



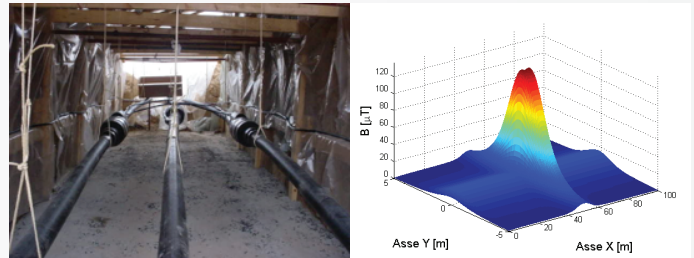
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PASSIVE LOOPS WITH HIGH MAGNETIC COUPLING

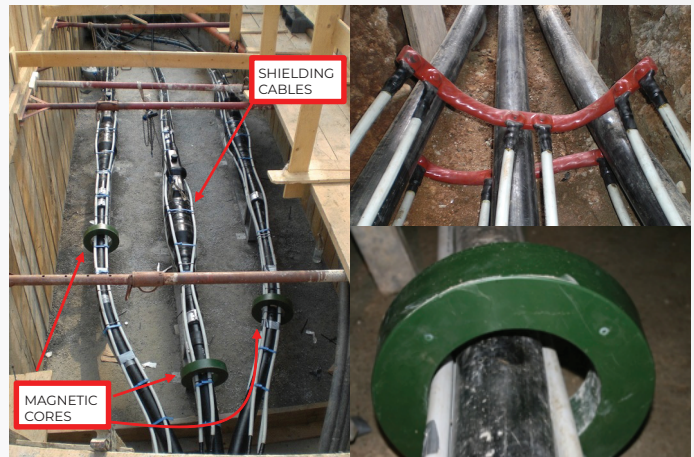
Description of the problem

In high-voltage cables, the coupling area is a critical point because the distance between cables increases and the magnetic field can even exceed the recommended European limit (1999) of 100 μT .



Solution

The proposed solution is based on an innovative method called HMCPL, or high magnetic coupling passive loops. The idea is very simple: within the shielding cables, a toroidal core induces a current with phase opposite that of the source. This ensures very fast installation when compared to the solution proposed by the competition (less than 4 hours instead of 2-3 days). In addition, the costs are lower and the performance much better. The solution is protected by an international patent.



Results

The system exhibits a significant reduction in magnetic flux density above the power line. Comparison with a standard passive loop shows that the HMCPL technology is significantly better. The solution has been adopted in several applications for Terna Spa and major cable manufacturers (e.g., Nexans, NKT, etc.).

