



Heavy Industry, Tools & Machinery

Tools, Machinery & Equipment

Innovations in tools, machinery, and equipment have fueled manufacturing efficiency since the industrial revolution. The automation of repetitive and mundane tasks has improved production and freed up human resources to perform more challenging and complex tasks.

COJK's attorneys, many with degrees in engineering and with prior industry experience working as engineers, researchers, and designers, assist manufacturing clients in the fields of aerospace and aeronautics, agriculture, automobiles, alternative energy, heavy duty machinery, and electrical and mechanical technologies.

We assist our manufacturing clients to protect their IP in the following areas:

- Advanced internal combustion engines, including piston configurations, reciprocating cylinder engines, and gas turbine engines
- Aeronautics and aerospace technologies, including structural design, engine control systems, fluid dynamics, landing systems, propulsion engines, machine elements, and power generating systems
- Airport/airplane ground support equipment, including power supply and HVAC systems, passenger boarding bridges, gangway systems, monitoring systems, fire control, cargo loaders, and tractors for towing aircraft
- Food processing machinery, including high-pressure processing (HPP) machines, sorters, thermal processing, portioning, and clip packaging systems
- Heavy duty machinery, including farming equipment, turbines, power generators, mining equipment, tunnel boring equipment, wheelchair lifts and ramps, CNC machinery, printing presses, and machinery for manufacturing HVAC ducting and connectors
- Grid-scale energy storage systems, including thermal energy storage and flow battery systems
- Material handling machinery, including conveyors, inventory pickers, and robots
- Nuclear industry equipment, including integrated head assemblies for reactors, mobile and stationary casks for spent fuel, and reactor control systems

- Oil and gas drilling equipment and pipeline inspection apparatus
- Safety test systems for crash testing and simulation
- Semiconductor manufacturing equipment and tools
- Testing equipment and tools, including electronic test equipment and measurement instruments
- Vehicles, automotive technology, and watercraft, including medium-and heavy-duty trucks, long-haul trucks, passenger vehicles, automatic guided vehicles (AGVs), and high-speed watercraft

Pulp & Paper

The pulp and paper industry, which has strong roots in the Pacific Northwest, serves both local and worldwide markets. In the past few decades, important advances in production methods, biology, botany, and applied chemistry have improved the vitality of an industry that is based on natural resources.

COJK has a long history representing industry scientists, inventors, and executives in this field. Our legal skills are supported by our technical and scientific backgrounds, enabling us to provide clients comprehensive and high-quality counsel regarding cellulose fiber technologies for pulp and paper production. Through our full range of services, we help clients in the paper and pulp industry secure, maintain, and leverage their intellectual property rights.

COJK attorneys assist clients with matters related to:

- Pulping processes
- Chemical modifications of fibers; tree, lumber, and pulp characterization technologies
- Engineered wood products, such as oriented strand board (OSB), and related chemical treatments, including fire retardants, water retardants, and adhesives
- Construction wood products, including trusses, I-beams, joists, and other structural components
- Pulp-based consumer products, including tissues, towels, diapers, and pads
- Lignin processing and related technologies, including biofuel additives and cellulose fiber compositions, such as fiber-polymeric composite compositions and wood-based products
- Specialty papermaking processes

- Cellulose fiber compositions including non-petroleum-based superabsorbent fibrous compositions and multi-fiber composites, including nonwoven and engineered fabrics
- Methods of manufacture
- Liner board (cardboard); folded boxes