

INERTIAL NAVIGATION AND STABILIZATION SYSTEM

LADOGA-ME



Unified gyro device

Intended to provide shipborne systems of surface ships and submarines with navigation and stabilization parameters

Stabilization parameters:

	limiting errors
■ Roll and pitch angles	1.5 arc min
■ Angular rates of roll, pitch and heading change	0.2 deg/s
■ Components of instantaneous motion velocity caused by roll and pitch and orbital motion at the place of the gyro device installation	0.1 (0,2) m/s
■ Components of instantaneous displacement caused by roll and pitch and orbital motion at the place of the gyro device installation	0.1 (0,2) m

Navigation parameters:

■ When using the data from a SNS receiver (adjustable mode):	
- Position (latitude, longitude) - along each coordinate	0.4 km
- Heading	3.0 (4.0) arc min at latitude $\varphi \leq 60^\circ$ 1.5 (2.0) sec φ arc min at latitude $\varphi > 60^\circ$
- Northern and Eastern velocity components relative to the ground	0.8 kt
■ When using the data from a shipboard log (autonomous mode):	
- Position (latitude, longitude) in period of 6 hours	5 km
- Heading	6.0 (8.0) arc min at latitude $\varphi \leq 60^\circ$ 3.0 (4.0) sec φ arc min at latitude $\varphi > 60^\circ$
- Northern and Eastern velocity components relative to the ground	1.2 kt
■ Power consumption	<1 kW

Specifications in the brackets are given for the ships with displacement less than 3000 tons

The inertial navigation and stabilization system comprises:

- unified gyro device
- digital computer
- control unit
- computer
- heat setting unit

Transmission and interface units, power supply units, repeaters are mounted according to individual requirements of a certain ship design.



Computer

The generated parameters are indicated and the operation modes are controlled by means of the computer.



Control device

Updating capabilities of the Article allow any type of user to be connected.



Digital computer

The data output is available both in digital (MIL-STD-1553B) and analog form.



Heat setting unit