CAS course on "Normal- and Superconducting Magnets", 19 November - 02 December 2023, St. Pölten, Austria



Contribution ID: 48 Type: not specified

Heat transfer, cryostat, conduction cooling II

Tuesday 28 November 2023 11:00 (1 hour)

For one-of-a-kind superconducting-, or small numbers of, superconducting-magnets one usually can afford to be more relaxed on energy consumption and cryogen consumables than for the magnets making up the core of a multi-km long particle accelerator. From the point of view of thermal design conceptions of accelerator magnets we'll address the energetic notions that come into play when having to decide for a new project. The experience gained with the present LHC design will be addressed together with some of the drawbacks that emerged. We'll conclude with the, in my personal opinion, consequent thermal design directions that ought to be taken for new accelerator projects which enhance sustainability and lighten the dependence on cryogen resources.

Presenter: VAN WEELDEREN, Rob (CERN)