



Godfrey & Wing Inc.

Quality. Commitment. Value. **Worldwide.**

Godfrey & Wing

Vacuum impregnation is our passion and it's easy to understand why. Godfrey & Wing has more experience and expertise in vacuum impregnation processes, sealants and equipment than any other company in the world.

With over sixty years of knowledge, we have honed our skills by:

1. Engineering and manufacturing patented Continuous Flow Impregnation and general use batch impregnation systems
2. Developing and manufacturing patented impregnation sealants
3. Building and operating Godfrey & Wing owned vacuum impregnation service centers and establishing strategic relationships with independent service owner/operators

While there are many companies that offer sealants, equipment or services, Godfrey & Wing continues to differentiate itself from the field not only through formulating, manufacturing and testing our products, but through using them on a daily basis – so we know what you face every day, month and year in maintaining your equipment, sealant and process.

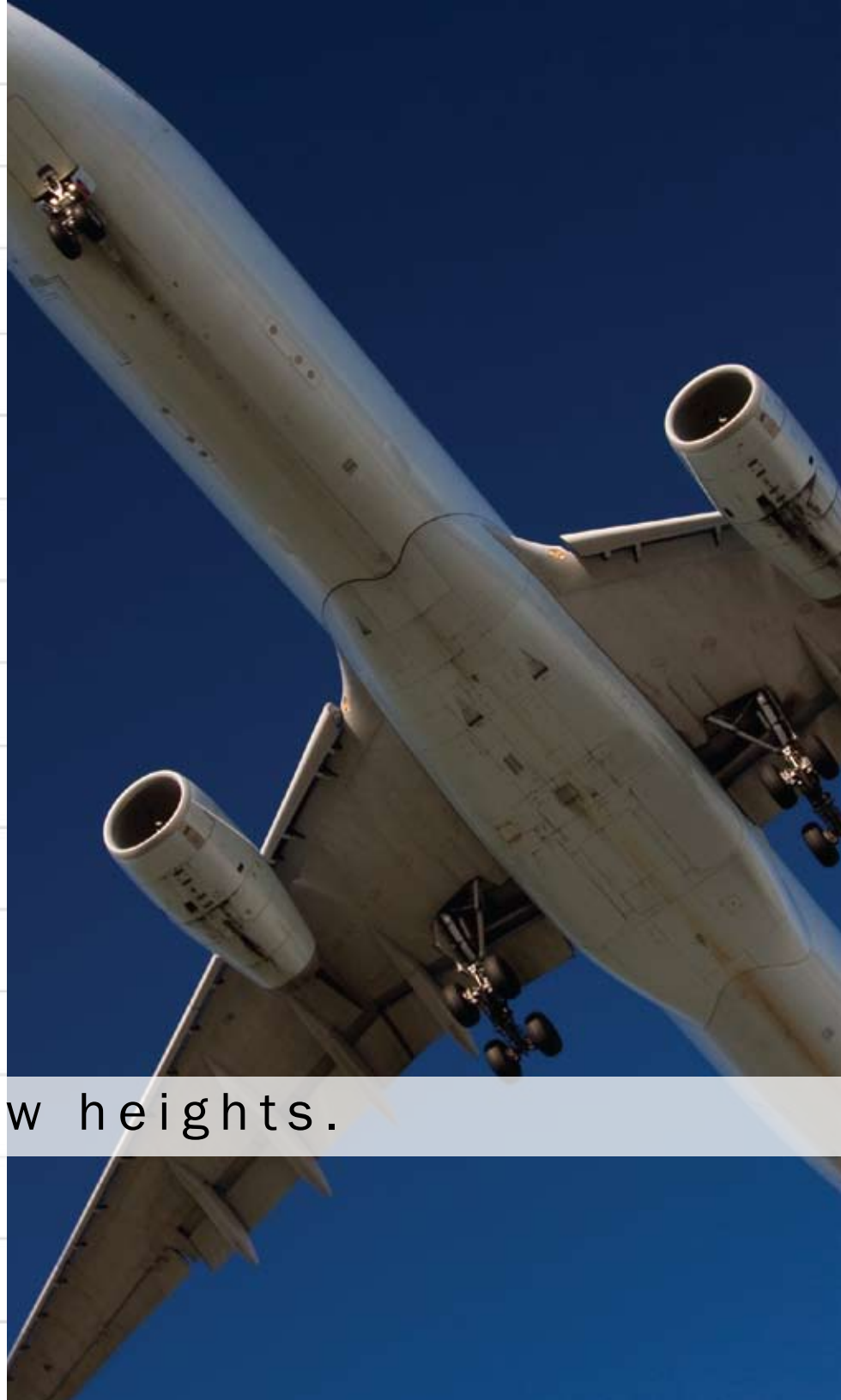
We are your single point contact for all vacuum impregnation sealant, equipment and service needs. Whether you have your own equipment and need sealant, are charged with developing an internal impregnation program, or must find an experienced, qualified and competitive supplier for outsourcing, Godfrey & Wing has the capability to meet and exceed your requirements.

