



Forensic Materials & Mechanical Engineering Services

ATTAR offers an engineering materials and mechanical failure analysis service for the Insurance Industry and the Legal Profession in the following areas:-

Building Materials

- Concrete, mortar and plaster failures.
- Ceramic failures, including cracked, lifting, worn and slippery tiles, and damaged glass.
- Blisters, porosity and cracks in fibreglass pools.
- Adhesives and sealants for masonry, tiles and other surface finishes on buildings and pools.
- Corrosion of pipes and structural steel.
- Tiling failures, ceramic or vinyl tiles on the floor or wall.
- Paint system problems, thickness, peeling and durability.

Motor Vehicles

- Mechanical failure of all components, including suspension, engine components, including pistons and connecting rods, transmission and braking systems.
- Tyre failure, including determination of the cause of blow-outs.
- Windscreen failure analysis.

Engineering Failures

- Structural and component failures in cranes, machines and aircraft including determination of mechanism and cause.
- Non-destructive testing failures, explanation and assessment of suitability of inspection.
- Assessment of corrosion mechanisms.
- Determination of compliance with Occupational Health and Safety as well as Engineering Standards.

Public Liability

- Bottle breakages, assessment of cause.
- Slip incidents, measurement of the slip-resistance of the surface to AS/NZS 3661.1, AS/NZS 4663.
- Mechanical failure of products and equipment, such as ladders, chairs, racking systems, motorised scooters and trolley systems.
- Incident investigations involving machines and equipment, determination of contributing factors, including compliance with Occupational Health and Safety and other Standards

Evidence has been presented in the Supreme, Federal, County, Magistrates and Coroners Courts and emphasis is always placed on the continuity or logical chain of evidence.

ATTAR Staff

- **Dr Gary Martin MIEAust CPEng**, who has extensive experience in failure analysis of engineering materials in the building, power generation, petrochemical, manufacturing, aviation and transport industries. He has acted as an expert witness in all courts.
- **David Padfield BEng (Mat) Hons Grad IEAust**, joined ATTAR in early 2002, has been working in engineering materials failure analysis since graduation and has experience in the manufacturing, mining, aviation and transport industries. Also providing materials analysis and comparison to specifications, including chemical analysis, hardness testing and microstructure.
- **John Cacic (Mech/Elec) Grad IEAust**, has been with ATTAR from 2003, and has been working on electrical and fire related investigations as well as conducting accident, slip, trip and fall investigations for the legal and insurance profession.
- **Marcus Brache**, has been conducting slip-resistance for ATTAR for the past 10 years



ATTAR

Advanced Technology Testing and Research