

## SUMMARY

pre-graduation practice report

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on "The alkaline and rare earth metals in the steel and slag ESR"

The report of the pre-diploma practice are the results of the Exploration of steel alloying metals and alkaline earth metals and further electroslag remelting.

Pre-graduation practice report includes 19 pages of printed text. The report includes two sections to the findings, figures, tables, diagrams.

The introduction provides general data on the steel industry and its importance to the economy, the volume of production. Also find information on the need for LZM and REM at ESR to improve quality.

The first chapter provides general information about the electro-slag remelting, technology and characterization process chamber furnace ESR and information processing steel rare earth and alkaline earth metals. Also, the goal and objectives of the study.

The second section is devoted to the research methodology, namely, materials research, described the sequence of steelmaking in ESR, ESR choice of flux for steel. And equipment where experiments were conducted and the manner by ESR remelting.

As a result, pre-diploma practice an analysis of the literature, methods of troubleshooting low quality metals and alloys using doping LZM and REM.

During the work have been reached the following conclusions:

1. Features of calcium metal and rare earth metals and rare-earth LZM at ESR.
2. Established their physical - chemical properties and the influence of REM and ligatures LZM different composition.
3. Identified rozkysnu ability LZM and REM.
4. It was considered features and basic functions of flux and slag.

**Keywords:** ESR, LZM, REM, slag, fluxes, alloying, ligatures, remelting