E. SABROSA (*Universidade do Estado do Rio de Janeiro, Brazil*)
- S0661** Fatigue behavior of selected provisional crown and bridge materials. S. DATZ*, W. DASCH, and A. PETSCHL (*University of Erlangen-Nuremberg, Germany*)
- 0662** Plaque Activity Control to Prevent Gingivitis by Temporary Crown & Bridge Materials. S. HADER*, U. HOHEISEL, R. HECHT, C. THALACKER, M. HAUKE, and I. HAEBERLEIN (*3M Deutschland, Seefeld, Germany*)
- S0663** Shear Bond Strength of Experimental Resin for Coating Cast Clasp. H. HAMASAKA*, K. OKAMOTO, M. SONE, Y. TOYOTA, R. NEGORO, S. YORICHKA, S. MAKI, H. IKESHITA, M. ENDO, and S. OHKAWA (*Meikai University School of Dentistry, Sakado, Japan*)
- 0664** In-vitro-examination of molar crowns with substructures made of different polyetheretherketones. C. KOLBECK*, N. SERENO, D. WOOD, A. JOHNSON, M. ROSENTRITT, and G. HANDEL (*Regensburg University Medical Center, Germany*)
- S0665** Profilometric evaluation of finishing systems for CEREC CAD-CAM Chairside blocks. M. CARRABBA*, G. VULTAGGIO, M. SEDDA, A. VICHI, and M. FERRARI (*Tuscan School of Dental Medicine, University of Florence and Siena, Firenze, Italy*)
- 0666** 12-Month clinical evaluation of porcelain laminate veneers. E. OZTURK* and S. BOLAY (*Government Dental College and Hospital, Kocaeli, Turkey*)
- 0667** Spectrophotometric Analyses Of Surface Modifications In A Ceramic CAD/CAM System. C. IGIEL*, V. ZINSER, K. LEHMANN, and H. SCHELLER (*University Medical Center, Mainz, Germany*)
- 0668** Effects of Irradiation Methods on Leucite-Based-Ceramic Surface Roughness and Color. M. AKIN*, T. YAVUZ, A. OZTURK, and F. BASCIFTICI (*Selcuk Universitesi, Konya, Turkey*)
- 0669** Color Performance Of Ceramics According To Translucency And Insertion Material. V. ZINSER*, C. IGIEL, K.M. LEHMANN, and H. SCHELLER (*University Medical Center, Mainz, Germany*)
- 0670** Spatial Adaption of Ceramic Restorations: Digital versus Conventional Impressions. O. SCHAEFER*, H. KUEPPER, A. HEFTL, and A. GUENTSCH (*Jena University Hospital – Friedrich Schiller University Jena, Germany*)
- S0671** Handling Properties of Three Intraoral Scanning Systems. J.-S. SCHLEY*, S. REICH, and T. KERN (*Medical Faculty, RWTH Aachen University, Germany*)
- S0672** Dimensional Change in Impression Materials – Alginates and Alginate-Substitutes. T. BEYER*, M. HOLZMEIER, and A. STELLZIG-EISENHAUER (*University of Wuerzburg, Germany*)
- S0673** Comparison of New Intra-oral Syringe versus Automatic Handgun Cartridge Dispenser. S. DOGAN*, A. RAIGRODSKI, and C. SPIEKERMAN (*University of Washington, Seattle, USA*)
- 0674** Shore Hardness increase of Tray Materials during setting. J.C. FARR*, H. HOFFMANN, A. MAURER, P. OSSWALD, and E. WANEK (*3M ESPE, Seefeld, Germany*)
- 0675** New Method to Measure Retraction Capability of Retraction Pastes. A. MAURER*, C. SCHULTE, and T. KLETTKE (*3M Deutschland, Seefeld, Germany*)

