



Enlightened Service.

Providing operational and engineering services to support your core business plans and strategies, Pulse is a one-call solution for all of your technical and commercial needs.

The Harper Pulse group's outstanding performance on our recent HT Furnace upgrade and rebuild was key to a successful project that will deliver savings for our company's bottom line. Across our many experiences with Harper's team, we have seen that they share the Cytec vision for safety and quality of work, along with an urgency to get production systems back in operation. With their strong technical and operational support, we completed the project ahead of schedule, below budget, and reduced the total downtime for this equipment, ultimately delivering significant savings in capital expenses and an increase in revenue through additional uptime of the production line.

Simon C. Harvey
Operations Manager
Cytec Carbon Fibers

"Harper is very innovative. They have provided excellent, intuitive service, looking ahead into the future as to what we might need."

Timothy A. Dye
Engineering Manager
Toho Tenax America



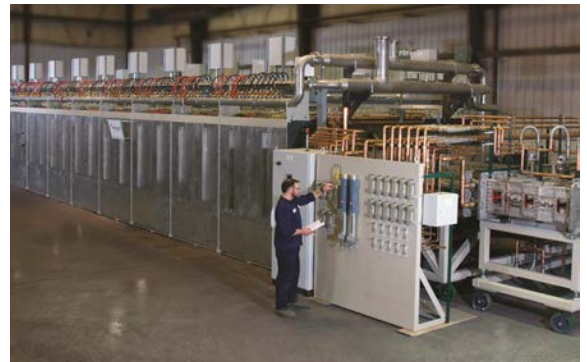
Spark the future.™

Today's demands for superior quality, performance, reliability, minimized downtime and ever-tightening delivery schedules in foreign and domestic markets requires a new level of timely, comprehensive aftermarket service.

Harper's comprehensive Pulse™ team service offers one-call technical support, domestic and overseas field service, proactive preventative maintenance programs, fast-turnaround genuine replacement parts, and engineered solutions for a broad spectrum of your service and maintenance requirements. The Pulse team brings a passionate, collaborative and innovative focus nurtured by years of process technology know-how to bring timely and practical solutions to the most difficult challenges.

Technical Support

The Pulse team of experienced engineers and service professionals is available for consultation on any aspect of our process technology equipment from installation through operations, troubleshooting and general maintenance support. Broader requirements such as proactive scheduled maintenance and inspection programs are available.



Parts Support

With the demands of today's competitive business environment and ever-escalating downtime cost, timely replacement with quality parts is a must. Our experienced engineers and technical specialists will collaborate with you to identify the optimal replacement parts or design solution to meet your needs. The Pulse team is well-experienced with shipping logistics to overseas locations to ensure that your equipment arrives as expeditiously as possible.

Aftermarket Support

Visionary customers appreciate collaboration with the Pulse team of experienced engineering professionals to develop innovative solutions to a number of diverse technical and engineering challenges ranging from upgrading equipment for process or production optimization, energy management or to increase reliability and performance. Harper also provides enhanced control systems, instrumentation and technologies tailored to meet the stringent control requirements and specialized needs of emerging technologies and complex applications.

Service Support

Harper's Pulse™ team provides operational and engineering services to support your core business plans and strategies. Through custom designed programs, we can help you achieve a higher level of planned and predictive operational activities that ensure a more efficient use of resources. As your partner, we provide responsive service and become proactively involved in identifying, evaluating, recommending, and implementing innovative, cost effective and technological solutions.

Our experienced professionals with decades of thermal processing system experience will provide technical oversight to develop and implement strategic and tactical plans, policies and procedures that maintain optimal equipment performance reducing downtime, extending equipment life and maximizing the availability of equipment at the lowest cost and at the highest quality and safety standards.

Our comprehensive programs are developed to proactively monitor, assess, predict, and understand equipment performance and impending problems before a failure occurs. No one is better suited to help you reach your goals of maximum operational efficiency than our Pulse team

What kind of activities can be included in Harper's Service Support programs?

- Equipment inspections, diagnostics and failure analysis
- Maintenance planning and scheduling
- Maintenance management policies, procedures, and service levels
- Preventative and predictive maintenance development
- Reliability-centered maintenance through FMECA
- Shutdown/Rebuild management
- Energy management plans
- Education and training plans
- Remote equipment condition monitoring
- Life cycle costing
- Management of outsourced services and contracts
- Spare parts management (with consigned parts inventory, if desired)



What can you expect to achieve as a part of your Service program?

- Mitigation of safety hazards
- Maximization of equipment uptime
- Improved product quality
- Decreased costs per unit produced
- Maximum productive capacity and performance
- Increased Overall Equipment Effectiveness (OEE)

To get started, contact us today at servicesupport@harperintl.com or 001.716.276.9889 to talk with our dedicated Pulse team about a customized service program to meet your strategic and tactical needs.