

THERMOGRAM CALIBRATION FOR INDUSTRIAL MATERIALS THERMOGRAPHY

Vlad Florin MUSCUREL¹

Abstract. *Thermography is a high resolution, non-intrusive technique for temperature measurement. In the paper is presented the detailed calibration data for a number of thermographic images made for industrial materials. The calibration will be done using SimTerm and Virtest to simulate a simple image and assess the Minimum resolvable temperature difference (MRTD) for a IR camera, and how it varies with the spatial frequencies. Also, using FLIR Tools to generate a report over an industrial thermogram using the assessed camera.*

Keywords: Thermography, Thermogram calibration

1. Introduction

In industrial applications, quality criteria must be applied to improve the manufacturing process, one of it being the need for equipment working at its maximum capacity.

There is an increasing demand for structural integrity, that is related to the quality of production, and Non Destructive Inspection monitoring and maintenance.

These inspection techniques must be cheap, easy and fast to implement and very reliable, thus as industrial materials are changing, so do these methods.

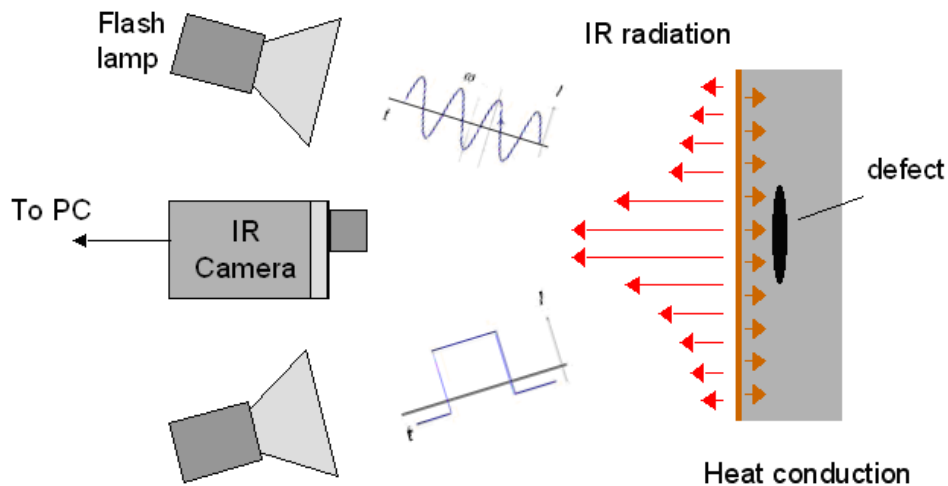


Fig. 1. Active thermography by reflection.

¹M. Sc. Eng., University "Politehnica" of Bucharest.