

TECHNICAL REPORTS (TR) 2012-13

Design of an Improved Filter Coupled Bolometer Camera for ADITYA Tokamak

PRABHAT KUMAR, KUMUDNI TAHILIANI, M.V. GOPALAKRISHNA, SAMEER KUMAR, VAIBHAV RANJAN, RATNESHWAR JHA and THE ADITYA TEAM

IPR/TR-206/2012 (APRIL, 2012)

Design Modification and Testing of the Analog Input-Output Isolation Cards and its Interfacing with RF-ICRH System

MANOJ SINGH, H. M. YADAV, RAMESH JOSHI, BHAVESH, KIRIT PARMAR, Y. S. S. SRINIVAS, S. V. KULKARNI and ICRH GROUP

IPR/TR-207/2012 (APRIL, 2012)

Development Programme Overview for Regulated High Voltage Power Supplies (RHVPS) at IPR

PARESH J. PATEL, C. B. SUMOD, D. P. THAKKAR, L. N. GUPTA, V. B. PATEL, L. K. BANSAL, K. QURESHI, V. VADHER, N. P. SINGH and U. K. BARUAH

IPR/TR-208/2012 (APRIL, 2012)

Kinetics of Nb₃Sn, Cu₆Sn₅ and Cu₃Sn Layer Growth

YOGENDRA SINGH and SUBRATA PRADHAN

IPR/TR-209/2012 (APRIL, 2012)

A Technique on Vacuum Coupling of Photo Multiplier Tube with Monochromator for Improved Monitoring of VUV Emission from Aditya Tokamak

R. MANCHANDA, M. B. CHOWDHURI, J. GHOSH, K. M. PATEL, N. RAMAIYA, S. BANERJEE, NIRAL CHANCHAPARA, ANIRUDDH MALI, VIPAL RATHOD, C. J. HANSALIA, VINAY KUMAR and P. VASU

IPR/TR-210/2012 (APRIL, 2012)

Thermo-mechanical Analysis of Plasma Facing Components for SST-1 PARITOSH

CHAUDHURI, P. SANTRA, D. CHENNA REDDY

IPR/TR-211/2012 (MAY, 2012)

Four Channel Sequence Detection and Display Electronics Card for the Analysis of Fault Sequence in the Rf-ICRH System

MANOJ SINGH, H.M. JADAV, RAMESH JOSHI, S.V. KULKARNI and RF-ICRH GROUP

IPR/TR-212/2012 (MAY, 2012)

Bolometer Diagnostics for SST-1 Divertor: A Hardware Modification Perspective

PRABHAT KUMAR, KUMUDNI TAHILIANI, P. YUVA KIRAN and RATNESHWAR JHA

IPR/TR-213/2012 (MAY, 2012)

Design and Development of FPGA based Multi Channel Interlock System

HARSHIDA PATEL, RAJAN BABU, B.K. SHUKLA, K. SATHYANARAYANA, D. PRAGNESH, JATIN PATEL and ECRH GROUP

IPR/TR-214/2012 (MAY, 2012)

Estimation of Thermal Anchoring Length for Various Instrumentation Wires used in SST -1 Coils Test Campaign
DIPAK PATEL, A. N. SHARMA, UPENDRA PRASAD, YOHAN KHRISTI, PANKAJ VARMORA, KALPESH DOSHI and S. PRADHAN
IPR/TR-215/2012 (MAY, 2012)

Experimental Simulation of Grid Breakdowns & High Voltage Conditioning of NBI Power Supply System
L.N.GUPTA, PARESH.J.PATEL, N.P. SINGH, VISHNU PATEL, DIPAL THAKKAR, SUMOD C.B, L.K.BANSAL, KARISHMA QURESHI, VIJAY VADHER and U.K BARUAH
IPR/TR-216/2012 (JUNE, 2012)