- 0676** Evaluation of onlay fracture load; Resin Nano Ceramic and IPS e.max. L.C. CARNEIRO, P. VARPAAARA, T. HEIKINHEIMO*, and L. LASSILA (*University of Helsinki, Finland*)
- 0677** Metal ceramic crowns cemented with two luting agents: three-year results. A. PIWOWARCZYK*, K. SCHICK, and H.-C. LAUER (*University of Witten/Herdecke, Germany*)
- 0678** Joint Configuration and Mechanical Properties of Laser Welded Co-Cr Alloys. M. CHAKMAKCHI*, I. KOKOLIS, A. THEOCHAROPOULOS, A. PROMBONAS, and S. ZINELIS (*University of Mosul, Iraq*)
- 0679** Effects of Cold-cured PMMA Reinforcement by E-glass Fibers Impregnation. Y.C. SO, J.K.H. TSOI*, and J. MATINLINNA (*University of Hong Kong, Sai Ying Pun, Hong Kong*)
- S0680** Bond Strength of Soft Liner to PMMA with Different Primers. B. KORUGLU*, N. HAMDÉMIRCI, and A. USUMEZ (*Gaziantep University, Turkey*)
- 0681** Hardness of experimental soft acrylic lining materials. A. CHE AHMAD, P.S. WRIGHT, and S. PARKER* (*Bari's and the London School of Medicine and Dentistry, QMUL, United Kingdom*)

Seq#: 88 Saturday, 15 September 2012, 12:00 – 13:00
Poster Session, Poster Hall

Scientific Groups – Microbiology/Immunology II

- S0682** Novel Microscope-based High-content Screening and Analysis of Oral Biofilms. L. KARYGIANNI*, M. FOLLO, D.A. BURGHARDT, M. WOLKEWITZ, E. HELLWIG, and A. AL-AHMAD (*University Freiburg Medical Centre, Germany*)
- S0683** Expression of Bone Related Genes on *Porphyromonas gingivalis* Invaded Osteoblasts. K. AYDIN*, F.Y. EKINCI, and M. KORACHI (*Yeditepe University, Istanbul, Turkey*)
- S0684** The Effect of Essential Oil Incorporated Nanoliposomes on Oral Microorganisms. G. DEMIRBAS, F. OZEN*, G. DUMAN, I. ASLAN, F.Y. EKINCI, and M. KORACHI (*Yeditepe University, Istanbul, Turkey*)
- S0685** Antimicrobial effects of root canal medicaments against *Enterococcus faecalis* and *Streptococcus mutans*. B. ATILA PEKTAS*, P. YURDAKUL, D. GULMEZ, and M.O. GORDUYSUS (*Hacettepe University, Ankara, Turkey*)
- S0686** Anti-biofilm Activity of Antifungal-impregnated Denture Material. N. SALIM*, N. SILIKAS, J. SATTERTHWAITTE, C. MOORE, G. RAMAGE, and R. RAUTEMAA-RICHARDSON (*University of Manchester, United Kingdom*)
- 0687** Lack of correlation between capsule, fimbriae and adhesion of *P.gingivalis*. S. TEIXEIRA, T.T.S. D'ÉPIRO, J. KISIÉLIUS, and M. MAYER* (*Institute of Biomedical Sciences, University of São Paulo, Brazil*)
- S0688** CD14-Cleavage by Gingipains Leads to Macrophage Hyporesponsiveness to *Porphyromonas gingivalis*. R. TZACH-NAHMAN*, A. WILENSKY, L. SHAPIRA, and G. NUSSBAUM (*Hebrew University, Jerusalem, Israel*)
- S0689** Effects of chelating-agents on shear-bond strength of an experimental sealer. M. AKMAN*, K. CELIK, B. OZCOPUR, and S. BELLI (*Selcuk Universitesi, Konya, Turkey*)
- S0690** Effects of Different Antimicrobial Disinfection Systems on *Enterococcus faecalis* Biofilms. S. UNVER*, M. UNGOR, E. BOSTANOGLU, and M. DEMIRBILEK (*Baskent University, Ankara, Turkey*)