

TECHNICAL REPORTS (TR) 2016-17

Optimisation of thermal zone of 3-stream (He-He-He) platefin heat exchanger for helium plant

A. K. SAHU, O. MAHAPATRA, P. SHARMA, B. V. SHAH and R. K. SAHOO

IPR/TR-379/2016 (APRIL2016)

Finding friction factor for low temperature helium flow through serrated type plate-fin heat exchanger using CFD

B. V. SHAH, A. K. SAHU, N. MAMGAIN, S. V. JAIN and P. SHARMA

IPR/TR-380/2016 (APRIL2016)

Development of prototype Nb₃Sn praying hand joint for SST-1 new superconducting central solenoid winding pack

U. PRASAD, A. PANCHAL, P. RAJ, P. VARMORA and S. PRADHAN

IPR/TR-381/2016 (APRIL2016)

Conceptual Design Report for Development of Hydrogen Isotopes Removal System

V. GAYATHRI DEVI, DEEPAK YADAV, and AMIT SIRCAR

IPR/TR-382/2016 (APRIL2016)

Sealing Performance of Non-Metallic Gaskets with Indium Wire Seal at Temperatures Down to 10K for High Vacuum and Thermal Insulation Application in a Screw Extruder System

PARESH PANCHAL, SAMIRAN SHANTI MUKHERJEE, PRATIK NAYAK, JYOTI SHANKAR MISHRA, JYOTI AGRAWAL, and RANJANA GANGRADEY

IPR/TR-383/2016 (MAY2016)

Establishment and Validation of “Unit for Thermal Properties Assessment at Low Temperature” (Utpal) At IPR

JYOTI AGARWAL, JYOTISHANKAR MISHRA, VRUSHABH LAMBADE, S. KASTURIRANGAN, RANJANA GANGRADEY and SAMIRAN MUKHERJEE

IPR/TR-384/2016 (MAY, 2016)

Kinetics Studies of Carbon Doped Amorphous Nano- Boron in MgB₂ Phase

NITISH KUMAR, SUBRAT KUMAR DAS and SUBRATA PRADHAN

IPR/TR-385/2016 (JUNE 2016)

Hollow Circular Acrylic Waveguides for Far Infrared Interferometer of SST-1

ASHA ADHIYA, RAJWINDER KAUR and PABITRA KUMAR MISHRA

IPR/TR-386/2016 (JUNE 2016)

Development, Optimization and Validation of Ultrasonic Testing for NDE of ELM Coils

K. BHOPE, M. GHATE, M. MEHTA, A. PANCHAL, S. PRADHAN and S. KHIRWADKAR

IPR/TR-387/2016 (JUNE 2016)

Design Study of a Vacuum Chamber for Hydrogen Solidification System

SANDIP ROY, JYOTISHANKAR MISHRA, RANJANA GANGRADEY and KARTIK KOTHARI

IPR/TR-388/2016 (JUNE 2016)

FPGA Based Electronics for Controlling High Voltage Biasing of Photomultiplier Tube Detector in Spectroscopy Diagnostic

MINSHA SHAH, HITESH MANDALIYA, RACHANA RAJPAL and ELECTRONICS GROUP

IPR/TR-389/2016 (JUNE 2016)

Design and Development of LN₂ Based Hydrogen Gas Pre-Cooler, with its Initial Experimental Study using Helium Gas

P. NAYAK, S. MUKHERJEE, P. PANCHAL, D. TRIPATHI, R. GANGRADEY, J. MISHRA and J. AGARWAL

IPR/TR-390/2016 (JUNE 2016)

Gated Integrator PXI-DAQ System for Thomson Scattering Diagnostics

KIRAN PATEL, VISHAL PILLAI, NEHA SINGH, JINTO THOMAS and AJAI KUMAR

IPR/TR-391/2016 (JUNE 2016)

Conceptual Design of Cuboid Shaped Vacuum Cryostat for Twin Screw Hydrogen Extruder

PARESH PANCHAL, DEVESH TRIPATHI, SAMIRAN MUKHERJEE and RANJANA GANGRADEY
IPR/TR-392/2016 (JULY 2016)

Conceptual Design Report of Experimental Loop for Hydrogen Isotopes Extraction from Liquid Pb-Li
RUDREKSH B. PATEL, SUDHIR RAI and AMIT SIRCAR
IPR/TR-393/2016 (JULY 2016)

Development and Testing of Visual Inspection Applications for Tokamak Maintenance
PRAMIT DUTTA, NAVEEN RASTOGI, SHREYA JOSHI, AKSHAY PATEL, MIHIR TRIVEDI and K. K. GOTEWAL
IPR/TR-394/2016 (JULY 2016)

Open Loop Control of Filament Heating Power Supply for Large Volume Plasma Device
R. SUGANDHI, P. K. SRIVASTAVA, A. K. SANYASI, P. SRIVASTAV, L. M. AWASTHI and S. K. MATTOO
IPR/TR-395/2016 (AUGUST 2016)

