

DECISION SHEET

Standard(s)- (year and edition): IEC 60601-1:1988 Ed.2 Am1+Am2	Sub clause(s): 57.9.1	Sheet n°: DSH-401
Subject: Mains supply transformers: Short Circuit and Overload tests	Key words: Over-current, protection, overload	Confirmed by CTL at its 39th meeting, in Cologne
<p>Question:</p> <p>Secondary circuit OVER-CURRENT PROTECTION is the first active component on the secondary side of a mains supply transformer. Is the overload test performed before or after the fuse? Insufficient transformer winding crossover insulation and secondary circuit CREEPAGE DISTANCES and AIR CLEARANCES causes transformer winding to short-circuit and exceed allowable temperatures.</p> <p>Decision:</p> <p>If the possibility of a short-circuit exists before the secondary OVER-CURRENT PROTECTION device (e.g. failure of basic insulation between winding or detachment of the wiring) the short circuit test should be conducted at the exit of the wiring from the transformer. (N.B. Similar recommendations can be made for batteries and their protective devices) The overload test however must always be conducted after any secondary OVER-CURRENT PROTECTION device (conform clause 57.9.1b) providing that the conditions of sub-clause 57.9.1. second dash are fulfilled.</p> <p>Explanatory notes:</p> <p>Inspection of the transformer arrangements will be necessary to determine the likelihood of a short-circuit before the OVER-CURRENT PROTECTION</p>		