

Summary

Of course work

Discipline "Heat foundry"

Student of FL-31 group

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On the topic of "regenerative furnace fuel chamber of a stationary hearth"

In the course work was designed regenerative furnace chamber of a stationary hearth. Coursework presented on 35 pages of handwriting font and one drawing A1.

Explanatory note consists of an introduction, 11 chapters, list of references and applications.

The introduction reveals the purpose chamber furnace, type of heat treatment of metal workpieces, the principle of the furnace.

The first section is designed fuel combustion, flue gas composition work, the lower temperature of combustion, the amount of flue gases, theoretical and actual calorimetric temperature furnace.

The second section is given coefficient calculated radiation criterion B_{10} and time of heating metal billets steel 30L 260h100h50 to normalize the size (up to 890 °C) furnace at 960 °C.

The third section is intended number of pieces in the heating furnace working space dimensions, dimensions.

In the fourth section, select lining furnaces, Refractory bricklaying - Fire ША-8 insulation bricklaying - lehkovahovyy fireclay ШЛ-0.9.

In the fifth chapter calculated the heat balance and fuel consumption, V_{max} -23.2 kg/h.

In the sixth chapter the fuel burning devices and jets of Satlproekt type selected.

In the seventh chapter calculated fuel utilization factor - FUF.
In the eighth chapter calculated the flue sizes.
In the ninth chapter designed aerodynamics of flue channels (geometric resistance, local resistance, friction resistance, and size of the stack).
In the tenth chapter designed the heat exchanger of type "Fuser."
In the eleventh chapter selected fan and the fan power calculated.

Keywords: fuel furnace chamber, heat exchanger