

SUVREMENA PROIZVODNA LINIJA TANKIH PANELA (LASER-HYBRIDNA TEHNOLOGIJA)

Sažetak

Modernizacija brodograđevnog proizvodnog procesa u fazi sklapanja sekcija broskog trupa bazira se na fleksibilnim proizvodnim linijama. Radi se o mehaniziranim, a dijelom automatiziranim odnosno robotiziranim proizvodnim linijama koje omogućavaju da se u tehnološkoj fazi sklapanja čelika ostvari u potpunosti koncept "kretanja proizvoda kroz proces" umjesto "kretanja procesa kroz proizvod". Ostvarenjem ovoga principa omogućeno je povećanje propusne moći i smanjenje troškova ove faze gradnje trupa broda. Osim toga, omogućuje se bolja logistika procesa, a time i upravljivost procesa.

U članku je dat prikaz strukture i konfiguracije automatizirane proizvodne linije tankih panela (4-15 mm) te potrebna obrada rubova limova i profila za aplikaciju laser-hybridne tehnologije zavarivanja u cilju smanjenja unosa topline u osnovni materijal kako bi se postigli niži troškovi proizvodnog procesa gradnje putničkih i Ro-Pax brodova.

Ključne riječi: modernizacija proizvodnog procesa, proizvodna linija tankih panela, laser-hybridno zavarivanje

MODERN THIN PANEL PRODUCTION LINE (LASER-HYBRID TECHNOLOGY)

Summary

Modernization of the ship production process in the stage of hull sections assembly is based on the flexible production lines. They are entirely mechanized or partly automatized or robotized production lines and they are making possible, in the technological stage of a steel assembly process, the accomplishment of the concept of "moving the product through the process" instead of "moving the process through the product". The accomplishment of this principle makes possible the increasing of the production process flow and the reduction of costs on this stage of the ship hull production. Beside this, the logistics of the process can be increased and consequently the controllability of the process too.

This material displays the structure and the configuration of automatized thin panel production line (4-15 mm) as well as plates and profiles edge treatment required for laser-hybrid welding technology application in order to reduce heat transfer in basic material and costs of production process in building of passengers and Ro-Pax ships.

Key words: production process modernization, thin panel production line, laser-hybrid welding