Prévessin, 12.01.2016

Minutes of Meeting on the 11T Dipole Trim Powering Meeting held on 12 January 2016

1. Attendees

L. Grand-Clement, H. Prin, F. Savary, H. Thiesen and S.Yammine

2. Agenda

The purpose of the meeting was to introduce the new fellow S. Yammine to the other 11 T project members and to relaunch the powering project in EPC.

3. Discussion

The meeting started by the introduction of the attendees and their roles at CERN and the 11 T project in particular.

Frederic recalled the necessity of developing the TRIM converter for the MBH circuit. This converter is aimed to correct the current inside the MBH 11 T dipoles which have a different inductance with respect to the standard MB dipoles. The TRIM will extract current from MBH circuit with a maximal value of around 250 A as can be seen on figure 1.

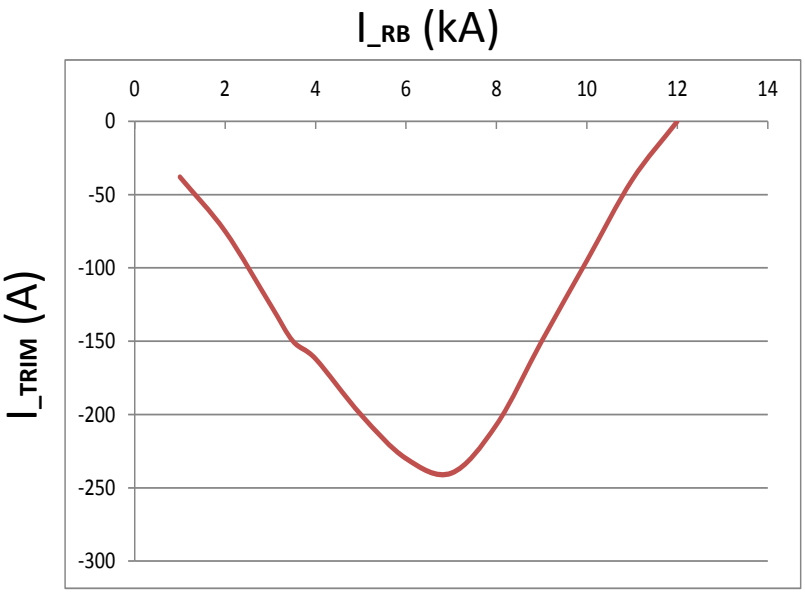

Fig.1: Trim current in function of the main circuit current (I_{RB})

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Frederic also stated that the 11 T project is due end of 2018 to coincide with the due date of the LS2 project, and talked about the several advances on the construction of the MBH magnet and that a prototype is underway.

Hervé asserted that the MBH dipoles will be placed on the line A of the RB circuit.

Hugues raised his concern that the TRIM converter could trigger the bypass diode in parallel with the dipole since the voltage could surpass the triggering voltage of ~ 6 - 7 V. This issue will be addressed with Bernhard Auchmann (TE-MPE) in a future meeting and simulations will be carried out to verify the circuit protection.

Then, Frederic and Hervé revealed that the implementation point of the MBH dipoles are at points 2 and 7 of the LHC with more importance on point 7. It would be also optional that the MBH could be implemented at points 1 and 5. The integration issues will be addressed with Paolo Fessia.

An 11 T Dipole Review will be held from 6/04/2016 till 8/04/2016 where the advances on the magnet construction as well as the converter will be presented.