

CONCLUSIONS

1. In this work have been determine the stability of the alloy TNM-G to high-temperature oxidation at temperatures up to 700 °C, 800 °C, 900 °C in air, exposure time for each temperature of 30 hours. Oxidation degree determined by gravimetric method, in this case there was a weight increase of the sample. Studied the microstructure, elemental and phase composition of the oxide layer formed.

2. Established that at 700 °C, 800 °C oxidation hardly occurs at 900 °C process intensifies, there is an oxide layer blue color. It is strong enough not showered and does not crack, has layered structure.

3. Oxidative stability of γ -TiAl is based on the formation of a protective layer based on Al₂O₃, which is only slightly more stable than TiO, and the latter with a further oxidation forms rutile (TiO₂), which has a low protective properties [8]. Phase analysis showed the presence of the following phases: 15% TiAl, 13% TiO₂, 68% TiAl₂, 1% Al₂O₃, 2% NbO₂. By adding a relatively small amount of Nb inhibited the growth of TiO₂, Al₂O₃ and an increasing number in the layer.