Data Acquisition System for LN2 Cool Down Experiment for 6 Nos. of Cryogenics Pumps
KARISHMA QURESHI, P. J. PATEL, C. CHAKRAPANI, S. L. PARMAR, L. K. BANSAL, B. PANDYA, DIPAL THAKKAR, C. B. SUMOD, L. N. GUPTA, VIJAY VADHER, B. CHOKSI, NILESH CONTRACTOR, S. K. SHARMA, SRIDHAR, RAMBABU, BHARATHI, M. R. JANA, V. PRAHLAD and U. K. BARUAH
IPR/TR-396/2016 (AUGUST 2016)

Artificial Neural Network for Yield Strength Prediction of Irradiated RAFM Steels
H. T. IYER and A. ABHISHEK
IPR/TR-397/2016 (AUGUST 2016)

Electromagnetic and Structural Analysis of Jet Elm Control Coil Support Structure
PRAMIT DUTTA, MANOAHSTEPHEN MANUELRAJ, NAVEEN RASTOGI and CHRISTOPHER LOWRY
IPR/TR-398/2016 (SEPTEMBER 2016)

Preliminary Design and Assessment of Beam Tube for Laser Interferometer Gravitational Wave Observatory (LIGO)-India Project
RAKESH KUMAR, YUVAKIRAN PARAVASTU and ZIAUDDIN KHAN
IPR/TR-399/2016 (SEPTEMBER 2016)

Development of Driver Amplifier Stage for Generator of the ADITYA ICRH System
SUNIL KUMAR, D. BORA, S.V. KULKARNI and HIGH POWER ICRH SYSTEMS DIVISION
IPR/TR-400/2016 (SEPTEMBER 2016)

Development of Pre-Driver Amplifier Stage for Generator of the ADITYA ICRH System
SUNIL KUMAR, D. BORA, S.V. KULKARNI and HIGH POWER ICRH SYSTEMS DIVISION
IPR/TR-401/2016 (SEPTEMBER 2016)

Development and Testing Of Prototype Soft X-Ray Camera Using 16channel AXUV Photodiode Array for Aditya Tokamak
JAYESH RAVAL, S. PUROHIT, Y.S. JOISA, A.K. CHATTOPADHYAY, PRAVEENA KUMARI, VISMAYSINH RAULJI, MINSHA SHAH and RACHANA RAJPAL
IPR/TR-402/2016 (SEPTEMBER 2016)

Specimen Preparation Procedure for Studies using Transmission Electron Microscope (TEM)
A. SATYAPRASAD, C. BALASUBRAMANIAN and S. MUKHERJEE
IPR/TR-403/2016 (OCTOBER 2016)

Low Cost, Light Weight 100kV Galvanic Isolated Control Power Supplies
BHAVESH R. KADIA, K. M. PARMAR, Y. S. S. SRINIVAS and S. V. KULKARNI
IPR/TR-404/2016 (OCTOBER 2016)

Study of Requirement and Possibility of using Mechanical and Temperature Sensors on LLCB TBM
RITESH KUMAR SRIVASTAVA and PARITOSH CHAUDHURI
IPR/TR-405/2016 (OCTOBER 2016)

Outgassing Measurement of Various Activated Carbon Sorbents for Application in Prototype Cryopump
PARESH PANCHAL, SAMIRAN MUKHERJEE and RANJANA GANGRADEY

IPR/TR-406/2016 (NOVEMBER 2016)

Electron Beam Welding Scenario: Non - Vacuum / Partial Vacuum

GAUTAM R. VADOLIA and K. P. SINGH

IPR/TR-407/2016 (NOVEMBER 2016)

Implementation of Object Oriented Software Engineering on Labview Graphical Design Framework for Data Acquisition in Large Volume Plasma Device

R. SUGANDHI, P. K. SRIVASTAVA, PRABHAKAR SRIVASTAV, A. K. SANYASI, L. M. AWASTHI, V. PARMAR, K. MAKADIA, I. PATEL and S. SHAH

IPR/TR-408/2016 (NOVEMBER 2016)

Design and Analysis of Manifolds for Indian HCCB Blanket Module

DEEPAK SHARMA, PARITOSH CHAUDHURIA, ALICE YING

IPR/TR-409/2016 (NOVEMBER 2016)

Virtual Reality Applications in Remote Handling Development for Tokamaks in India

PRAMIT DUTTA, NAVEEN RASTOGI and KRISHAN KUMAR GOTEWAL

IPR/TR-410/2016 (DECEMBER, 2016)

Design and Optimization Study of First Wall for Indian HCCB Blanket Module

DEEPAK SHARMA, PARITOSH CHAUDHURI and ALICE YING

IPR/TR-411/2016 (DECEMBER, 2016)

