

TECHNICAL REPORTS (TR) 2015-16

Development, Integration and Testing of Automated Triggering Circuit for Hybrid DC Circuit Breaker

DEVEN KANABAR, SWATI ROY, CHIRAGKUMAR DODIYA, and SUBRATA PRADHAN

IPR/TR-338/2015 (APRIL 2015)

Design, development and results from a Charge-Collector diagnostic for a Toroidal Electron Plasma Experiment

SAMBARAN PAHARI, LAVKESH LACHHVANI, MANU BAJPAI, KARAN RATHOD, YOGESH YEOLE, and P. K. CHATTOPADHYAY

IPR/TR-339/2015 (APRIL 2015)

Electron Beam Profile Measurement Set-Up for High Heat Flux Test Facility at IPR

YASHASHRI PATIL, S. S. KHIRWADKAR, S. M. BELSARE, RAJAMANNAR SWAMY, K. GALODIYA, N. PATEL, T. PATEL, and P. MOKARIYA

IPR/TR-340/2015 (APRIL 2015)

Performance Study of Outgassing System Incorporating Air Baking

PARESH PANCHAL, SAMIRAN SHANTI MUKHERJEE, JYOTI AGARWAL, and RANJANA GANGRADEY

IPR/TR-341/2015 (APRIL 2015)

ICRH DAC Software Modification for Aditya Experiment Requirements

RAMESH JOSHI, H M JADAV, MANOJ PARIHAR, B R KADIA, K M PARMAR, A VARIA, GAYATRI ASHOK, Y S S SRINIVAS, SUNIL KUMAR, and S.V. KULKARNI

IPR/TR-342/2015 (MAY 2015)

Conceptual & Engineering Design of Plug-in Cryostat Cylinder for Super-Conducting Central Solenoid of SST-1

PROSENJIT SANTRA, PRABAL BISWAS, KIRIT VASAVA, SNEHAL JAYSWAL, TEJAS PEREKH, PRADEEP CHAUHAN, HITESH PATEL, and SUBRATA PRADHAN

IPR/TR-343/2015 (MAY 2015)

Design, Development, Integration and Testing of Glass Fiber Optic Based Control Signal for Remote Operation of RHVPS

MANOJ SINGH, HM JADAV, YSS SRINIVAS, PARESH PATEL, SUNIL KUMAR, and SV KULKARNI

IPR/TR-344/2015 (MAY 2015)

Design and Development of PLC based Offline Impedance Matching System for ICRH Experiment RAMESH JOSHI, H M JADAV, ANIRUDDH MALI, S V KULKARNI, and ICRH GROUP

IPR/TR-345/2015 (MAY 2015)

LabVIEW Based Prototype Software for High Power ICRH DAC

RAMESH JOSHI, H M JADAV, ANIRUDDH MALI, YSS SRINIVAS, SUNIL KUMAR, S V KULKARNI and ICRH GROUP

IPR/TR-346/2015 (MAY 2015)

Analog Input Modules (IP320, IP330) Driver Development and Integration with ICRH DAC Software
RAMESH JOSHI, H M JADAV, S V KULKARNI, and ICRH GROUP
IPR/TR-347/2015 (MAY 2015)

Eight Channel, Scalable, Optical Gate Control Circuit for 4kV Series IGBT DC Switch
BHAVESH R KADIA, MANDEEPSINGH CHHABADA, YSS SRINIVAS, S.V. KULKARNI, and ICRH GROUP
IPR/TR-348/2015 (MAY 2015)

Indigenously Developed Bending Strain Setup for I-V Characterization of Superconducting Tapes and Wires
ARUN PANCHAL, ANEES BANO, MAHESH GHATE, PIYUSH RAJ, and SUBRATA PRADHAN
IPR/TR-349/2015 (MAY 2015)

Development of Cryostat for Pulse Tube Cryocooler system
DHAVAL BHAVSAR, ANANYA KUNDU, ANEES BANO, MAHESH GHATE, and SUBRATA PRADHAN
IPR/TR-350/2015 (JUNE 2015)

Design, Fabrication, Installation of In-Vessel Coil of SST-1 Tokamak
SNEHAL JAYSWAL, PRADEEP CHAUHAN, PROSENJIT SANTRA, HITESH PATEL, TEJAS PAREKH,
PRABAL BISWAS, and SUBRATA PRADHAN
IPR/TR-351/2015 (JULY 2015)

