

Mechanical



About EIC Activities

EIC Activities is CIMIC Group's engineering and technical services business.

Our engineering and risk mitigation expertise provides CIMIC Group with a competitive advantage for winning and delivering profitable projects that also generate value for clients.

EIC Activities ensures the Group's collective experience, technical capabilities, innovations and leading-edge technology applications are leveraged to deliver our client's objectives.

About CIMIC Group

CIMIC Group is an engineering-led services, construction and natural resources leader with a history dating back to 1899.

Powered by 39,000 people, and pioneering technology and engineering, we deliver high-value and sustainable solutions across the lifecycle of assets, infrastructure and resources projects in around 20 countries.

CIMIC Group comprises our engineering and construction businesses CPB Contractors and Leighton Asia, our integrated solutions providers UGL and Sedgman, our natural resources company Thiess (60% ownership), and our development and investment arm Pacific Partnerships – all supported by our in-house engineering consultancy EIC Activities.

Our mission is to generate sustainable returns by delivering innovative and competitive solutions for clients and safe, fulfilling careers for our people. We strive to be known for our principles of Integrity, Accountability, Innovation and Delivery, underpinned by Safety.



Our mechanical services

As a member of CIMIC Group, EIC Activities provides services to CIMIC's operating companies exclusively. Our engineers are dedicated to work in the best interests of our clients in order to mitigate risk and identify opportunities to create value.

To achieve this, EIC Activities' mechanical team provides the following services:

- advice on engineering partners and major vendors to support bid strategies
- design for concept development, feasibility and planning, and temporary works
- systems engineering and integration development strategies
- detailed design review and optimisation
- delivery phase technical design services, reviews and construction support
- commissioning and handover assistance including expert review and advice
- ongoing technical support during the defects liability stage
- troubleshooting mechanical technical issues.

Our mechanical capabilities

The EIC Activities mechanical team work across multiple sectors including: building, infrastructure, resources, water and energy. The team provides a range of engineering services throughout the project life cycle.

Our mechanical capabilities and expertise includes:

- structural, mechanical and piping works for buildings, process and major infrastructure
- tunnel ventilation engineering
- rotating equipment for power and water infrastructure
- building services (HVAC, plumbing and fire)
- infrastructure services
- engineering management
- factory acceptance witness testing
- commissioning services.

Case studies



Sydney Metro Line-Wide project - CPB Contractors/UGL

Proof engineering

Challenge

EIC Activities' mechanical and electrical teams were tasked with supporting the delivery of the systems associated with the Sydney Metro City and Southwest Line-wide Works. These works included the design, construction and commissioning of:

- Major rail systems in the new twin 15km Sydney Metro tunnels from Chatswood to Sydenham
- Expansion of the existing Sydney Metro Trains Facility at Rouse Hill and the new Sydney Metro Trains Facility South at Marrickville
- Tunnel ventilation, mechanical and electrical systems for seven underground stations, and power systems for the Sydenham to Bankstown section.

Solution

The scope of our team's involvement included:

- Proof engineering for the tunnel ventilation and fire systems, including a proof engineering report comparing findings to the IFC documentation
- A full review of all ventilation and fire system documentation and a report on the findings
- Simulations using Subway Environmental Simulation software of normal, congested and fire scenarios to determine ventilation system effectiveness to limit tunnel temperatures and effective smoke control
- Additional mechanical and electrical work to ensure designer and commissioning requirements were met.

Contacts



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Summary

- 35 years in design, construction, commissioning and management of all mechanical, electrical, fire and systems services for rail and road tunnel projects, water treatment plants, conveyors and ship loaders
- BEng (Mechanical) - University of Technology Sydney
- MIEAust CPEng NER APEC Engineer IntPE(Aus).

Relevant Experience

- experienced mechanical and electrical engineering manager and independent verifier
- experienced in the coordination and integration of civil/services in motorway and subway design, water treatment plants, conveyors and ship loaders.





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