**Introduction**

The development of a modern foundry involves the use of marketing strategies. One of the main components of any marketing strategy is customer acquisition. For this reason, when developing a strategy, it is necessary to consider the concept of the mission of the enterprise (production). For a foundry (enterprise), one of the types of marketing strategy is to conquer the sales market for its products by achieving greater profitability and product quality using advanced technologies. This allows the enterprise to become a leader by saving on production costs and, first, such as reducing downtime and increasing the productivity of the main equipment. When developing a company's strategy, it is necessary to define its mission, which is understandable for potential buyers of their products.

It is generally accepted that the mission of the foundry is to produce castings that meet customer requirements. However, modern realities lead to the fact that the mission of the foundry begins to consider the requirements for environmental safety in the production of castings, increasing resource efficiency, more efficient use of recycling in the production of alloys, and reducing harmful emissions. All this is continuously associated with a constant increase in labor productivity using technological processes that have a positive impact on the technological and economic profile of modern foundry production [1]. Fig. 1 shows the volume of smelting of foundry alloys in Russia today and the smelting equipment used to produce cast iron.

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**Materials and Methods**

In the production of castings, cast iron is the most common alloy. The main reason for its widespread use is its low cost compared to other ferrous alloys. The main melting unit for its production is a cupola, as the cheapest design of a melting furnace. However, it does not allow to obtain, stably, an alloy for castings from gray iron grade SCh 20 GOST 26588-84 and higher.

In Russia, until 2000, the metal filling for the smelting of synthetic iron in induction furnaces consisted of 25-30% of steel scrap, and the smelting of the alloy was carried out (as it was laid down by the designer) at temperature less than 1450 °C (Fig. 2).

**Experimental Study and Discussion**

This paper proposes a fairly simple way to solve the problem that does not require capital expenditures. It consists in the introduction of high-temperature technology for smelting synthetic iron at 1500-1600 °C [9]. This technology presupposes the use of up to 70-90% of steel scrap in the metal melting furnace, that is, to switch to the smelting of pig iron from a charge entirely consisting of steel scrap. The resistance of the acidic lining is provided by a new composition, in which electrocorundum is used as an additive. It allows you to reduce the consumption of materials and electricity due to the use of cheap steel scrap instead of cast iron, preserve the lining resistance in the amount of 300 heats, and get away from high-temperature furnaces for heat treatment of initial quartzite and heat-resistant containers. The introduction of this technology makes it possible to obtain significant savings in the purchase of charge and lining materials.

The cost savings calculation is presented for the ICT-1 melting furnace in Table 1.

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**Conclusions**

The use of the proposed technology makes it possible to completely abandon the use of foundry and pig iron in the metal filling station. Smelting of synthetic iron allows to reduce by 60-70% the cost of charge materials and materials for lining.

Despite the increase in the temperature regimes of smelting, the lining life does not change. The use of this technology makes it possible to abandon the use of high-temperature heating furnaces and heat-resistant containers required for drying quartzite.

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**References**


