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## **PATROL VESSEL MAIN DIMENSIONS DEFINITION WITH REGARD TO RESISTANCE – PREDICTION AND TOWING TANK TRIALS**

### **Summary**

Design of new hull is often connected with significant costs and risk. If hull design fails, entire concept of the vessel can fail resulting in a major project setback. For the purpose of patrol vessel design, we analyzed the influence of main dimensions on hull resistance. Procedure based on systematic variation of main dimensions for finding optimal hull was applied. Hull lines were designed according to obtained optimal dimensions. Towing tank tests were performed to check the design and make necessary corrections. This paper focuses on design procedure, methods and towing tank contribution necessary to successfully design hull for patrol vessel.

*Key words: hull design, patrol vessel, resistance, prediction, towing tank testing,*

## **ODABIR GLAVNIH DIMENZIJA PATROLNOG BRODA SA STANOVIŠTA OTPORA – PROCJENA I BAZENSKA ISPITIVANJA**

### **Sažetak**

Projekt novog trupa prate znatni troškovi i rizik. Neuspješan projekt trupa može dovesti u pitanje koncept broda, a time bitno unazaditi projekt broda. Za potrebe osnivanja patrolnog broda analizirali smo utjecaj glavnih izmjera na otpor trupa. Primijenili smo proceduru za pronalaženje optimalnog trupa, koja se temelji na sustavnoj varijaciji glavnih izmjera. Osnovani smo linije za optimalni trup. Bazenska ispitivanja su provedena da bi se provjerio projekt trupa i napravile nužne korekcije. Ovaj rad prikazuje projektnu proceduru, metode i doprinos bazena nužan za uspješno projektiranje trupa patrolnog broda.

*Ključne riječi: projektiranje trupa, patrolni brod, otpor, procjena otpora, bazenska ispitivanja*