

## THE CAD/FEM MODELLING FOR RIVER-COSTAL SHIP STRUCTURES

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**Abstract:** The main topic of this paper is the 3D-CAD/FEM modelling approach of the ship hull structures, extended over the whole ship length. As study cases are included the models developed for two river-costal ships: a multipurpose cargo carrier and an oil-tanker, loaded with: eigen ship and cargo weight, still water and equivalent quasi-static head wave pressure. The vertical in plane equilibrium conditions are achieved based on an eigen iterative procedure, with user-subroutines implemented into the SolidWorks-Cosmos/M package. Based on the 3D-FEM numerical results, the ship structure strength is assessed. This study has been accomplished for Romanian National University Research Council CNCSIS A-679/07-08 Project.

**Key words:** CAD/FEM models, river-costal ship structures.