



## Safety under pressure

Facilities in the resources and utilities sectors operate in severe environments with their assets exposed to various forms of degradation. Over time, these damage mechanisms can significantly impact safety, operations and the environment.

Through a range of integrated services, K.J. Beer offers full lifecycle integrity management of static pressure equipment: from design, verification and commissioning through to fitness for service (FFS) assessments and plant life extensions.

We assist facility owners in maintaining the safety of their pressure equipment. We offer our clients practical solutions for their ageing assets, including run-repair-replace decisions and risk management philosophies and systems.

## How we help

With extensive technical expertise backed by practical experience, K.J. Beer provides project solutions from concept through to decommissioning.

We provide you clear and timely advice you can trust and act upon.

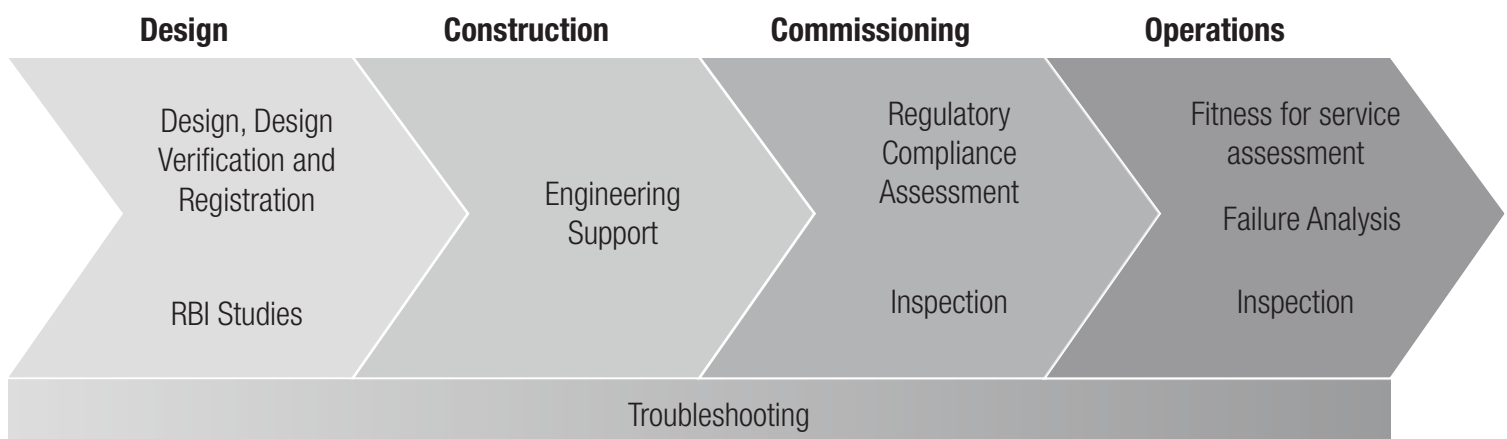
## Our expertise

K.J. Beer specialises in the design and integrity management of pressure equipment in the resources and utilities sectors. Our focus is to help our clients maintain the integrity of their static equipment such as pressure vessels, storage tanks, piping systems, heat exchangers and more.

Established in 1982, K.J. Beer has progressively grown its engineering capabilities and now works in all phases of the project, covering detailed design, commissioning, inspection, engineering and asset support and management.

When unexpected failures occur, K.J. Beer offers root cause failure analysis (RCFA) and investigation. This is followed by gap analysis and development of preventive measures such as engineered solutions or improvement in asset management policy, strategies and processes.

K.J. Beer's quality management system is certified and registered to ISO 9001 for design, design verification, integrity assessment and inspection of static pressure equipment.



## Capabilities

### Pressure Equipment

- Design of pressure vessels, storage tanks and boilers
- Design verification and registration
- Piping stress and flexibility analysis
- Piping vibration and SBF bracing
- Pulsation studies
- Risk based inspection (RBI)
- Non-intrusive inspection (NII) review and implementation

### Advanced Finite Element Analysis (FEA)

- Static linear / non-linear
- Transient analysis
- Computational fluid dynamics (CFD)
- Flow-induced vibration (FIV) and Acoustic-induced vibration (AIV)
- Structural assessment
- Vibro-acoustics

### Inspection

- Pre-commissioning and commissioning
- Vibration surveys
- In-service inspection
- Boroscope inspection
- Strain gauging and surface replication

### Integrity Assessment

- Fitness for service (FFS) / Fracture mechanics
- Root cause failure analysis (RCFA)
- Remaining life assessment
- Fatigue assessment
- Creep assessment
- In-situ post-weld heat treatment (PWHT)

## Safety, Reliability & Integrity

SVT is a specialist engineering consultancy with world-class capabilities in noise, vibration, corrosion and pressure. SVT operates across the project life cycle in the resources sector. Our clients call on us when they need to improve the safety, reliability and integrity of their critical assets.

SVT's focus is on improving the safety, reliability and integrity of:

- operating plant
- rotating and reciprocating equipment
- pressure vessels and piping systems
- fixed and mobile structures

SVT combines first principles understanding with a wealth of field experience. We have a team of very bright and experienced engineers who are passionate about the work we do. Our goal is to provide our clients with clear and timely advice that can be trusted and acted upon.

Integrity Engineering

Rotating Equipment Reliability

Noise Management

Corrosion & Materials

Training