

Titanium-aluminium base alloys MJ12 and MJ47 were treated in acetylene, ammonia and argon atmosphere at 1000, 1100, 1200 and 1300 K. Each temperature was treated for 2, 5, 10 and 15 hours. Flowrate of gases are 0.2, 2.0 and 1.8 ml.s<sup>-1</sup> respectively. Knoop hardness, wear and mass change per unit area were studied. It was found that the hardness of samples were increased when both of the temperature and times increased. But wear rate of samples were decreased with both of the temperature and times. Additionally, it was found that the mass change per unit surface area were increased with the temperature and times.