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NEG COATING OF THE NON-STANDARD LSS VACUUM CHAMBERS

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The vacuum chambers of nearly all the warm magnets of the LHC (MBXW, MQW, MSI, MSD, etc...) will be coated with a Ti-Zr-V thin film by magnetron sputtering. The NEG coating is necessary to provide uniform pumping speed along the chambers and to suppress electron cloud instabilities and dynamic outgassing. The about 300 chambers will be coated using the existing facility, developed for the production of the standard LSS chambers, after minor modifications mainly due to the different cross sections. In order to cope with the present installation schedule, the production planning will allow processing of different families of chambers in parallel by using two or three coating systems simultaneously. After a brief introduction to the Ti-Zr-V characteristics and performances, the coating facility and strategy will be illustrated as well as the possible conflicts due to uncertainties in the planning of the experimental beam pipes and the standard LSS chambers.

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