Seminar

Institute for Plasma Research

Title : Highlights of 15th Conference on Plasma Facing Materials and Components for Fusion Applications (PFMC15)

Speaker : Dr. P. N. Maya
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Date : 3rd July 2015 (Friday)

Time : 03.30 PM

Venue : Seminar Hall, IPR

Abstract:

The performance of a fusion device and a future fusion power plant critically depends on plasmafacing materials and their components. Resistance to heat and particle loads during transient and steadystate plasma operations, thermomechanical properties as well as response to fusion neutrons of the materials are critical parameters that need to be understood in order to tailor their properties for future applications. The 15th PFMC conference was mainly focussed on these aspects and in this presentation, the highlights of the conference will be discussed.

Low atomic number (Z) divertor materials such as carbon have almost vanished from the picture due to extremely large fuel retention. Experiments on liquid lithium as a possible choice of divertor material were discussed. Among the high Z materials, currently tungsten (which will be used in the ITERdivertor) is the most studied candidate material. Activities from various groups around the world on tungsten and its alloys were presented in the conference. The highlights of some of the key areas and the challenges in using tungsten as a Plasmafacing material will be discussed in this presentation.