



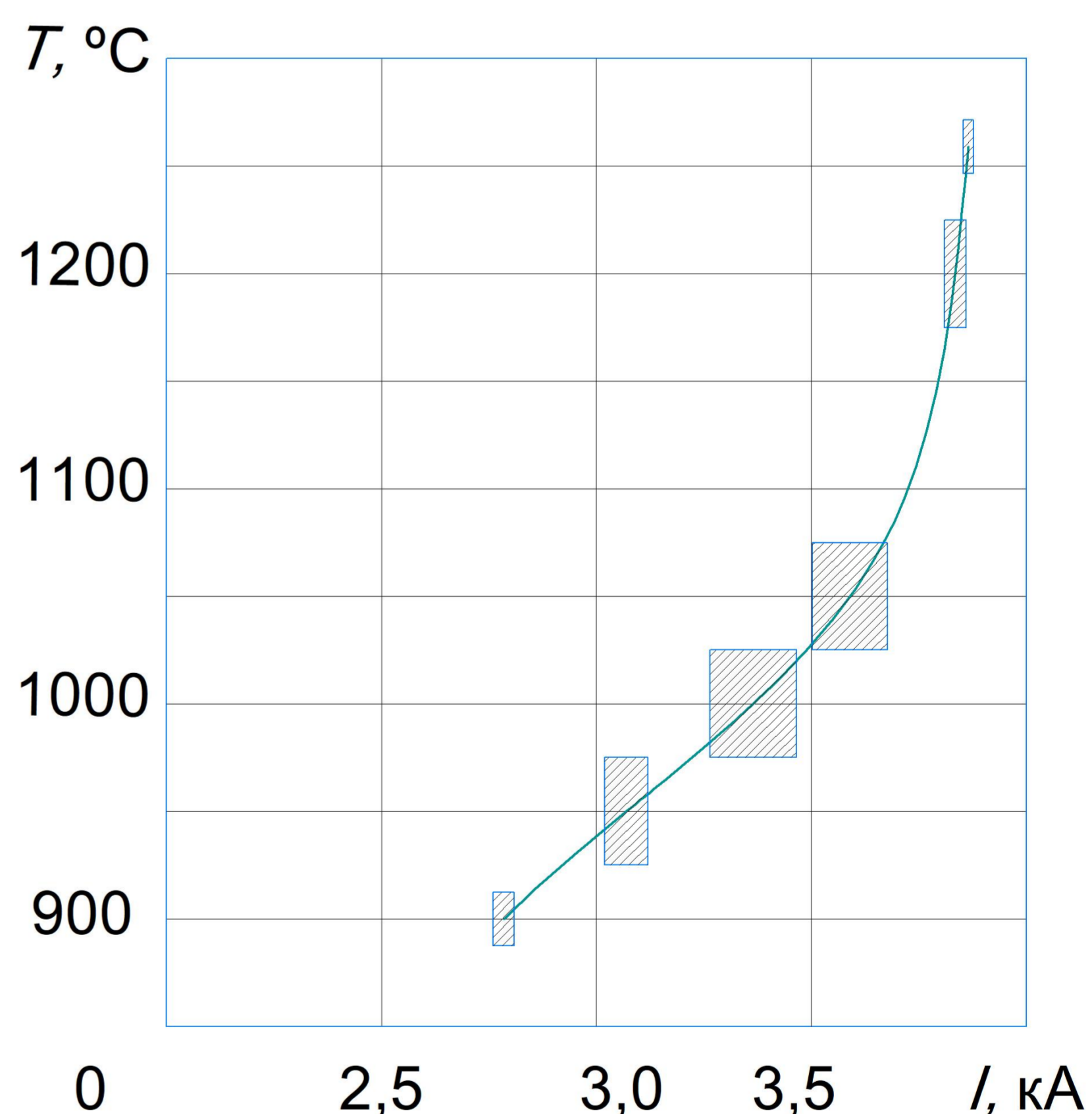
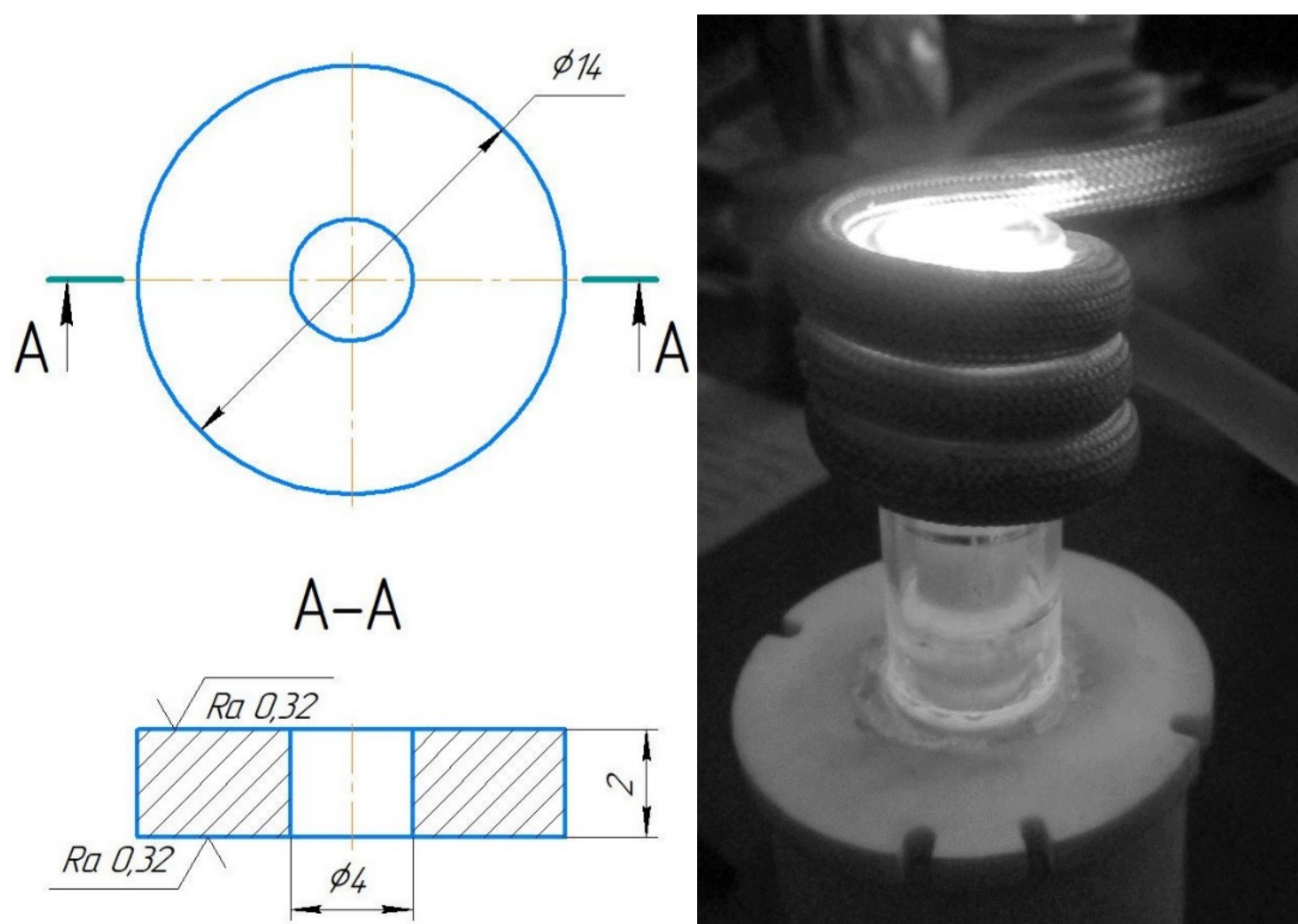
# SARATOV FALL MEETING 2020



## Investigation of changes in the electrical parameters of induction heating of commercial titanium in the high-temperature range

Andrey Shchelkunov, Ivan Egorov, Aleksandr Fomin  
Yuri Gagarin State Technical University of Saratov, Russia

In this work, the process of changing the electrical parameters of induction heating to create solid films and coatings on commercial titanium was investigated. The change in inductance current 2.8 to 3.8 kA with different voltage values 70 to 100 V is shown. As a result, the inductance current values are fixed, and the heating temperature is compared.



For the experiment, titanium (commercially pure titanium VT1-00) samples of a disk shape with a diameter of 13.9–14.1 mm and a thickness of 1.95–2.00 mm were prepared

IHT was performed in a laboratory setup, the main parameters of which were voltage  $U = 70\text{--}100$  V, inductor current  $I = 2.8\text{--}3.8$  kA and exposure temperature  $T = 900\text{--}1250$  °C