Establishment of Helium Recovery System at IPR
SAMIRAN MUKHERJEE, RANJANA GANGRADEY, SRINIVASAN KASTHURIRENGAN, PARESH
PANCHAL, and JYOTI SHANKAR MISHRA
IPR/TR-352/2015 (JULY 2015)

Numerical Studies on HHF Test Mono-Block for Divertor Applications
K. SATPATHY and S.S. KHIRWADKAR
IPR/TR-353/2015 (JULY 2015)

LabVIEW based 80 Channel Data Acquisition for ICRH-RF Transmission Lines and Diagnostics
RAMESH JOSHI, H M JADAV, ANIRUDDH MALI, S V KULKARNI & ICRH GROUP
IPR/TR-354/2015 (JULY 2015)

Conceptual Design Report of Experimental Set-Up for Determining Hydrogen Isotope Solubility in Liquid Pb-Li
SUDHIR RAI and AMIT SIRCAR
IPR/TR-355/2015 (AUGUST 2015)

Non-destructive Testing of Macro-brush type mock-ups of the Plasma Facing Component using different Infrared Thermography Techniques
SANTOSH P. PANDYA, SHWETANG N. PANDYA, YASHASHRI V. PATIL , DEEPU S. KRISHNAN,
MENAKA MURUGESAN, D. SHARATH, KONGKHAN PREMJI SINGH, MD. SHOAIB KHAN, M. ARAFAT,
N. BIJU, SAMIR S. KHIRWADKAR, JAGANNATHAN GOVIDARAJAN, B. VENKATRAMAN and
KRISHNAN BALASUBRAMANIAM
IPR/TR-356/2015 (AUGUST 2015)

Commissioning of 10kVDC, 7A and 12VAC, 120A Integrated Power Supply for Triode based 20KW Stage CWRF Amplifiers KIRIT M PARMAR, BHAVESH R. KADIA, Y S S SRINIVAS, H. M. JADAV, RAMESH JOSHI, S. V. KULKARNI and ICRH Group
IPR/TR-357/2015 (AUGUST 2015)

Process Automation System for Integration and Operation of Large Volume Plasma Device
R. SUGANDHI, P. K. SRIVASTAVA, A. K. SANYASI, PRABHAKAR SRIVASTAV, L. M. AWASTHI and S. K. MATTOO
IPR/TR-358/2015 (SEPTEMBER 2015)

Determination of Plasma Temperature in SST-1
SHARAD KUMAR YADAV, P. K. KAW, A. DAS, S. K. PATHAK, S. JOISA, D. RAJU and SST-1 TEAM
IPR/TR-359/2015 (OCTOBER 2015)

Revisiting Timing and Synchronization for Multi Module Data Acquisition System on PXIe Bus
R. SUGANDHI, P. K. SRIVASTAVA, P. SRIVASTAV, A. K. SANYASI, L. M. AWASTHI, V. PARMAR, K. MAKADIA, I. PATEL and S. SHAH
IPR/TR-360/2015 (OCTOBER 2015)

Design of 4 kV, 1A Series Connected IGBT Switch for the Protection of Triode Based 2kW Stage ICRF Amplifier
BHAVESH R KADIA, MANDEEPSINGH CHHABADA, Y. S. S. SRINIVAS, S. V. KULKARNI and ICRH Group
IPR/TR-361/2015 (NOVEMBER 2015)

Ultrasonic Evaluation of Electron Beam (EB) Welded CuCrZr to CuCrZr joints presents in Heat Transfer Element of SPIDER Beam Dump
KEDAR BHOPE, HITESH PATEL, ALPESH PATEL, JAINISH TOPIWALA, MAYUR MEHTA, CHANDRAMOULI ROTTI and SAMEER KHIRWADKAR
IPR/TR-362/2015 (DECEMBER 2015)

Digital Signal Processing on FPGA for Plasma Diagnostics
RACHANA RAJPAL, HITESH MANDALIYA, PRAMILA GAUTAM, PRAVEEN, VISMAY, UMESH, S. K. PATHAK, P. K. ATREY and R. JHA
IPR/TR-363/2015 (DECEMBER 2015)

