

Cryobiological vessels (Dewar vessels)



The plant HZTO carries out the development and production of cryobiological vessels since 1965. Initially, they were the vessels with evacuated powder insulation "Kharkov-15" and "Kharkov-30" and jars for quick freezing called "Kharkov-31".

In 1978-1983 in accordance with the order of Minister of mechanical engineering, who governed the plant HZTO, the vessels "Kharkov-34A", "Kharkov-34B" and vehicle with enlarged throat diameter "Kharkov-35T" were developed. The development engaged a number of research organization specializing in cryogenics such as TsNIIMash (Central Engineering Research Institute), FTINT of Academy of Sciences of USSR, HelijMash, and Institute for electric welding by E. Poton, NIITM, MAI, and so on. Also patents and the best vessel species of full-size of foreign companies (Minnesota Valley Engineering (MVE), Union Carbide) were studied and used.

During vessels and vessels manufacturing technique development five inventors certificates were received and in accordance with four of them the inventions were used. The plant started to produce the developed vessels "Kharkov-34B" and "Kharkov-35T" in the line. The vessels have the following nitrogen evaporation characteristics 0.0063 kg/h and 0.01 kg/h respectively, which correspond to the world stan

