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Review of experimental results and parameters for evaluation of AC losses of the ITER conductors

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During the years of ITER conductors qualification phases, samples from all domestic agencies were tested. Some of these tests were focused on characterizing the AC losses properties of the ITER conductors. The data produced originate from various facilities (SULTAN, University of Twente, CERN...), using different experimental protocols, for a large number of samples. The result is thus a considerable amount of information with a wide spread in the properties.

The need for a reduced set of parameters describing the AC losses properties of the ITER conductors is now becoming urgent in order to permit consistent analysis of the coils heat loads in commissioning and operation.

This paper will try to summarize the conductor choices, the models and the parameters that emerge from the extensive experimental characterizations, hoping to give a strong baseline for analysts investigating AC losses in ITER conductors.

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