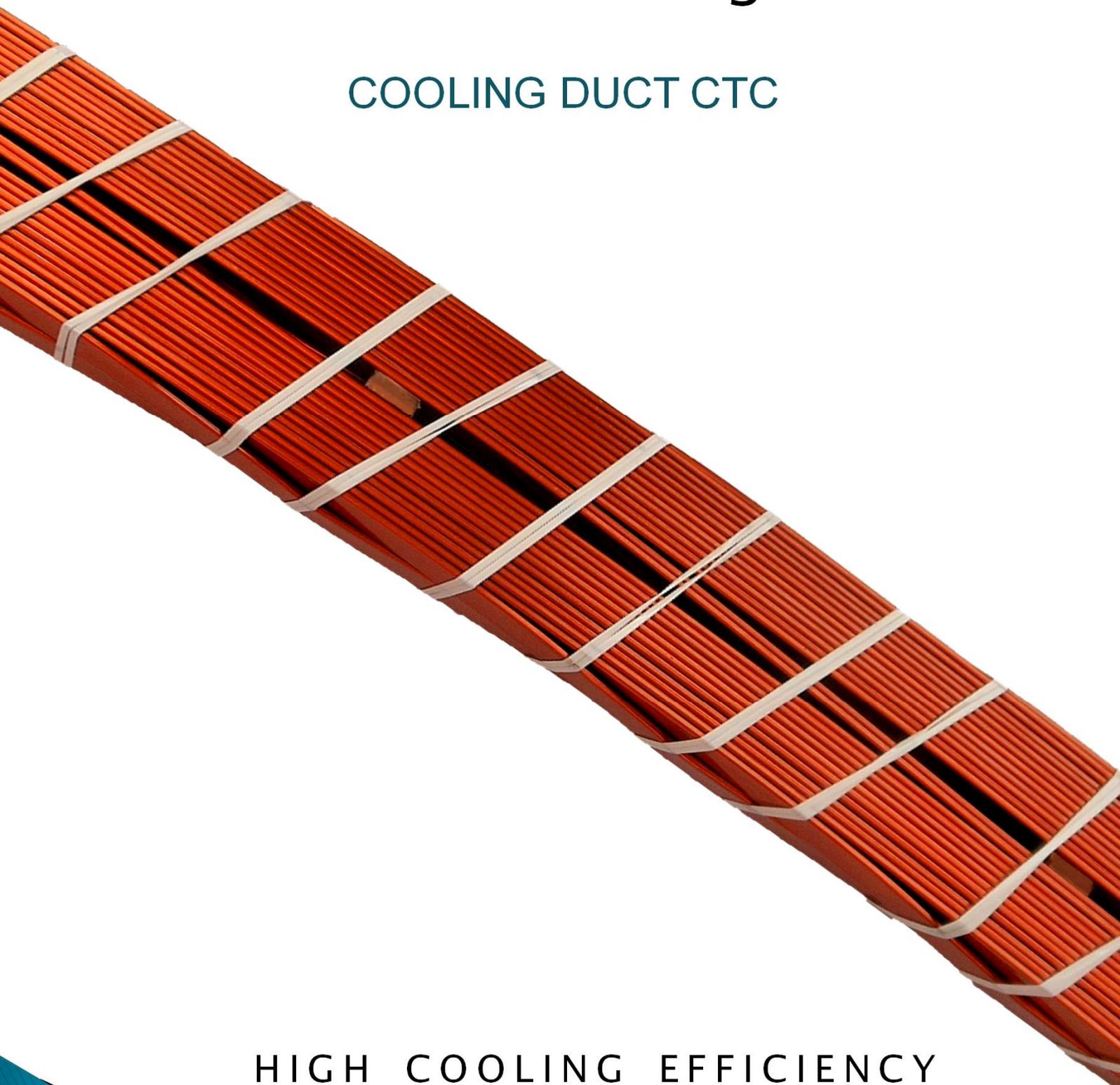


New Technologies

COOLING DUCT CTC



HIGH COOLING EFFICIENCY

COOLING DUCT CTC

Design / Research and Develop Department

Davide Peroni, Nicoletta Toniolo, Francesco Magagna

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ABSTRACT

De Angeli Prodotti is developing a new technology allowing to obtain the highest cooling efficiency in paperless CTC.

INTRODUCTION

High power transformers are subject to energy losses due to the rise up of resistivity together with the temperature.

A method to reduce this effect is to increase the surface's heat exchange by inserting wood spacers in the middle of the CTC cable.

This solution also allows to increase the oil flow rate, optimizing the heat dissipation.

One solution that helps to increase the overall efficiency of the system.

ENGINEERING

De Angeli Prodotti is developing an innovative paperless CTC cable: a different number of rectangular cross section wire are transposed together in a special machine.

In this process, some wood spacers are inserted in the middle of the cable and, after this step, a couple of polyester wire is wounded around the CTC to ensure its stability.

ADVANTAGES

Paperless CTCs allow to increase the thermal transmission of the cable and the heat can flow more easily from the conductor to the oil.

The insertion of the spacers allows to reach a higher cooling efficiency because the surface's heat exchange is higher and the oil can pass through the cable refrigerating it.

These expedient reduce the conductor's operating temperature and its electrical resistance this is one of the key solutions to reduce losses and to improve the overall efficiency of the transformers.

CONCLUSIONS

De Angeli Prodotti is able to supply an innovative paperless CTC to improve the performances of electrical machines.

This technology allow to obtain the best efficiency from the high power transformers.

CONTACTS

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www.deangeliprodotti.com