SESSION 2: OS-1

Cryogenic Systems; Refrigeration & Liquefaction

TUESDAY, January 22, 2013 :: 12:15 - 13:55

OR-100-01 Recent operational experience of cryogenic system for SST-1

OR-100-02 Design and prototyping efforts towards development of a cryomodule for 650MHz SCRF cavities
P.K. Kush, Prashant Khare, S G Gilankar, Rupul Ghosh, Abhishek Jain, R. Chaube, A. Lakshminarayanan

OR-100-03 Theoretical analysis on performance of thermosiphon cooling for cryomodule shield of superconducting LINAC
T.S. Datta, Soumen Kar, Jacob Chacko, Anup Choudhury, Joby Antony, Suresh Babu, Manoj Kumar

OR-450-04 Technical evaluation of small size liquid nitrogen supply options
H. Bengani

OR-150-05 Exergy analysis of indigenously developed reciprocating type cryogenic expansion engine based helium liquefier
Rajvir Singh Doohan, P K Kush, Govind Maheshwari

OR-250-06 Dynamic loss analysis for 4.5 MJ SMES
Bidhan Chandra Mandal, Uttam Bhunia, Javed Akhtar, Jedidiah Pradhan, Chinmay Nandi, Sajjan Kumar Thakur, Manoranjan Das, Gautam Pal and Subimal Saha

SESSION 2: OS-2

Cryo Coolers; Air Gas Separation

TUESDAY, January 22, 2013 :: 12:15 - 13:55

OR-350-07 Optimal piston configuration of a linear motor pressure wave generator for a pulse tube cryocooler
Jacob S, Narasimham G.S.V.L., Karunanithi R., Kranthi Kumar J., Damu C.
OR-350-08  StirlinGUIDE - Graphical user interface for design and education of stirling type machines  
Akshit Markan, Amitosh Dash, M.D. Atrey

OR-350-09  The influence of aspect ratio of pulse tube and inertance tube in the performance of an inertance tube pulse tube cryocooler  
Rajesh TN, Biju.T.Kuzhiveli

OR-350-10  Development of inline high frequency miniature pulse tube cryocooler for 80 K applications  
S. Jagan Mohan, M. D. Atrey

OR-350-11  Numerical simulation for prediction of thermal history in cryoprobe assisted biological tissue freezing  
Abdul Mateen A. G. Shaikh, Atul Srivastava, M. D. Atrey

OR-450-12  Process intensification of air separation using centrifugal field  
P. Sandilya

SESSION 7: OS-3

Cryogenics for Space; Cryogenic Tests & Test Facilities

WEDNESDAY, January 23, 2013 :: 12:00 - 13:40

OR-650-13  Cryogenic Rocket Engine Thrust Chamber Test Facility  
A. Narayanan

OR-650-14  Conceptualization, design and realization of single phase LN_2 supply system to meet stringent requirement of controlled cooling of black body targets used during thermal vacuum tests to qualify meteorology payloads developed at SAC, Ahmedabad  

OR-650-15  Realization and thermal performance analysis of liquid nitrogen based 80 K cryo target system for space simulation of meteorological payloads.  
Batch testing of SST-1 toroidal field magnets
A. N. Sharma, S. Pradhan, U. Prasad, P. Varmora, K. Doshi, Y. Khristi,
D. Patel, A. Panchal, P. Gupta, S. J. Jadeja

Fabrication and testing of 2 K cryostat for vertical test facility at RRCAT

Design and manufacture of the PTCL test infrastructure cryogenic
hardware for ITER-India
Ruud. van der Woude, Ronald Dekker, Rob Groenendijk

SESSION 7: OS-4

Cryogenic Systems, Instrumentation and Control; Refrigeration & Liquefaction

WEDNESDAY, January 23, 2013 :: 12:00 - 13:40

Design and analysis of cryogenic storage equipment and multi process
tubes transfer lines
Hardik Vyas, Paras Choski, Rajkumar Panjwani

Commissioning of the new 1 kW class helium refrigerator for
superconducting LINAC at IUAC
Anup Choudhury, Joby Antony, Jacob Chacko, M. Kumar, S Babu, S Kar
and T. S Datta

Turbo-Brayton cryogenic refrigerator
Gondrand C., Durand F., Delcayre F., Drevard L.