So when we say vacuum impregnation is our passion, we mean it. With millions of components sealed in our service centers and millions more at our customers using Godfrey & Wing sealants and equipment, the results prove our passion – everyday.





...reaching new heights.



Vacuum Impregnation

Vacuum impregnation is used to seal voids created during the manufacturing process. In the case of cast or pressed metals, these voids are known as porosity. A similar condition exists in insert-molded electrical components and cable assemblies where dissimilar materials are formed together. These voids (porosity) will ultimately allow fluids and gasses to escape (or penetrate) leading to a component failure.



When developing an impregnation program, it is important to recognize the four key characteristics of the vacuum impregnation process:

1. Evacuate air from voids in the components being impregnated
2. Fill evacuated voids with sealant
3. Remove excess sealant from component
4. Catalyze impregnated sealant

With this understanding, the program can be developed by lending consideration to the three variables that must be evaluated. Each of these variables contain multiple factors that impact the effectiveness of the impregnation program:

1. Impregnation process method
2. Manufacturing system
3. Sealant type

When developed and applied properly, vacuum impregnation will seal voids without altering any other functional or dimensional characteristics of the component being impregnated. It is the preferred method for ensuring pressure tight components in fail-safe applications in the aviation, automotive and oil & gas industries.

Typical applications include engine blocks and heads, fuel delivery systems, fuel cell plates, pumps, hydraulics, transmissions, wheels, braking systems and air conditioning compressors.

For more detailed information on vacuum impregnation processes, systems and sealants, please contact us to arrange a technical review with a Godfrey & Wing Sales Engineer.





...making good product better.



Impregnation Sealants

One type of sealant does not fit all applications as all parts are not alike. Godfrey & Wing's *imprex* sealants are designed to have properties to match the application. Whether it is micro porosity in cast metals or macro porosity in sintered metals, Godfrey & Wing has the sealant with the correct viscosity, adhesion and chemical resistance properties for the specific application. When it comes to insert-molded electrical or wire harness applications, our line of flexible sealants provide high quality and money saving alternatives to traditional potting compounds.

Whatever the application, Godfrey & Wing's sealants share a superior characteristic – the ability to be thoroughly and effectively rinsed from machined features in a short amount of time. This key characteristic saves our customers valuable production time and prevents the downstream assembly failures commonly experienced with other sealants.

Also rest assured that *imprex* sealants are:

1. Environmentally friendly, containing no toxic substances and compliant with global environmental initiatives
2. Fully recoverable for re-use. Our goal is to keep sealants pure without the additional chemistry or ancillary processes to 'recycle' sealants from waste streams. This level of purity assures our customers the highest yield of pressure tight parts with the minimum amount of labor, energy and resources

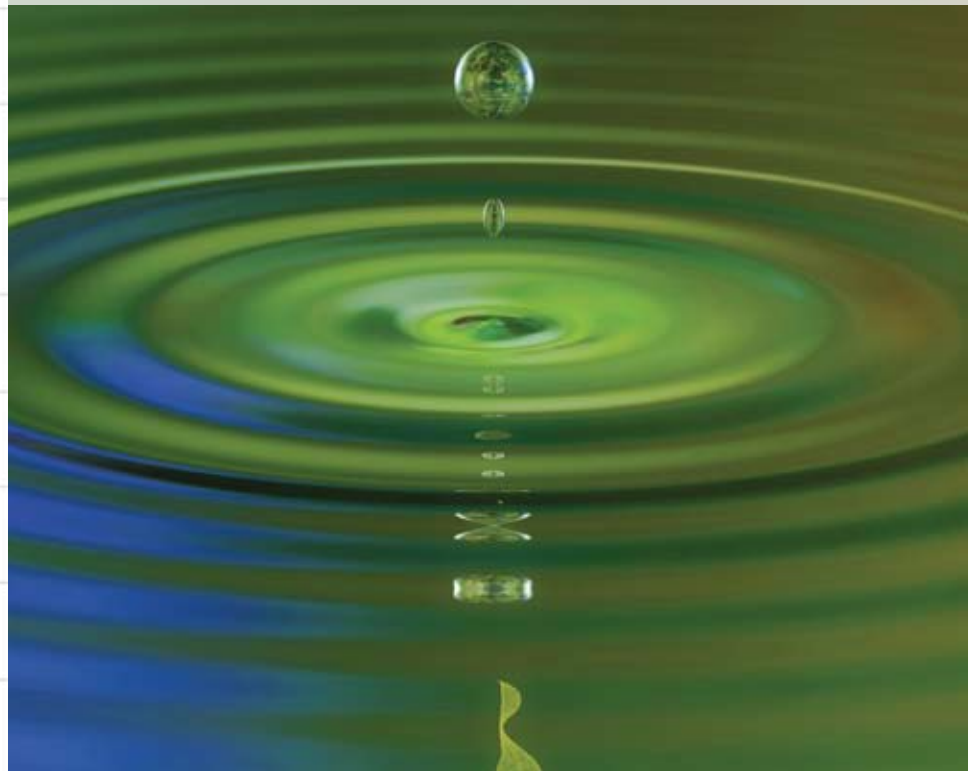
Godfrey & Wing sealants can be found on the Department of Defense Qualified Products List, most OEM specifications and are listed by  and 

