



Everything mechanical consultancy ltd

## Introducing Emc²

At Emc² it is our job to analyse, design and consult with you on matters within the mechanical specialty.

We offer a full complement of services to fit your requirements for technical reports, drawings legislative responsibilities, design calculations, general advice and technical management.

One feature in particular that is unique to Emc² is that we offer you one point of contact. An engineer who is responsible and will personally administer, design, draw, manage and ultimately fulfill all aspects of the brief from start to finish.

Our philosophy ensures that one multi-tasking engineer can efficiently complete your project on time and within budget without

excuses. Our clients find an added benefit in this approach with the removal of any time and money wastage, due to internal miscommunication and misinterpretation.

As supporters of independent peer review, we welcome the review of our work, and offer this service to our colleagues at other consultancies in Auckland.

Emc² is a small well organised firm, that is able to match and exceed levels of professionalism and quality generally only expected of larger corporations.

We can also provide integrated solutions via our access to other established experts.

You will find our friendly, flexible approach a real benefit to your team.

### Memberships:

- Institute of Professional Engineers, NZ
- Chartered Institute of Building Services Engineers, UK
- Association of Consulting Engineers, NZ

### Quality brand registrations:

- Chartered Professional Engineers register, NZ
- Chartered Engineer register, UK

For all enquiries please contact  
Craig Schipper

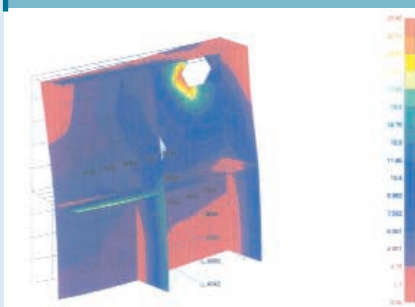
ph (09) 488 77 33  
fx (09) 488 77 32

PO Box 33917 Takapuna  
North Shore 1332 | Auckland

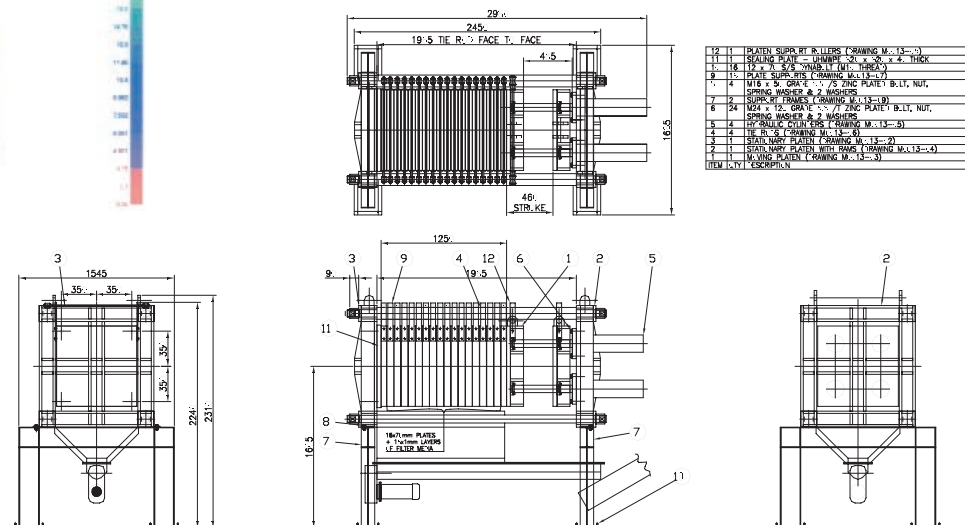
info@emcsquared.co.nz  
www.emcsquared.co.nz

## Project Experience:

### Machine Design: 150,000kg Working Load Filter Press



X-Y symmetry was used in FEA Check for stress concentration in end platen of filter press (right).

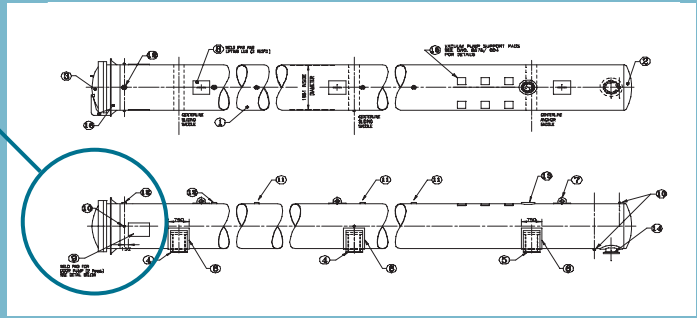




**Koppers Hickson:** Fatigue analysis and general design of 2m diameter 10 times atmospheric working pressure timber treatment pressure vessel



Automatic door mechanism



AutoCAD General Arrangement Drawing  
Pressure Vessel 30m in length



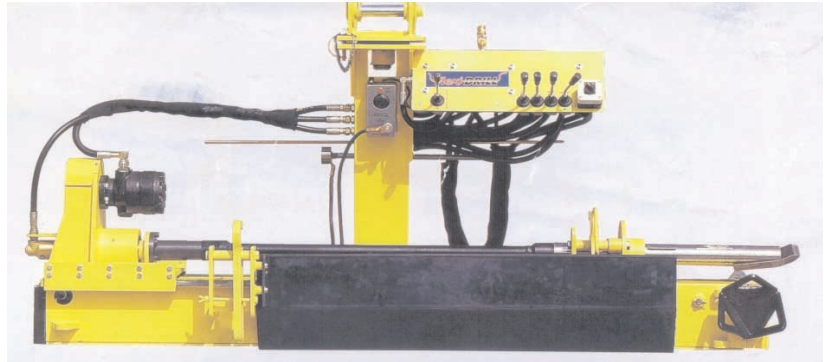
**Flexidrill:** (right)

Design of a miniature hydraulic drilling rig, capable of drilling a curved route through subsoil



**Ancor Loc:**

Design of lightweight percussion drilling rig



**Centillion**

**Chemicals:** (right)

Seismic design of storage tank base restraints and weather canopy, including resource and building consent council applications



**RNZAF:**

5 Tonne SWL mobile A-frame gantry crane



**Mabbot Trask:**

Tilt prop design, for precast concrete walls



**Prada Flagpole:**

Fatigue design review

**EXPERIENCE**

- Project feasibility reports
- Research and Development
- Specification documenting
- Installation management
- Site troubleshooting

**DESIGN CAPABILITIES**

- General steel & component design
- Weld & mechanical fixing design
- Finite element stress, strain & vibration analysis
- Fatigue and seismic design
- Acoustic design
- Natural ventilation design
- Cooling and drying rooms
- Boilers & chillers
- Pneumatics and hydraulics
- Materials handling and machines
- Cranes, tanks and pressure vessels

**OTHER MECHANICAL SERVICES**

- Heating ventilation & air conditioning
- Plumbing & drainage design
- Technical management
- Calculations & Certificates
- Accident & failure investigation
- Control system functional design
- Computer Aided Drawing