



Indian Institute of Technology

Course Details Report

Course No: OE5015

Course Name: Design of Fishing Vessels

Course Type:

Theory

Description:

To enable students to design fishing vessels with regard to their functional and operational requirements.

Course Content:

Introduction- Different kinds of fishing vessels and methods based on functionality, Fishing vessels – Trawlers, Crabbers, Seiners, Factory trawlers, long liners etc., Fishing methods- Beach and Boat seines, Bottoms trawls, dredges, Purse seines, gillnets, trolling lines etc. fishing research vessel, a brief overview of fisheries laws and management in India,. Ocean environment, description of sea state, concept development and design of fishing vessels, fishing gear and lifting gear and their effect on safety and stability, stability issues and criterion, resistance and powering calculations for fishing vessels, vessel motion and control, methods for estimating forces from towed objects, classification society Machinery and electrical installations- propulsion machinery and stern gear, electrical installations, pumping and piping systems, anchors and cable, machinery systems with highly variable loading. Deck machinery for gear handling and catch-handling. Principles of fish finding and navigation instruments- Fish finder, echo sounder, video echo sounder etc. Safety issue related to fishing vessels, fire protection and safety, firefighting appliances, safety of working personnel- bulwarks, guard rails, hand rails, safety harness, surface of working decks etc. , Lifesaving appliances (LSA), Radio and navigation equipment, navigation lights, shapes and sound, Ergonomics and safety considerations in wheelhouse, accommodation and work space design.

Text Books:

1. J.Fyson, Design of Small Fishing Vessels , Fishing News Books, 1985
2. Design, Construction and Equipment of Small Fishing Vessels of less than 15 m Length overall, code of practice (include info – publisher, year)
3. Small Ships: A Book of Study Plans for Tugs, Freighters, Ferries, Excursion Boats, Trawler Yachts, Houseboats & Fishing Vessels : Working Vessels & Workboat heritage (include info – publisher, year)
4. Hind, J.A. “Stability and Trim of Fishing Vessels and Other Small Ships”, Wiley-Blackwell, 1989.

Reference Books:

1. Voluntary Guidelines for Design, Construction and Equipment for Small Fishing Vessels, FAO, 1980.