

**Injector of High-Current Multicharge Heavy Ions  
Beam for the TWAC Project,** V.A. ANDREEV,  
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work on conversion of ITEP proton synchrotron to  
installation for heavy ion fusion experiments is now under  
realization. The constructed installation (TWAC) will  
accumulate high power heavy ion beams. In frame of the  
project a new injector capable to accelerate the  $\text{Co}^{+25}$  ions  
from the laser ion source up to energy 1.6 MeV/u is  
required. The 75 MHz RFQ was developed to satisfy the  
specific requirements of the installation. The RFQ is based  
on new "four-ladder" structure, which has more reliable  
mode separation keeping high RF efficiency inherent for  
"four-vane" RFQ. The beam dynamics simulation has been  
carried out using new developed code DINAMION. The  
results of simulation for real charge spectrum of the ion  
beam from laser source are presented. The basic parameters  
of the RFQ structure, RF generators, matching channel  
between laser source and injector are discussed.