

How to deal with environmental risk in IEC 62305-2

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Abstract—The 2nd edition of the lightning risk management standard (IEC 62305-2) considers structures, which may endanger environment. In these cases, the loss is not limited to the structure itself, which is valid for usual structures. In the past (Edition 1) this danger was simply taken into account by a special hazard factor, multiplying the existing risk for the structure with a number. Now, in the edition 2, we add to the risk for the structure itself a “second risk” due to the losses outside the structure. The losses outside can be treated independently from what occurs inside. This is a major advantage to analyze the risk for sensitive structures, like chemical plants, nuclear plants, or structures containing explosives, etc. In this paper, the existing procedure given by the European version EN 62305-2 Ed.2 is further developed and applied to a few structures.

Keywords—lightning, risk, overvoltage, environment, chemical, explosion, nuclear