

SERVICE SHEET

# MECHANICAL ENGINEERING



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Fyfe's comprehensive mechanical engineering capability can be applied across a wide range of mining design work including material handling, process, water, building and hydrocarbon services, all within a 3D design environment.

We undertake equipment and layout engineering at a practical, effective level. We select, size, specify and manage delivery of the correct equipment for the application taking into consideration the process arrangement, client requirements, technical integrity, health and safety, environmental needs, reliability, and whole of life expenditure.

Services include:

- Plant layout and plot plan development
  - Facilities design
  - Plant and capacity upgrades
  - Efficiency and environmental improvements
  - Fuel storage and distribution networks
  - PFD and heat, mass and energy balances
  - P&ID development
  - Hazardous areas assessment and HAZOP leadership/facilitation
  - Pump design and operation
  - Pressure vessel design
  - Pipe stress analysis
  - Fluid flow hydraulics
- Development of equipment datasheets, drawings and specifications including:
- pumps
  - tanks
  - thickeners
  - cyclones
  - slurry launders
  - vessels
  - exchangers
  - coolers
  - combustion/burners
  - flues
  - dust extraction
  - steam boilers
  - air compressors and dryers
  - conveyors, chutes, bins and sampling systems
  - Material selection

Fyfe applies the above capabilities across all phases of a project namely, Identification, Selection, Definition, Execution (detailed design, construction, start-up) and demolition.