Recent Conference Contributions Relevant to CRP on “Plasma-Wall Interaction with Reduced Activation Steel Surfaces in Fusion Devices”

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14th International Conference on Plasma Facing Materials and Components for Fusion Applications (PFMC 2013), Jülich, 13-17 May 2013


Invited and oral contributions
Posters contributions


A048 O. V. Ogorodnikova, K. Sugiyama, Yu. Gasparyan, V. Efimov: Deuterium retention in displacement damage produced by fast heavy ions in tungsten and Eurofer

A062 S. Lindig, A. Houben and T. Schwarz-Selinger: The Native Hydrogen Content in EUROFER97

A068 V. Kh. Alimov, Y. Hatano, K. Sugiyama, T. Höschen, M. Oyaidzu, J. Dorner, M. Fußeder, T. Yamanishi: Surface Modification and Deutrium Retention in Reduced Activation Ferritic Martensitic Steels Exposed to Low-Energy, High Flux D plasmas and D2 Gas

A120 A. Houben, F. Koch, and Ch. Linsmeier: Ceramic Coatings as Tritium Permeation Barriers on Eurofer97

16th International Conference on Fusion Reactor Materials (ICFRM 2013), Beijing, 20-26 Oct 2013


Plenary, invited and other talks

Farhad Tavassoli, CEA, France: Current status and recent research achievements in ferritic/martensitic steels

Natalia Luzginova, NRG, Netherlands: An overview of 10 years of irradiation experiments on EUROFER 97 steel at high flux reactor in Petten

Takuya Yamamoto, UCSB, USA: In situ He injection and dual ion irradiation studies of reduced activation tempered martensitic steels and nanostructured ferritic alloys

Zhongwen Yao, QueensU, Canada: Radiation induced microstructures in austenitic ODS steels under dual-beam ions

Viacheslav Kuksenko, PSI, Switzerland: Nano-sized clusters formation in ferritic-martensitic steels under mixed proton-neutron irradiation

Jean-Louis Boutard, CEA, France: Oxide dispersion strengthened ferritic steels, a basic research joint program in France

Xu Wang, UM, USA: Microstructure analysis of ion beam irradiated CNSI and CNSII steels

Alexander V. Spitsyn, NRC KI, Russia: Retention of deuterium in damaged low-activation steel RUSFER (EK-181) after gas and plasma exposure

Poster contributions

16-110 Hui Zheng: The inhibition effect of low-temperature pre-irradiation of helium ions on the growth of helium bubble in 316L stainless steel: A Monte Carlo simulation

16-140 Dmitry Terentyev: Interaction of minor alloying elements with lattice defects in ferritic high-Cr steels: Ab initio study

16-162 Hongen Ge: Microstructure investigation on clam steel under H+/He+ dual-beam irradiation

16-234 Haishan Zhou: Plasma- and gas-driven hydrogen permeation through a reduced activation ferritic steel alloy F82H
21st International Conference on Plasma Surface Interactions in Controlled Fusion Devices (PSI 2014), Kanazawa, 26-30 May 2014

Papers are in JNM v463: http://www.sciencedirect.com/science/journal/00223115/463

Invited and oral contributions


Poster contributions (first author only)

P1-023 A. Hakola: Erosion of tungsten and steel in the main chamber of ASDEX Upgrade
P1-057 I. Takagi: Hydrogen-Deuterium exchange on plasma-exposed W and SS surface
P1-096 N. Yoshida: Retention and Desorption of Hydrogen and Helium from Stainless Steel Exposed to Plasmas of LHD
P2-005 N. Ashikawa: Effects of helium bombardment on hydrogen retention properties in F82H steel
P2-016 R. A. Pitts: Final case for a stainless steel Diagnostic First Wall on ITER
P2-026 T. Takizuka: Combination of helical ferritic-steel inserts and flux-tube-expansion divertor for the heat control in tokamak DEMO reactor

P3-020 M. Balden: Surface modifications of RAFM steels by deuterium exposure: Variation from coral-like/fuzz-like to blister-like features

P3-048 H. Zhou: Effects of surface conditions on the plasma-driven permeation behavior through a ferritic steel alloy observed in VEHICLE-1 and QUEST

12th International Workshop on Hydrogen Isotopes in Fusion Reactor Materials, Toyama, 2-6 June 2014


2-AM-5 Yu. M. Gasparyan, I. M. Timofeev, V. S. Efimov, M. S. Zibrov, A. A. Pisarev: Effect of Surface Conditions on Deuterium Retention and Desorption in Ferritic-Martensitic Steels

2-AM-6 Y. Hatano, V. Kh. Alimov, N. Yoshida, H. Watanabe, M. Oyaidzu, T. Hayashi: Surface Morphology of F82H Reduced Activation Ferritic/Martensitic Steel Exposed to High Flux Deuterium Plasma

2-AM-7 V. Kh. Alimov, Y. Hatano, J. Roth, K. Sugiyama, M. Oyaidzu, M. Baldwin, R. Doerner, M. H. J. ’t Hoen, H. T. Lee, Y. Ueda, M. Matsuyama, T. Hayashi: Deuterium Retention in Reduced Activation Ferritic Martensitic Steels Exposed to D Plasmas and Irradiated with D Ions


Invited and oral contributions

O-17 U. von Toussaint, T. Schwarz-Selinger and A. Mutzke: Investigation of coupled sputter-diffusion-effects of the tungsten-iron model system under deuterium ion bombardment

Poster contributions

A052 Tue P-40 A. B. M. Berger, R. Stadlmayr, G. Meisl, M. Cekada, K. Sugiyama, M. Oberkofler, T. Schwarz-Selinger, and F. Aumayr: Transient effects during erosion of WN and FeW films by deuterium ions studied with the quartz crystal microbalance technique

A129 Tue P-104 V.Kh. Alimov, Y. Hatano, M. Oyaidzu, M. Tokitani, and T. Hayashi: Erosion and surface modification of reduced activation ferritic martensitic steel F82H and iron exposed to deuterium and helium plasmas

A136 Tue P-112 Yuji Torikai, M. Nakayama, M. Saito, V.Kh. Alimov and R.-D. Penzhorn: Apparent tritium solubility in Fusion Reactor Materials

A160 Thu P-22 K. Yakushiji, H.T. Lee, K. Ibano, and Y. Ueda: Influence of helium on deuterium retention in reduced activation ferritic-martensitic steel (F82H) under simultaneous deuterium and helium irradiation


A213 Thu P-69 K. Sugiyama, J. Roth, R.P. Doerner, M. Balden, T. Höschen, W. Jacob: Sputtering Behaviour of EUROFER Steel by Energetic Deuteron Bombardment at Various Temperatures


Plenary, invited and other talks

Poster contributions
to follow.