Japan-US Workshop on
Fusion Power Plants and Related Advanced Technologies with participations of EU and Korea
February 22-24, 2011 at National Institute for Fusion Science in Toki, JAPAN

Agenda

Tuesday, February 22, 2011

9:00 – 9:20 Welcome and Opening remarks

9:20 – 9:30 Welcome address : A. Komori

Session : Overview of Fusion Reactor Designs (Chair : Y. Ogawa)

09:30 – 10:10 F. Najmabadi : Initial results from the latest US Power plant studies

10:10 – 10:50 H-C. KIM : A Path Way to DEMO: DEMO Design Activities of Korea, Current and Near Future

10:50 – 11:30 S. Konishi : Biomass Hybrid Concept and its High Temperature Blanket

11:30 – 12:10 K. Tobita : Recent design activities toward DEMO in JAEA

Group photo & Lunch

Session : Helical Reactor Design (Chair : F. Najmabadi)

13:30 – 14:10 A. Sagara : Overview of NIFS Fusion Engineering Research Project and Helical Demo FFHR-d1

14:10 – 14:40 T. Goto : Design window analysis of LHD-type heliotron DEMO reactors

14:40 – 15:10 J. Miyazawa : Direct Profile Extrapolation for the Deductive Procedure of Fusion Reactor Design

15:10 – 15:40 O. Mitarai : High density ignition access by NBI heating in FFHR

Coffee Break

Session : Divertor Engineering Issues (Chair : A. Sagara)

16:00 – 16:40 M. S. Tillack and the ARIES Team : Tungsten structures for high heat flux components: Opportunities and challenges

16:40 – 17:10 N. Yanagi : Heat flux reduction by HTS helical divertor coils in the heliotron fusion energy reactor

[Dinner : On own initiative]

Wednesday, February 23, 2011

Session : System Code (Chair : L.V. Boccaccini)

09:15 – 09:45 L. Carlson : Development of a Visualization Tool for the ARIES Systems Code to Explore the Parameter Space

09:45 – 10:15 H. Utoh : Modification of JAEA system code

10:15 – 10:45 K. Yamazaki : Burning Simulation and Life-Cycle Assessment of Fusion Reactor

Coffee Break

Session : Divertor Physics Issues (Chair : R. Hiwatari)

11:00 – 11:30 N. Asakura : Progress of simulation study for heat handling and impurity seeding in the DEMO divertor

11:30 – 12:00 M. Nakamura : Simulation study on behaviors of a detachment front in a divertor plasma

12:00 – 12:30 M. S. Tillack, X. R. Wang, J. A Burke and the ARIES Team : Design improvements and analysis to push the heat flux limits of divertors

Lunch

Session : Engineering Issues (Chair :N. Asakura)

13:30 – 14:00 L.V. Boccaccini: Overview on Fusion Technology development for DEMO in KIT

14:00 – 14:30 Y. Someya : Conceptual design of mixed pebbles blanket for SlimCS fusion DEMO reactor

14:30 – 15:00 X. R. Wang, S.Malang, M. S. Tillack and the ARIES Team : Robust high-performance first wall design and analysis

Coffee Break

15:15 – 16:45 **LHD tour**

Welcome Party at NIFS (Restaurant Tokkiko)

Thursday, February 24, 2011

Session : Plant system (Chair : K. Tobita)

09:30 – 10:00 T. Muroga : Overview of materials research in TITAN project

10:00 – 10:30 S. Fukada : Experimental evaluation of tritium inventory in Li-Pb and design of tritium and heat recovery from Li-Pb blanket of fusion reactor

10:30 – 11:00 F. Cismondi : Considerations on in Vessel components integration and impact on maintenance in EU DEMO

11:00 – 11:30 D. Navaei, X. R.Wang, M. S. Tillack and the ARIES Team : External transition joints for tungsten divertors

11:30 – 11:45 Closing Address

Adjourn