

DETERMINING THE EXPEDIENCE OF INCREASING FORGED INGOT DIAMETER OVER 2.5 M WITH ESR TECHNOLOGY

ABSTRACT

Thesis 92 pages, 7 tables and 34 figures, 43 references, 4 appendices.

Master's thesis dedicated to the problem of further increasing of diameter of the blacksmith ingots by ESR.

The aims of the study. The aim is to determine the feasibility of a further increase forge ingot diameter over 2.5 m, which is molten electroslag remelting method.

Object of study. Electroslag remelting process.

Research methods and equipment. We used advanced computational research methods that allow us to establish patterns of ESR process. These methods include mathematical modeling (numerical experiment).

The practical significance of the results. Based on the studies found that technology ESR able to further increase the diameter of the blacksmith bars.

The technology is safe for health and safety and the environment.

Keywords. SPECIAL METALLURGY, ELECTROSLAG REMELTING, INGOT, LARGE SIZE INGOT.