ABSTRACT

The invention relates to a polymer chamber, the method for its production and its use for obtaining a composite artillery cartridge with split cartridge loading or for an anti-corrosion container in high-pressure systems requiring resistance to acids, bases and organic solvents. The polymer chamber is characterized by the fact that it is made with a cylindrical or conical body (1) with a base (2), where the body (1) is made with an inclination with a limit value of the angle α=1.4 and is made of highly elastic and tear-resistant up to 50°C polymer mixture, with elasticity modulus of 1300 MPa and elongation before breaking not less than (ε)=400%, the rounding radius R1 of the base (2) is from 3 to 5 greater than the thickness d of the housing wall (1), and the thickness d of the housing wall (1) is 1/54 to the diameter (D) of the base (2), the height h of the housing (1) to the diameter (D) of the base (2) is h/D= 3.4/1. The polymer chamber production method includes the following technological mode: preparation, dosing, mixing of the starting material; drying the obtained uniform, homogeneous mass in specialized dryers with filters and removing the absorbed moisture by blowing with dry air at a temperature of 70-80°C for 2 hours until the humidity of the mixture reaches 0.02%; adding supplements in a closed system; melting the material in a syringe machine under the action of the mechanical forces of a screw auger with a diameter of 80 mm, a length of 1,500 mm and a peripheral speed of 0.20 to 0.25 m/s, and the temperature of the melt is from 210 to 230°C; cooling, grading, packaging, T 40°C.