

ИЗПОЛЗВАНЕ НА ТЕРМОГРАФИЯТА ЗА ОПРЕДЕЛЯНЕ НА КОРОЗИЯТА В АРМИРОВКАТА

Борислав Бонев¹, Анна Стойнова², Антонио Шопов³

USING THE THERMOGRAPHY FOR DETERMINING CORROSION IN REINFORCEMENT STEEL

Borislav Bonev¹, Anna Stoynova², Antonio Shopov³

Abstract:

Very often in construction practice, before the concrete is done, part of the reinforcement steel is already corroded. Corrosion has a negative effect on the reinforcement steel, reducing its geometrical characteristics, mechanical properties and leading to appearance of surface defects (structural changes). From a positive point of view, it should be noted that it helps to improve the connection between reinforcement steel and concrete.

There are various means and methods for determining corrosion in the reinforcement steel. Thermography is considered as a method for the determination of corrosion in reinforcement bars and the possibility of determining corrosion by thermography is established. A methodology and algorithm for determining the corrosion in the reinforcement steel has been developed for use in practice.

Keywords:

Thermography, Corrosion, Reinforcement Steel.

¹ Борислав Бонев, докторант, катедра „Микроелектроника“, Факултет по електронна техника и технологии, Технически университет – София, бул. „Кл. Охридски“ 8, *e-mail*: bonev@ecad.tu-sofia.bg;

Borislav Bonev, PhD student, department „Microelectronics“, Faculty of Electronic Engineering and Technologies, Technical University of Sofia, 8 “Kl. Ohridski” blvd, Sofia, Bulgaria; *e-mail*: bonev@ecad.tu-sofia.bg.

² Анна Стойнова, професор, катедра „Микроелектроника“, Факултет по електронна техника и технологии, Технически университет – София, бул. „Кл. Охридски“ 8, *e-mail*: ava@ecad.tu-sofia.bg;

Anna Stoynova, professor, department „Microelectronics“, Faculty of Electronic Engineering and Technologies, Technical University of Sofia, 8 “Kl. Ohridski” blvd, Sofia, Bulgaria; *e-mail*: ava@ecad.tu-sofia.bg.

³ Антонио Шопов, докторант, катедра „Съпротивление на материалите“, Факултет по транспорт, Технически университет – София, бул. „Кл. Охридски“ 8, *e-mail*: ansh@tu-sofia.bg;

Antonio Shopov, Phd student, department „Strength of materials“, Faculty of Transport, Technical University of Sofia, 8 “Kl. Ohridski” blvd, Sofia, Bulgaria; *e-mail*: ansh@tu-sofia.bg.