

the period on the ways and post-construction in the shipyard, on the basis of the module principle of construction, outfitting the ship's body with the maximum volume of equipment while still on land. Such technology is not new in ship-building. And secondly, there is another principal problem that should be addressed with care and responsibility. What is this problem essentially?

The modern nuclear ice-breakers with which we have worked combine state-of-the-art engineering equipment with outdated machinery; the newest automation simply cannot be used in the same 'harness' with the old and inferior units. For example, a first-class nuclear reactor is manned by as few as nine specialists, while the remaining systems of the power plant are supervised by around a hundred people. Let us estimate the cost of such wastefulness. The maintenance of one crew member over the lifetime of an ice-breaker, i.e., about 25 years, costs 300,000 roubles. To reduce the size of the crew considerably is quite possible, if the ship is equipped with new reliable machinery. But the machinery is not all.

Conservatism, unwillingness to understand the real problems of nuclear ice-breaking fleet development, and even direct opposition to innovations manifest themselves in different ways. We will cite only one fact. The process of implementing the so-called washing mechanism for the ship's body was stretched out over ten years. It was used only for the ice-breaker "Rossiya" while it could have been already used for "Arktika" and "Sibir'". The most unsightly side of this story is that those who most vehemently opposed this progressive idea yesterday, today pretend to be the authors of this innovation.