

Strapdown inertial navigation system

BEMOL-E



IS APPLIED

onboard ships and vessels. System generates navigation and dynamic parameters required for ship navigation and aids stabilization



FEATURES

- High accuracy of generated data
- Short readiness time
- Low power consumption
- Low weight and small dimensions
- Scheduled service is not required

GENERATES AND OUTPUTS

- Geographical position coordinates
- Geographical heading
- Roll angles measured in the transverse sectional plane
- Pitch angles measured in the vertical plane
- Latitude and longitude
- Components of linear speed over the ground
- Roll and pitch angular rates
- Total deck inclination

Major advantages of SINS Bemol-E over the former inertial navigation and stabilization systems, which directly affect the ship's combat readiness, are short (no more than 1 h) time of initial alignment, and high reliability ensuring trouble-free operation of the article for a long period.

The system can be operated under conditions of pitch and roll with amplitude of up to 45° and period from 6 to 16 s

System main advantage is high accuracy of generated navigation data making possible navigation in autonomous mode

STABILIZATION PARAMETERS

	Errors of generation, max
Roll/pitch angles	1 arc.min
Angular rates of roll/pitch and heading change	0.2 °/s
Total deck inclination	0.1°

NAVIGATIONAL PARAMETERS

(in autonomous mode with correction according to the log data)

Position coordinates (latitude, longitude)

over 6 hours	5 km
over 24 hours	9 km

Heading

at $\varphi \leq 60^\circ$	6 arc.min
at $\varphi > 60^\circ$	3 sec(φ) arc.min

Components of linear ship speed over the ground 1.2 kt

SINS data are outputted in digital form via interfaces CAN, RS-485, RS-422, RS-232

SPECIFICATIONS

Power consumed from the 27 V mains – 30 W

Weight – 25 kg

SINS readiness time – does not exceed 60 min



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