

인하대학교 선박해양공학과 CFD 연구활동
CFD Research Activities in the Department of Naval Architecture
and Ocean Engineering in Inha University

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1. CFD Codes

1-1 Panel Method (3D)

- Hess and Smith
- Dawson

1-2 Euler Solver (3D)

- MAC (Rectangular Grid)
- FDM (Body Fitted)

1-3 Navier-Stokes Solver (2D or 3D)

- MAC (Rectangular, Body Fitted)
- FVM (Body Fitted, zero Eq. or $k-\varepsilon$)

2. Applications

2-1 Simulation of Ship Flows and Waves

2-2 Resistance of Ship

2-3 Hull Form Design (Bulb etc.)

2-4 Three-Dimensional Curved Duct

2-5 Three-Dimensional Two Layer Flows

2-6 Viscous Flows with Free Surface

2-7 Two-Dimensional Breaking Waves on a Beach

2-8 Wave Forces in Two-Dimensional Incident Waves

3. Further Improvements

3-1 Wave Breaking Simulation around a Ship

3-2 High Froude Number and Reynolds Number
(Planing Hull, ACV, SES, WIG, ...)

3-3 Ship Flows with Appendages

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