

PROMISING SUBMARINE MOTION CONTROL CONSOLE WITH ELEMENTS OF ENVIRONMENT VISUALIZATION ON THE BASIS OF VIRTUAL DYNAMIC SYSTEMS APPLICABLE TO SUBMARINE SURFACING MANOEUVRE

V.O. Mrykin, V.A. Lomov, S.A. Kurnosov (*OAO" CDB ME "Rubin", St.Petersburg*)

M.Kh. Dorri (*V.A. Trapeznikov Institute of Control Sciences of the Russian Academy of Sciences, Moscow*)

Problems arising during development of promising motion control systems for modern submarines are considered in the first part of the presentation.

Results of development work for tools and computer-aided technologies used during formation of virtual dynamic systems are covered in the second part. The tools and computer-aided technologies allow the environment surrounding the submarine to be vividly and dynamically represented. The use of proposed tools implemented during the development of promising submarine motion control console is demonstrated on the example of submarine surfacing manoeuvre with crossing of free surface.

Proposals how to use the suggested control console as a training facility to exercise tasks of modern submarine motion control and optimize control algorithms are given.