

ABSTRACT

The diploma project entitled "Automated material classification by the thermal testing method" is devoted to the development of contactless device for temperature profile measuring. This work was performed by a student of the department of PSNK (Igor Sikorsky Kyiv Polytechnic Institute) Mykola Nakonechnyy.

During the work on project the theoretical bases of temperature measurement, physical bases of thermal imager were considered, the functional scheme of the device was developed, the optical system of a thermal imager was synthesized and calculated, components were selected, the electric schematic diagram and assembly drawing were developed.

The volume of the work consists of 58 pages (without appendices), 3 chapters, general conclusions, list of references, contains 1 table, 23 figures and 16 references.

Key words: non-contact temperature measurement, thermal imager, temperature profile, material classification, optical system, infrared non-destructive testing, non-destructive testing.