Design of Efficient Oil Coalescer for Helium Compressor and Oil Removal System

V.B PATEL, A.K SAHU and K. PURANI

IPR/TR-412/2016 (DECEMBER, 2016)

A Technical Report on Radiation Shielding Calculation for the LINAC facility (IPR-SPEAR)

LALIT GUPTA, M. K. NAYAK, HARIDAS G. and RAVI A. V. KUMAR

IPR/TR-413/2016 (DECEMBER, 2016)

Development of a Prototype Work-Cell for Validation of ITER Remote Handling Control System Standards

NAVEEN RASTOGI, VAMSHI KRISHNA, PRAMIT DUTTA, MANOAH STEPHEN, KRISHAN KUMAR GOTEWAL, DAVID HAMILTON and J. K. MUKHERJEE

IPR/TR-414/2016 (DECEMBER, 2016)

Development of Output Amplifier Stage for Generator of the Aditya ICRH System

SUNIL KUMAR, D. BORA, S. V. KULKARNI and HIGH POWER ICRH SYSTEMS DIVISION

IPR/TR-415/2017 (JANUARY, 2017)

Design, Fabrication and Initial Testing of the Output Amplifier Stage for Generator of the SST-1 ICRH System

SUNIL KUMAR, D. BORA, S.V. KULKARNI and HIGH POWER ICRH SYSTEMS DIVISION

IPR/TR-416/2017 (JANUARY, 2017)

Lab Scale Experiment Study to Explore Thermal Deformation of P91 Structural Material with the use of Strain Gauges

RITESH KUMAR SRIVASTAVA, ABHISHEK SARASWAT and PARITOSH CHAUDHURI

IPR/TR-417/2017 (FEBRUARY, 2017)

Apparent Porosity and Bulk Density Measurement of Lithium Meta-Titanate Pebbles by Kerosene Intrusion & Archimedes Method

MAYANK MAKWANA, A. SHRIVASTAVA, M. PANCHAL, P. CHAUDHURI and E. RAJENDRAKUMAR

IPR/TR-418/2017 (MARCH, 2017)

Concept of Twin Screw Extruder for Solid Hydrogen Extrusion

SAMIRAN SHANTI MUKHERJEE, RANJANA GANGRADEY, DEVESH TRIPATHI, PARESH PANCHAL, PRATIK NAYAK, JYOTI SHANKAR MISHRA, JYOTI AGARWAL and KRISHANPAL PATIDAR

IPR/TR-419/2017 (MARCH, 2017)

SST-1 NBI: 6 Cryopumps Parallel Cooldown and Operational testing with LN2

CH. CHAKRAPANI, B. SRIDHAR, P. BHARGAV, Q. KARISHMA, C. NILESH, P. SANJAY and C. BHARGAV

IPR/TR-420/2017 (MARCH, 2017)

A Report on Crush Load of Lithium Ceramic Pebbles

SURAJ KUMAR GUPTA, MAULIK PANCHAL, RISCOB JAMES BRIGHT, AROH SRIVASTAVA, MAYANK MAKWANA and PARITOSH CHAUDHURI

IPR/TR-421/2017 (MARCH, 2017)

FPGA based Reconfigurable Digital Filter in Measurement System for Plasma Diagnostic

AARTI N. ODEDARA, V. CHAUDHARI and A. H. DAFDA

IPR/TR-422/2017 (MARCH, 2017)

Radiation Heat Transfer Studies for Dome Fabrication Project

DEEPU S. KRISHNAN, K. P. SINGH, S. S. KHIRWADKAR and VINAY MENON

IPR/TR-423/2017 (MARCH, 2017)

Investigation on Turbulent Heat Transfer in Developing Flow Regime for Counter Current Arrangement in Double Pipe Heat Exchanger (Concentric Annulus) for PbLi Liquid Metal

ARVIND KUMAR, V. MEHTA, A. K. PRAJAPATI, A. SARASWAT, S. VERMA, R. BHATTACHARYAY, V. C. CHAUDHARI, K. T. SANDEEP, A. JAISWAL and S. GUPTA

IPR/TR-424/2017 (MARCH, 2017)

Tensile Testing of Pure Tungsten Material at Elevated Temperatures Using Small Specimen

ALPESH PATEL, DHAVAL MAKVANA and S. S. KHIRWADKAR

IPR/TR-425/2017 (MARCH, 2017)

Refurbishment, Testing and Experiments on Ion Removal System Magnet of SST-1 NBI

SANJEEV SHARMA, BHARGAV CHOKSI, S. RAMBABU, SANJAY PARMAR, V. PRAHLAD and U. K. BARUAH

IPR/TR-426/2017 (MARCH, 2017)

Study of Spectral Characteristics and Operating Parameters of Twin Cavity CH₃OH Laser for Fir Diagnostics of SST-1

ASHA ADHIYA and RAJWINDER KAUR

IPR/TR-427/2017 (MARCH, 2017)