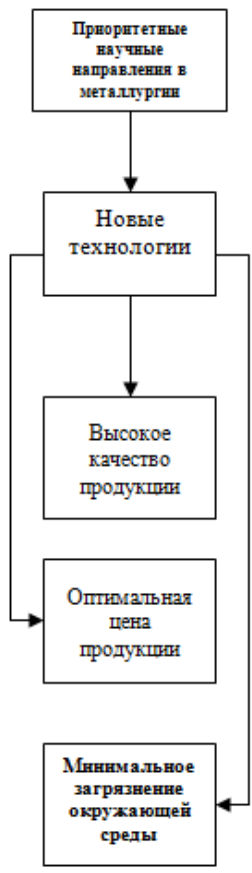


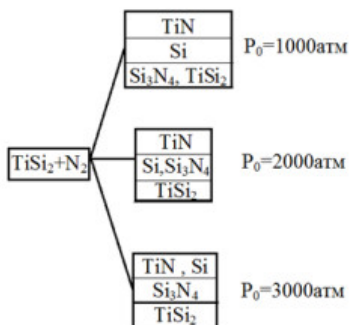
3 –
1
(~ 50 %) –
()
2,



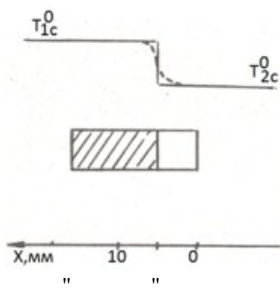
. 1.
Ti–

Ti-Si-N.

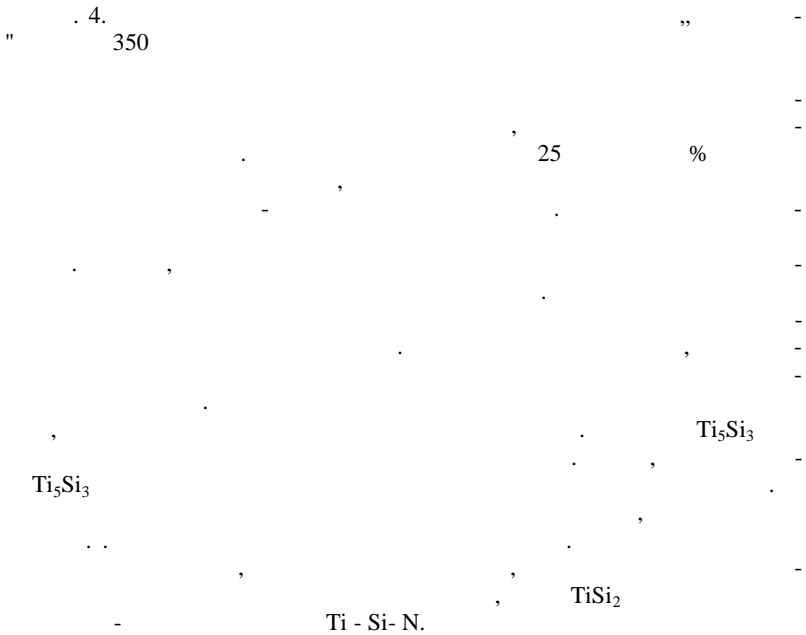
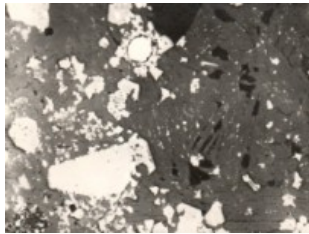
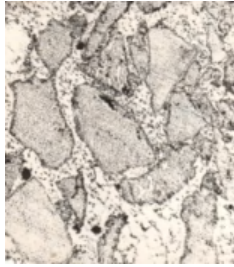
TiSi₂-

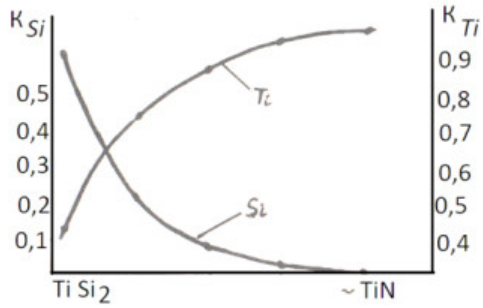


. 2.



. 3.

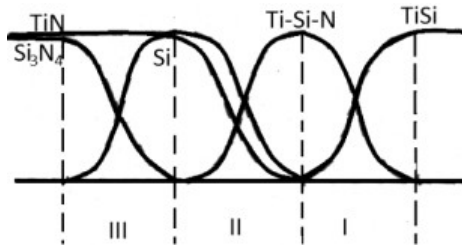




. 5.

2

PN ₂ , Ti ₅ Si/SiN ₄ %	50\50	70\30	Ti ₅ Si ₃
1500	TiN Si ₃ N ₄	TiN Si ₃ N ₄ Si	TiN TiSi ₂ Si ₃ N ₄ Si-
3300	TiN Si ₃ N ₄	TiN Si ₃ N ₄ Si	TiN Si Si ₃ N ₄



. 6.