

Vipac Engineers & Scientists Ltd is a 100% Australian owned multi-disciplinary engineering consultancy that specialises in acoustics, vibration, shock, wind, fluid mechanics, thermo-dynamics and air quality. Vipac is a member of the **Defence Industrial Security Program** with **Defence security clearances (to NV1 Level)**.

Vipac has delivered innovative solutions to engineering challenges in Defence and has improved operational performance, reliability and availability of military land, air and sea assets. Vipac is a registered **Australian Government Research Organisation** and has **ILAC/NATA** accredited testing and certification facilities with extensive testing laboratories and equipment. These include **MIL-STD-810** and **MIL-STD-901** environmental qualification and validation.

The company has **ISO** trained specialists with expertise in the fields Defence (Marine, Land, Air and Space), dealing with infrastructure, environmental testing and Occupational Health & Safety (OHS).

KEY AREAS IN DEFENCE, AEROSPACE & SPACE SYSTEMS

Marine

- hull strength
- radiated noise
- internal noise
- speech intelligibility



Collins-class submarine



Adelaide / ANZAC -class frigate



HMAS Canberra



Armidale-class patrol boat

Aircraft

- structures
- load development
- simulation testing
- detailed noise assessments



F/A-18E/F Super Hornet



C-130J Hercules



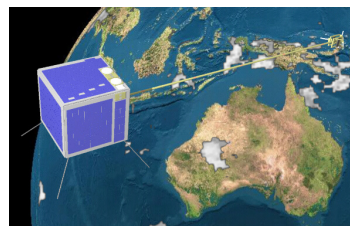
Boeing CH-47 Chinook



Sikorsky UH-60 Black Hawk

Spacecraft

- micro-satellites
- space instruments



Satellite system design & supply



Satellite system design & supply

Land

- remote sensors
- weapons development
- systems development
- detailed noise assessments



Military vehicles



Bushmaster



Joint Strike Fighter / F35A with Lockheed Martin: On-site Fort Worth for SDD phase; supported design of forward canopy and centre fuselage; provided stress analysis, DADT expertise; Weapons Bay Adaptor – Testing of 4 styles at Vipac's Advanced Technology Dynamics Test Facility (ATDTF); supported first test flight of JSF; High Speed Titanium Machining (through DMTC); developed tool-face vibration and thermal monitoring system; developed chatter prediction system and machining control system.



Collins Class Submarine (SSG): Conducted Hull transmission and radiated noise source ranking study; sound power measurements and shock testing; test and calibration services; provided Whole of Submarine Noise Survey.

CORE CAPABILITIES

1. Structural Integrity, Structural Dynamics & Statistical Energy Analysis (SEA).
2. Design & systems engineering and weaponry integration.
3. Testing & evaluation.
4. Vibration, shock & isolation solutions.
5. Systems engineering, modelling, simulation & analytical solutions.
6. Design & 3D modelling, drafting, interface & integration.
7. Test, measurement, data analysis & evaluation.
8. MIL standard environmental testing, mechanical shock & vibration, high-low temperature & thermal shock testing.
9. Asset condition monitoring, diagnostics, HUMS & data acquisition systems.
10. Failure, fatigue, fracture analysis & root cause investigations.

ACCREDITATIONS & CERTIFICATIONS



Accreditation No. 676



- ILAC / NATA accredited testing and certification
- NATA / A2LA ISO 17025 accredited
- NCS International ISO 9001
- ABS American Bureau of Shipping
- Australia's only ABS recognised specialist in Ambient Environmental Testing in the Marine sector.
- MIL-STD-810 / 901 environmental qualification
- BSI – ISO 9001, ISO 14001 and AS/NZ 4801
- Vipac personnel have Defence security clearances: Baseline up to Secret Level (NV1)

CLIENTS – DEFENCE

- | | |
|---|-----------------------------------|
| • Royal Australian Navy | • Tenix Defence |
| • Australian Submarine Corp – Collins Class | • DSTO (&EIG, JHC) |
| • Department of Defence | • ACASG/DMO, CDG (& RPDE) & DARPA |
| • Naval Group Australia | • Defence COHS |
| • BAE Systems | • Thales |
| • Lockheed Martin | • BMT Design & Technology |
| • Northrop Grumman | • Range, Minehunter Inshore, TSS |
| • Rheinmetall | • Raytheon |
| • Rolls Royce | • Boeing |
| • ASC (AWD & Collins) | • Saab |
| • Australian Aerospace | • Airbus |

DEFENCE PANELS

Vipac is Preferred Panel Supplier

- SEA1000 IPT Future Submarine Program Panel
- ASC Technical Support Agency (TSA) Panel
- CAS-SS / DMOSS Support Services SOP Panel (CASG)
- Work Health & Safety Services SOP Panel (WHSB)