R&D STATUS OF INDIAN TEST FACILITY FOR ITER DNB CHARACTERIZATION – FIP-P1-40

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AIMS
• Establish and characterize ITER sized beam source to produce 100 keV 60 A H- ion beam and the functionality of beam line components like the neutralizer, the electrostatic residual ion dump and calorimeter.
• Determine netural beam power delivered over a transport length of ~20.7 m to provide neutral beam data base for diagnostician involved with CXRS diagnostic at ITER

PRESENT STATUS WORLWIDE :
• IPP in the process to establish ITER desired beam parameters for H and D beams in half sized sources
• Experiments to characterize ITER sized ion source with a 3 grid accelerator at SPIDER facility in Padova. Parallel H- beamlets with no focusing or long distance transport

HOW IS INTF DIFFERENT? :
• Beam source (ion source + 3 grid accelerator) and BLC’s BTP as per ITER design
• Neutral beam transport studies using angled beam group segments in horizontal and vertical directions for beam focusing to be experimented over transport lengths of 20.7 m
• The experimental outcome will provide the desired operational experience and database for DNB operation at ITER