

ANALYSIS OF THE MATERIALS FROM THE PRODUCTION PROCESS

Goal of the project

Structural analysis and mechanical testing of materials used in production of heating elements and systems, in order to optimize the material selection criteria for processing tools and devices as well as the final products.

Short description of the project

The project consisted in analyzing of the materials used in the production of heating elements and setting criteria for selection of these materials.

Implementation period

November-December 2018

Main activities

- Structural analysis and hardness testing of cold working tools in different heat treatment states;
- Structural analysis and hardness testing of stainless steels used in the manufacture of tubular heaters;
- Establishing the influence of the manufacturing process parameters on the structure and properties of steels used in the tubular heaters production;
- Optimizing the material selection criteria for the production of tubular heaters.

Results

It has been optimized the material selection for the production of tubular heaters elements in order to reduce the scrap.

Applicability and transferability of the results

The results obtained help design engineers to optimize the selection of materials in order to increase products quality and reduce the scrap.

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Research Centre

Research Center for Processing and Characterization of Advanced Materials

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