

## Floating laboratory

Designed specifically for deep-ocean research around the Australian coast, Australia's most sophisticated research vessel, the Oceanographic Research Vessel *Franklin*, was launched in October 1984 and, following fitting out and acceptance trials, has now begun work.

The \$12.5 million research platform, operated by the CSIRO Division of Oceanography, has a satellite navigation system, a propulsion system designed to minimize noise and vibration, and computer-controlled bow and stern thrusters that allow it to remain stationary in heavy seas.

Measuring 55 metres from bow to stern, O.R.V. *Franklin* is fully air-conditioned and has been fitted with an array of scientific instruments, computer systems, and a satellite data link.

Its scientific work areas include a 'wet' laboratory for receiving samples direct from the sea, a chemistry laboratory, a general-purpose laboratory, operations and computer rooms, electronics

workshop, darkroom, drawing office, and library. A transducer well allows easy exchange of instruments at deck level before they are lowered through the hull to a mounting flush with the ship's bottom.

All the laboratories except the wet laboratory have floating floors to reduce vibration.

Six microcomputers on board collect data and store it in a central VAX 11/750, where it is processed. An Inmarsat satellite data link will allow the ship to receive maps of sea-surface temperature from the CSIRO Marine Laboratories in Hobart, *Franklin's* home base. These maps are created from data collected by NOAA polar-orbiting satellites.

The 1100-tonne vessel, designed in West Germany and built by the Cairns shipyard North Queensland Engineers and Agents Pty Ltd, can accommodate 25 personnel (scientists and crew), and take them 7500 nautical miles on a single cruise. Most cruises will, however, last only about 20 days.

Although *Franklin* will be used extensively by the CSIRO

Division of Oceanography, the vessel is a national facility, available to other marine science institutions. A steering committee headed by Professor David Green of the University of Tasmania allocates ship time after assessing research programs proposed by scientists at institutions around the country. In the program of research planned for the vessel are on-going CSIRO oceanographic projects and many new ones made possible through the use of this advanced floating laboratory.

O.R.V. *Franklin* is named after Sir John Franklin, the fifth governor of Tasmania (from 1837 to 1843), who served early in his career as midshipman under Matthew Flinders on the *Investigator*.

The new vessel replaces the chartered 43-m *Sprightly*, a converted ocean-going tug, which has been laid up after more than a decade's work for CSIRO. She began life as a salvage rescue tug for the British Navy during World War II. During her service with the Organization she logged nearly 500 000 nautical miles on more than 100 cruises.

Civilian deep-sea research now has a sophisticated lady to plumb the ocean depths and uncover its mysteries.

**The new Oceanographic Research Vessel *Franklin* in her element.**