Plasma Pyrolysis Technology and its evolution at FCIPT, Institute for Plasma Research, India
S. K. NEMA, V. JAIN, K. S. GANESHPRASAD, A. SANGHARIYAT, S. SONI, C. PATIL, V. CHAUHAN and P. I. JOHN
IPR/TR-364/2016 (JANUARY 2016)

Calculation of Error Matrix using Finesse for the supervisory control of an optical cavity
S. SUNIL, AMIT K. SRIVASTAVA and ZIAUDDIN KHAN
IPR/TR-365/2016 (JANUARY 2016)

Design of High Pressure High Temperature Water Circulation System for High Heat Flux Test Facility
RAJAMANNAR SWAMY, S. S. KHIRWADKAR, and PRASHANT SINGH
IPR/TR-366/2016 (JANUARY 2016)

A 5 kA Pulsed Power Supply for Inductive and Plasma Loads in LVPD
P. K. SRIVASTAVA, S. K. SINGH, A. K. SANYASI, L. M. AWASTHI and S. K. MATTOO
IPR/TR-367/2016 (JANUARY 2016)

Design Optimization of Beam Transport System for Accelerator based 14-MeV Neutron Source ASHA PANGHAL, SUDHIRSINH VALA, A.MANDAL, S. KUMAR, G.O. RODRIGUES, C. V. S. RAO, T. K. BASU and B. SARKAR IPR/TR-368/2016 (JANUARY 2016)

Thermal Hydraulic Analysis of Liquid Helium Flow through Cryopanel
SAMIRAN MUKHERJEE, RANJANA GANGRADEY, REENA SAYANI, PRATIK NAYAK, and PARESH PANCHAL
IPR/TR-369/2016 (JANUARY 2016)

EPICS Interfacing to Atmega2560 Microcontroller using Bit Stream Data Transfer Serial Communication Protocol
ARNAB DAS GUPTA, AMIT K SRIVASTAVA, S. SUNIL, and ZIAUDDIN KHAN
IPR/TR-370/2016 (FEBRUARY 2016)

Electrical characterization of prototype JET ELM control coils
DEVEN KANABAR, SWATI ROY, MAHESH GHATE, PIYUSH RAJ, ANANYA KUNDU, NITISH KUMAR, DHAVAL BHAVSAR, ARUN PANCHAL and SUBRATA PRADHAN
IPR/TR-371/2016 (MARCH 2016)

Cabling Technology for Manufacturing of Fusion Relevant Superconducting CICC Cables at IPR MAHESH GHATE, PIYUSH RAJ, ARUN PANCHAL, DHAVAL BHAVSAR and SUBRATA PRADHAN
IPR/TR-372/2016 (MARCH 2016)

Surface modification of Brass Valves using Environment Friendly Plasma Process
S. K. NEMA, P. KIKANI, A. SANGHARIYAT, B. K. PATEL, S. K. GUPTA and N. JAMNAPARA
IPR/TR-373/2016 (MARCH 2016)

Design and development of Seal Force Test facility for Axial Isolation Valve Seal
VRUSHABH LAMBADE, JYOTI AGARWAL, PARESH PANCHAL, SAMIRAN MUKHERJEE, JYOTI SHANKAR MISHRA and RANJANA GANGRADEY
IPR/TR-374/2016 (MARCH 2016)

An overview of Outgassing rate of different structural materials and its measurement
MOHSIN BUKHARI, SAMIRAN MUKHERJEE, PARESH PANCHAL, AJITKUMAR SHUKLA and RANJANA GANGRADEY
IPR/TR-375/2016 (MARCH 2016)

Performance and Capabilities of CNC Abrasive Waterjet Cutting machine on R&D works for Divertor Division
SUDHIR TRIPATHI, K. P. SINGH, NIKUNJ PATEL and S. S. KHIRWADKAR
IPR/TR-376/2016 (MARCH 2016)

Techniques to Measure Hydrogen Content in SS 304L
MANOJ KUMAR GUPTA, ABHINAV PRIYADARSHI, NAVNEET MANWAL and ZIAUDDIN KHAN
IPR/TR-377/2016 (MARCH 2016)

Commissioning of Screen Grid Power Supply 2kV, 12A (SGPS) for Testing of Tetrode based 1.5MW stage CWRP Amplifiers
KIRIT M. PARMAR, BHAVESH R. KADIA, Y. S. S. SRINIVAS, S. V. KULKARNI and ICRH GROUP
IPR/TR-378/2016 (MARCH 2016)