Instrumentation and DAQ aspects of SST-1 current feeder and 80 K
thermal shield systems
Nimavat V. L. Tanna, S. Pradhan

Performance analysis of cryogenic cold circulating pump
Hitensinh Vaghela, Jyotirmay Banerjee, Hemant Naik, Biswanath Sarkar

Mitigation of effects of pulsed heat load to helium refrigerator in fusion
devices: use of a cold-compressor
Rohan Dutta, Parthasarathi Ghosh, Kanchan Chowdhury
SESSION 11: OS-5

Cryo-pump; Cryogenic Instrumentation and Control

THURSDAY, January 24, 2013 :: 11:10 - 12:15

OR-550-25 Establishment of SQUID based system for biomagnetic measurements
K.Gireesan, C.Parasakthi, S.Sengottuvel, Rajesh Patel, N.Mariyappa, M.P.Janawadkar

OR-550-26 High T_c superconductor based level sensor for liquid nitrogen
R.Karunanithi, S.Jacob, D.S.Nadig, Abhay S.Gour, E.Raja Rajan, P.Deekshith, M.Gowthaman

OR-100-27 Cryoadsorption cryopump: Development of related technologies, facilities established and studies carried out
Ranjana Gangradey, Ravi Prakash, Samiran Mukherjee, Jyoti Agarwal, Manoah Stephen, V.S. Tripathi, S.Kasthurirengan and Satya Swarup Udgata, Paresh Panchal, Pratik Nayak

SESSION 11: OS-6

Low temperature Physics and Superconductivity

THURSDAY, January 24, 2013 :: 11:10 - 12:15

OR-800-28 Optimization of ³He distillation chamber for dilution fridge

OR-800-29 BiS₂ based new superconductivity in NdO₀.₅F₀.₅BiS₂ at 5 K
V.P.S. Awana, Rajveer Jha, S.K. Singh and Anuj Kumar

OR-800-30 Influence of twin spacings on the critical current densities and their field dependence in preform optimized infiltration growth processed YbCo superconductors
N Devendra Kumar, P Missak Swarup Raju, S Pavan Kumar Naik, T Rajasekharan, V Seshubai
SESSION 13: OS-7

Heat Transfer & Thermal Insulation

THURSDAY, January 24, 2013 :: 14:30 - 15:45

OR-600-31  Thermal performance of final cryomodules of RF-superconducting LINAC at IUAC
S. Kar, J. Chacko, A. Choudhury, S. Babu, M. Kumar, J. Antony and T. S. Datta

OR-600-32  Design of helium thermosiphon circuit for injector cryomodule of superconducting electron LINAC

OR-600-33  Theoretical analysis and experimental validation of double wedge tuner performance at cryogenic temperature

OR-600-34  Effects of axial heat conduction, property variation and parasitic heat in-leak on performance of compact plate-fin heat exchangers
Mukesh Goyal, M. D. Atrey

SESSION 13: OS-8

High & Low Temperature Superconductivity; Applications-magnets & Cavity

THURSDAY, January 24, 2013 :: 14:30 - 15:45

OR-250-35  Design and development of low β superconducting cavities for Indian ADSS program

OR-250-36  Thermal stress analysis of a large aperture dipole magnet
Sundeep Ghosh, Anjan Dutta Gupta, Pranab Bhattacharyya, Gautam Pal

OR-250-37  Development and fabrication of hybrid superconducting cable-in-conduit-conductor (CICC) using on-line fabrication facility towards indigenous fusion programme
A. K. Singh, M. M. Hussain, K. K. Abdulla & S. Pradhan
Thermohydraulic issues of cable-in-conduit conductors (CICC): role of CFD and numerical codes: a review

Raja Sekhar D., V.V.Rao