



ELEMENT ENFIELD

PTI Industries was acquired in late 2024 by Element Materials Technology and rebranded as Element Enfield. As part of the growing Element family, Element Enfield offers customers an unparalleled range of safety-critical testing and value add services. Element Enfield performs combined testing and value add specialized processes on customer components in one stop, reducing lead times, shipping cost and logistics issues associated with using multiple vendors. We operate in a high volume, high mix environment. Annually we process over 10M individual parts on 20K jobs with 5,000 unique part numbers. We have 2 buildings with over 80K sq. ft. of processing space, over 100 employees, and multiple shifts available. Our buildings are strategically located within one of the largest, most experienced concentrations of premier aerospace component manufacturers in the world.

SERVICES AT A GLANCE

- Non-Destructive Testing: FPI, MPI
- Passivation: Nitric, Citric
- Dry Film Lubricant/Anti-Gall Coatings
- Magnesium Coatings: DOW 7, 17, and 19
- Adhesive Bonding
- Precision Cleaning, Cleanliness Testing and Cleanroom Packaging
- Pressure Testing

NON-DESTRUCTIVE TESTING

Element Enfield's nondestructive analysis services include fluorescent penetrant inspection (FPI) and magnetic particle inspection (MPI). These nondestructive tests can locate and assess component defects with an extremely high level of accuracy. Element Enfield's experienced technicians, trained customer service, and quality control personnel will work together to seamlessly integrate your non-destructive testing requirements into time-sensitive production schedules.



PRECISION CLEANING & CLEANLINESS TESTING

Element Enfield bridges the gap between special processing and a finished, service-ready product through precision cleaning and testing. Precision cleaning is critical for aerospace components because even microscopic particulate matter can compromise safety, reliability, and component longevity. Trace contaminants can damage sensitive systems: trapped particulates may cause bearings, actuators, or hydraulic systems to fail, while blocked fuel or lubrication passages can directly impact performance. Cleanliness testing ensures that components meet strict standards before entering service. Element Enfield offers a full range of precision cleaning methods, including ultrasonic cleaning, aqueous immersion, high-pressure washing, and turbulent flushing, ensuring that even the most complex conventionally and additively manufactured components are flight-ready. We provide gravimetric analysis, non-volatile residue testing, and UV/bright white light inspection to verify compliance with the most stringent aerospace requirements. We can further support your supply chain with DSQR services and drop ship directly to your end user.

MAGNESIUM COATINGS

Our various magnesium coatings are applied to components to aid in the prevention of corrosion, act as a base for additional surface treatments, and ensure long term structural integrity. Element Enfield's magnesium coatings include Dichromate treatment #Dow 7, Magnesium Anodize treatment #Dow 17, and Chromic Acid treatment #Dow 19. Element Enfield's experience with magnesium goes beyond coating conventionally machined components, our knowledgeable staff can advise customers which coating method will be most suitable for their needs.

ADHESIVE BONDING

Element Enfield's advanced adhesive bonding services include pre-bond priming, post bond treatment, metal to metal bonding, epoxy bonding, Vespel® bonding, RTV bonding, silicon bonding, and Teflon® fabric and tape bonding. Our in-house machining coupled with our parametric design software (3-D modeling) capabilities enable us to custom design and build tooling to uniquely mate your parts to all of our processes. We also offer finished machining of Teflon® once bonded to your parts. Our expertise, equipment, and capabilities have made Element Enfield one of the premier adhesive bonding partners in the country.

WHY ELEMENT ENFIELD

Element Enfield provides customers with an unparalleled range of safety-critical testing and value-add services supporting the rapidly evolving aerospace, space, defense, and energy industries. We are a trusted strategic partner for special processing of both direct and subcontracted aerospace components, supporting organizations across the global aerospace and energy supply chains. Element Enfield is NADCAP accredited, DDTC (ITAR) registered, and FAA/EASA certified, reflecting our commitment to operating at the highest levels of regulatory compliance and technical excellence. In addition, we maintain hundreds of approvals from more than 40 aerospace OEMs and prime contractors, enabling us to seamlessly support customer programs across commercial aerospace, defense platforms, space systems, and power generation applications.

With nearly 50 years of industry experience, Element Enfield has built a reputation for technical expertise, reliability, and partnership. Our highly skilled, customer-focused team works closely with customers to understand program requirements, respond quickly to changing demands, and deliver precise, repeatable results. By combining deep industry knowledge with a culture of quality and service, we are committed to helping our customers maintain the highest standards of safety, compliance, and performance on their most critical programs.



PRESSURE TESTING

Pressure testing determines if parts have been properly fabricated or assembled. These tests substantiate that the design and manufacturing processes provide adequate strength to meet the intended end use. Element Enfield will use the latest software to custom design and build tooling onsite for your job. Element Enfield offers hydraulic and gaseous pressure & leak testing services that comply with many OEM and Prime specifications.

PASSIVATION

Passivation is the chemical treatment of components with a mild oxidant, such as nitric or citric acid solution, to remove surface contamination caused by free irons and enhance the spontaneous formation of a protective passive film. Element Enfield also offers high humidity and copper sulfate testing to confirm the effectiveness of the process.

DRY FILM LUBRICANT/ANTI-GALL COATINGS

Element Enfield coats parts with solid film lubrication, known as "dry film lubrication" or "anti-gall" that lubricates the surface of a part with a coating of fine molybdenum disulfide particles which reduces friction and results in less wear. This coating does not attract foreign particles such as dirt or metal, like conventional lubricants do, making it ideal for operations where cleanliness is a concern.

