

Metallurgical and Material Properties of Castings Manufactured from Stainless Steel G-X4CrNi13-4 and G-X4CrNiCu13-4

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This article presents the metallurgical and material properties of castings from stainless steel G-X4CrNi13-4 and G-X4CrNiCu13-4, which can be obtained under the conditions of the Foundry shop of PILSEN STEEL s.r.o. The article mentions furnace units of primary and secondary metallurgy in which the stated quality steel is produced. By way of illustration of achieved properties of melt, the heat analyses and micro-purity of steel are shown. Mechanical properties of steel are represented in well arranged graphs showing achieved values of the yield point, tensile strength, and impact energy at various temperatures, such as for example: 20, -10, -20, -30, -40, -50 a -60°C. By way of illustration, there are figures of the castings most frequently produced from stainless steel in the Foundry shop of PILSEN STEEL s.r.o. In the end, the article points out what effect has micro-purity of steel on the value of impact energy.

Keywords: metallurgy, stainless steel G-X4CrNi13-4, micro-purity of steel, mechanical properties, PILSEN STEEL s.r.o.

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