Development of an Eco-Friendly Technology for the Surface Activation of Carbon Granule by using Dielectric Barrier Discharge Process
SURYAKANT GUPTA, NARESH VAGHELA, KEENA KALARIA, RAMKRISHNA RANE, ADAM SANGHARIYAT, VIREN ACHARYA and SUBROTO MUKHERJEE
IPR/TR-217/2012 (JUNE, 2012)

Revisiting Plasma Hysteresis with an Electronically Compensated Langmuir Probe
P. K. SRIVASTAVA, S. K. SINGH, L. M. AWASTHI and S. K. MATTOO
IPR/TR-218/2012 (JULY, 2012)

Analytical Model for Active Cooling of ICRF Transmission Lines in SST-1
PRABHAT KUMAR and RAJ SINGH
IPR/TR-219/2012 (JULY, 2012)

Monitoring and Control Software for Cooling System of 82.6 GHz Gyrotron using NI LabView 8.5
JATINKUMAR PATEL, PRAGNESH DHORAJIYA, SUNIL BELSARE, HARSHITA PATEL, K SATHYANARAYANA, B K SHUKLA
IPR/TR-220/2012 (JULY, 2012)

Bipolar Pulsed Plasma Oxidation of Aluminized 9Cr-1Mo Steels
NIRAV I. JAMNAPARA, DILIP U. AVTANI, N. L. CHAUHAN, S. B. GUPTA, KEENA KALARIA, NARESH VAGHELA, S. MUKHERJEE, A. S. KHANNA
IPR/TR-221/2012 (JULY, 2012)

Analytical Results on Suitability of SST-1 Auxiliary Support Structure for Installation of Diagnostics
PRABHAT KUMAR SHARMA and THE SST-1 TEAM
IPR/TR-222/2012 (JULY, 2012)

Evaluation of True Hardness of Tungsten by Micro Vickers Hardness Test
CHARU LATA DUBE, S.S. KHIRWADKAR
IPR/TR-223/2012 (JULY, 2012)

Information Literacy: An Overview of Information Literacy Programmes at IPR
PRAGNYA J. PATHAK and S. SHRAVAN KUMAR
IPR/TR-224/2012 (JULY, 2012)

Design of Flow Distribution Network and it's Manifold Systems for Plasma Facing Components of SST-1 Tokamak
PARITOSH CHAUDHURI, P. SANTRA, N. RAVI PRAKASH, S. KHIRWADKAR, D. CHENNA REDDY, Y.C. SAXENA
IPR/TR-225/2012 (JULY, 2012)

Signal Monitoring, Data Acquisition, Interlocks and Control Electronics for 91.2 MHz, 1.5 MW (ICRH) System for SST-1

H. M. JADAV, RAMESH JOSHI, MANOJ SINGH, B. R. KADIA, K. M. PARMAR, S.V. KULKARNI and ICRH-RF GROUP

IPR/TR-226/2012 (AUGUST, 2012)

Development of Versatile Analog and Digital Isolation Cards for High Voltage DC Power Supplies and Protection Systems

HAVESH R KADIA, YSS SRINIVAS, S.V. KULKARNI & ICRH GROUP

IPR/TR-227/2012 (AUGUST, 2012)

Design and Comparison of Two Different Orientations of People Bed in Indian HCCB Blanket Concept

PARITOSH CHAUDHURI

IPR/TR-228/2012 (AUGUST, 2012)

Thermal Properties of Tungsten and Tungsten Alloys for Divertor Applications

YASHASHRI PATIL, S.S.KHIRWADKAR, S. KANPARA

IPR/TR-229/2012 (SEPTEMBER, 2012)

Silicon Drift Detector Calibration for Soft X-Ray Measurements

SHISHIR PUROHIT, JAYESH V. RAVAL, Y. SHANKARA JOISA, CHINTAN SHAH

IPR/TR-230/2012 (SEPTEMBER, 2012)

Ignitron Switch based Crowbar Protection System for 1.5 MW CWRF Amplifier

BHAVESH R KADIA, YSS SRINIVAS, ATUL VARIA, S.V. KULKARNI and ICRH GROUP

IPR/TR-231/2012 (SEPTEMBER, 2012)

