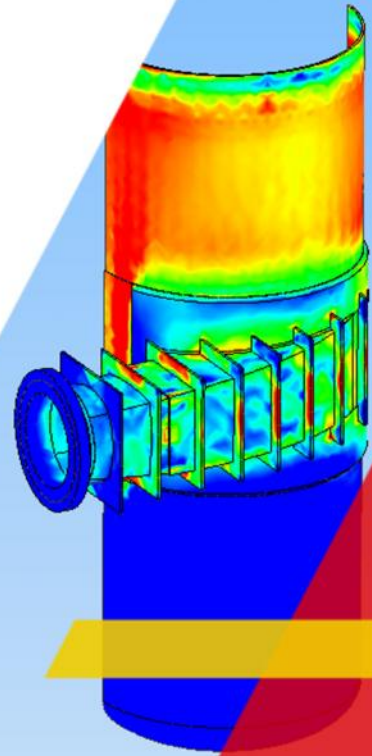


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## DRAFTING & MODELLING SERVICES

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MB Century has extensive experience in providing investigation, survey, design and drafting services to the International Energy Industry.

We pride ourselves on our efficient, effective and accurate maintenance procedures, which are certified to ISO 9001.

### Drafting & Modelling Services

MB Century has a highly competent team of qualified mechanical, process and civil draftsmen experienced in the International Energy Industry. Services include:

- > Design engineering following concept through to detailed design
- > Drafting new engineering designs and modification to existing client drawings
- > Geothermal pipeline drawing
- > 3D modelling in a variety of software packages
- > Finite Element Analysis (FEA) modelling on complex parts
- > Adherence to Client's in-house drafting requirements and standards

### Software

MB Century specialise in a range of software. Files can be output to suit the Client's own CAD software and readers, software include:

- > AUTODESK - InventorPro, Plant 3D, Civil 3D, AutoCAD
- > BENTLEY - Microstation, OpenPlant, AutoPipe
- > DASSAULT - Solidworks

The available software allows MB Century to offer full 3D modelling and FE analysis through to manufacturing drawings.

MB Century also has access to additional software upon the specific request of the client.

### Drafting Experience

MB Century and its staff have over 20 years' experience in drafting. Experience and projects includes:

#### Steamfield Drafting

- > Te Mihi SF2 - Wairakei
- > Te Mihi BAU – Wairakei
- > Nga Tamariki
- > TOPP1 - Kawerau
- > Nga Awa Purua – Rotokawa
- > Ohaaki
- > Ngawha
- > Lihir
- > Silencers

- > Separators
- > Detailed flange connections
- > Pipelines

Hydropower Drafting

- > Generator Vapour Seals
- > Temporary cofferdam crane (FEA)
- > Temporary cofferdam support brackets (FEA)
- > Redundant excitation removal
- > Original layout modifications
- > Generator cooling water piping upgrade
- > Stator platforms

General Drafting

- > Platforms to AS 1657
- > Lifting lugs & brackets
- > Brake drums
- > Maintenance stands
- > PIDs
- > Drill rig well pads
- > Workshop tools
- > Geothermal down hole tools
- > Lifting beams
- > Gantry crane access upgrades

**Engineering Services**

To complement the drafting service, MB Century has a dedicated team of experienced Engineers to undertake design services including:

- > CPEng accredited engineers for design and review of design solutions. Review and recommendation service available for third party designs
- > Steam field design
- > Feasibility studies and detailed recommendation/design reports
- > Engineering support for major turbine-generator overhauls and upgrades
- > Workshop QA on components under refurbishment or manufacture
- > Site QA for major overhauls and installations
- > Production, review and compilation of Inspection and Test Records for major and minor projects
- > Auxiliary system design solutions including screen cleaners and pumps
- > Alignment procedures and reporting for both large and small pieces of rotating equipment

**Project Management Services**

To further compliment the drafting service, MB Century offer the complete project management service to ensure projects run to schedule and budget whilst delivering a high quality outcome. With a proven track-record, services include:

- > HSE – We seek to maintain the highest levels of quality while providing a safe and healthy workplace that protects employees, clients, suppliers, communities and the environment
- > Scheduling advice and risk assessment for major projects
- > Early cost advice, financial management and contractual control of construction projects
- > Subcontractor management and QA with an emphasis on clear lines of communication back to the client
- > Management of Inspection and Test plans in line with client requirements

