

New Technologies

Coloured Conductors



INVISIBLE AND POWERFUL

Coloured Conductors

Design / Research and Develop Department

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ABSTRACT

De Angeli Prodotti and our partner have developed a new technology to colour the conductor. A new production line at our site utilizes the best technologies in the market to perform a well known process to meet client satisfaction.

INTRODUCTION

Generally the conductor is not treated and can be either hard or annealed aluminium. The surface doesn't have a specific treatment and the conductor is quite easy to produce.

For a particular request from one customer, De Angeli Prodotti accepted the challenge to produce a coloured conductor. After one year of research and development, all the parameters were met and defined and a new production line installed in the factory.

One solution for different problems.

ENGINEERING

De Angeli Prodotti and our partner have developed this new technology which is **eco-friendly**, completely solvent free and it doesn't require high energy costs.

A very thin layer of paint is deposited on the conductor, by spraying the varnish on it. After this phase, a very fast UV curing process is necessary to allow the paint to adhere to the surface.

The layer thickness is only 15-20micron.

Currently the colours available are either **black** or **green**.

The main characteristic of this technology is the very high **adherence**. During the stringing phase, unlike our competitors, there isn't detachment of the paint.

High surface coverage and uniform thickness are the peculiar characteristics of this technology.

ADVANTAGES

What are the advantages of this technology?

You can use this surface treatment to "hide" the conductors, for example, when crossing woods.

You can choose this surface treatment to increase the emissivity (up to 0.75 - 0.8, if black). This allows to reach the same ampacity at a lower temperature to reduce losses (and save **money**)!

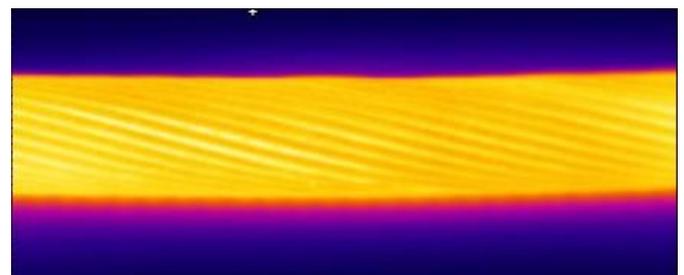


Figure 1. BLACK conductor. Infrared thermal imaging camera

CONCLUSIONS

De Angeli Prodotti has developed an innovative surface treatment to improve the characteristic of conductors (especially for HTLS).

This technology is well known for us and the customer satisfaction for this product is very high!

Up to now more than 100km of black conductor are already installed, with another 140km to be installed soon!