Data Acquisition, Control and Interlocks for 82.6GHZ(ECRH) System

HARSHIDA PATEL, J PATEL, B K SHUKLA and ECRH GROUP

IPR/TR-232/2012 (OCTOBER 2012)

Effect of Plasma Nitriding and Nitrocarburising Process on the Corrosion Resistance properties of Grade 2205 Duplex Stainless Steel

J. ALPHONSA, J. GHANSHYAM, M. SATYAPAL, PRATIPAL RAYJADA, NARENDRA CHAUHAN, SUBROTO MUKHERJEE and V.S. RAJA

IPR/TR-233/2012 (OCTOBER 2012)

Study of Suppressing Induced Voltages in PF System during Ohmic Operation

V. JAIN, A. VARDHRAJULU, C. N. GUPTA, R. SRINIVASAN, R. DANIEL, V. AGARWAL

IPR/TR-234/2012 (OCTOBER 2012)

Overload and Short Circuit Protection System for Multi-Secondary Transformers Utilised in a "Regulated High Voltage Power Supplies"

PARESH J. PATEL, C.B. SUMOD, D.P. THAKKAR, L.N. GUPTA, V.B. PATEL, L.K. BANSAL. K. QURESHI, V. VADHER, N.P. SINGH and U.K. BARUAH

IPR/TR-235/2012 (NOVEMBER 2012)

Differential Protection Scheme for Power Transformer with Micro Processor Based Numerical Relay: Introduction, Installation, Wiring, Configuration and Testing

AKHILESH KUMAR SINGH, A.VARDHARAJULU, C.K.GUPTA, CHIRAG B BHAVSAR

IPR/TR-236/2012 (DECEMBER 2012)

Studies on Divertor Cooling Finger of Helium Mock-Up through CFD Approach
S. RIMZA, K. SATPATHY, S.S. KHIRWADKAR, V. MENON, D. KRISHNAN
IPR/TR-237/2012 (DECEMBER 2012)

Glow Discharge Pulsed Plasma Aluminizing of 9Cr Steels
N. I. JAMNAPARA, V. S. NAYAK, D. U. AVTANI, N. L. CHAUHAN, D. PANDA, S. B. GUPTA, K.
KALARIA, N. VAGHELA, S. MUKHERJEE and A. S. KHANNA
IPR/TR-238/2013 (JANUARY 2013)

Fabrication of Bridge Type Joints for PF#3T Winding Pact of SST-1
UPENDRA PRASAD, A.N. SHARMA, D.PATEL, K.DOSHI, Y. KHRISTI, P.VARMORA, S.J. JADEJA and S.
PRADHAN
IPR/TR-239/2013 (JANUARY 2013)

Design, Fabrication and Inspection of Gun Drilling Machine Developed under “Magnet Technology
Development Programme”
MAHESH GHATE, SUBRATA PRADHAN, ARUN SINGH, R.J. MALLIK, T.L. GOVINDANKUTTY, M.M.
HUSSAIN, S.B. JAWALE
IPR/TR-240/2013 (JANUARY 2013)

Vacuum Gauge Calibration System based on Spinning Rotor Gauge PRATIBHA
SEM WAL and ZIAUDDIN KHAN
IPR/TR-241/2013 (JANUARY 2013)

Data Acquisition System for SST-1 Vacuum Vessel Baking
MANTHENA HIMABINDU and ZIAUDDIN KHAN
IPR/TR-242/2013 (FEBRUARY 2013)

A Review on Satellite Solar Array Arcing Phenomenon
RASHMI S. JOSHI and SURYAKANT B. GUPTA
IPR/TR-243/2013 (FEBRUARY 2013)

Design and Development of a Laboratory Scale Experimental System for Plasma Diagnostics (E×B Drift Velocity
Measurement)
A. SATYAPRASAD, R. S. RANE, and S. MUKHERJEE
IPR/TR-244/2013 (FEBRUARY 2013)