



BESHIELDING
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INDUSTRIAL BUILDING SHIELDING IN PESCIA (PT), ITALY

Description of the problem

The need to shield an industrial building from magnetic fields generated by overhead power lines is a recurring problem. The case presented concerns an industrial building in Pescia (Tuscany, Italy), located under a 380 kV overhead line. This line has a rated current of 2955A.



Solution

In this case, the shielding solution proposed was to set the shielding inside the structure and secure it to the ceiling. Given the vast extension of the shielding, the weight limits for securing the shielding to the ceiling, and the geometric characteristics of the area to be protected and the source, a shielding solution based essentially on the conductive principle was chosen. Particular care was taken with the shape of the plates, fit with fins to facilitate jointing and ensure sufficient conductivity between the different plates.



Results

The results obtained from magnetic field monitoring showed that the quality objective of 3 microT was achieved in the area to be protected. The images show, respectively, the magnetic induction levels at the floor of the building where the shielding was installed and at the floor below. The use of conductive shielding ensures that a good shielding factor is maintained, even at significant distances from the shielding.