For application assistance, TDS (Technical Data Sheets) and MSDS (Material Safety Data Sheets) please visit us at www.godfreywing.com or contact a Godfrey & Wing Sales Engineer at 800.241.2579.





...environmentally friendly innovation.



Impregnation Equipment

The heart of any successful impregnation program is selecting the right equipment for the manufacturing environment and utilizing a process that seals the component 100% of the time.

Many companies have a strategy that one system, process or sealant fits all applications. Godfrey & Wing believes that when competing in a global economy, customers need a strategy that looks upstream and downstream in the manufacturing process then incorporates the appropriate impregnation equipment, process and sealant solution. This is where Godfrey & Wing outperforms the others – we tailor systems to your application and environment.

Whether it is our ground breaking single piece flow Continuous Flow Impregnation (CFi) System or a batch processing system, our team of skilled engineers will design a system and process that fits any production schedule, part specification, or floor-space constraint. The key to our success is that we not only design and build impregnation systems, we run them, and have done so continuously since 1948 – longer than any other company in the world. We know what seals parts, cost effectively and reliably. It is our business and remains our core competency over 60 years later.

The Continuous Flow Impregnation (CFi) System demonstrates that competency and commitment. The most significant advance in vacuum impregnation equipment in 25 years, it achieves a level of performance unequalled in the industry. By focusing on the component to be impregnated, the CFi conserves resources, eliminates failure modes and provides for an effective, efficient and repeatable process – something not seen in traditional vacuum impregnation equipment.

To discover more about the most advanced casting impregnation system in use today—Continuous Flow Impregnation (CFi), or for batch and refurbished solutions, contact a Godfrey & Wing Sales Engineer.





...flexible technology.



Impregnation Services

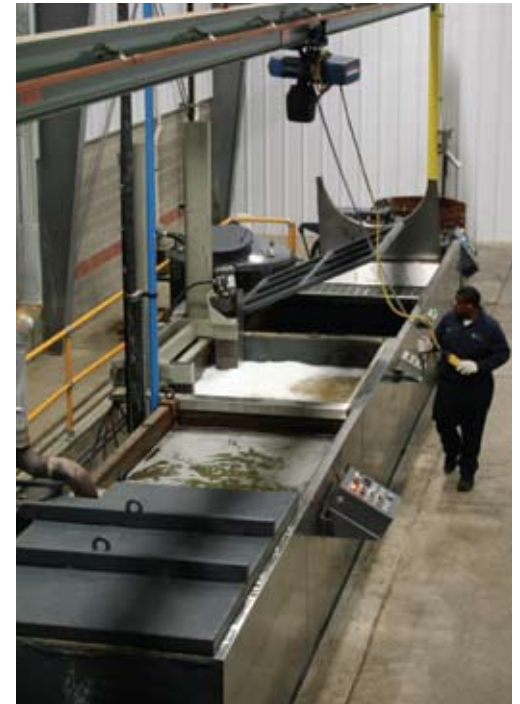
All customers have unique strategic goals. Some need the vacuum impregnation process inside their factories. Others prefer to outsource their impregnation requirements, maintaining their facilities for use in core competencies. The characteristic that sets Godfrey & Wing apart from our competitors is our ability to service our customers in either case.

When capital, floorspace, or other constraints exist which dictate the outsourcing of vacuum impregnation services, Godfrey & Wing provides strategic sourcing options to meet a wide range of specifications. Our goal is to control and reduce our customers' cost of business by eliminating unnecessary transportation, inventory and overhead while, at the same time, improving overall quality. We can do this in any one of our Company owned ISO/TS registered process centers or through our allied service centers around the globe.

Our process equipment utilizes the most advanced technology in the world. Whether it is our Continuous Flow Impregnation (CFi) or traditional batch systems, we have the solution to guarantee the highest yield of castings without defects resulting from porosity, contamination or damage.

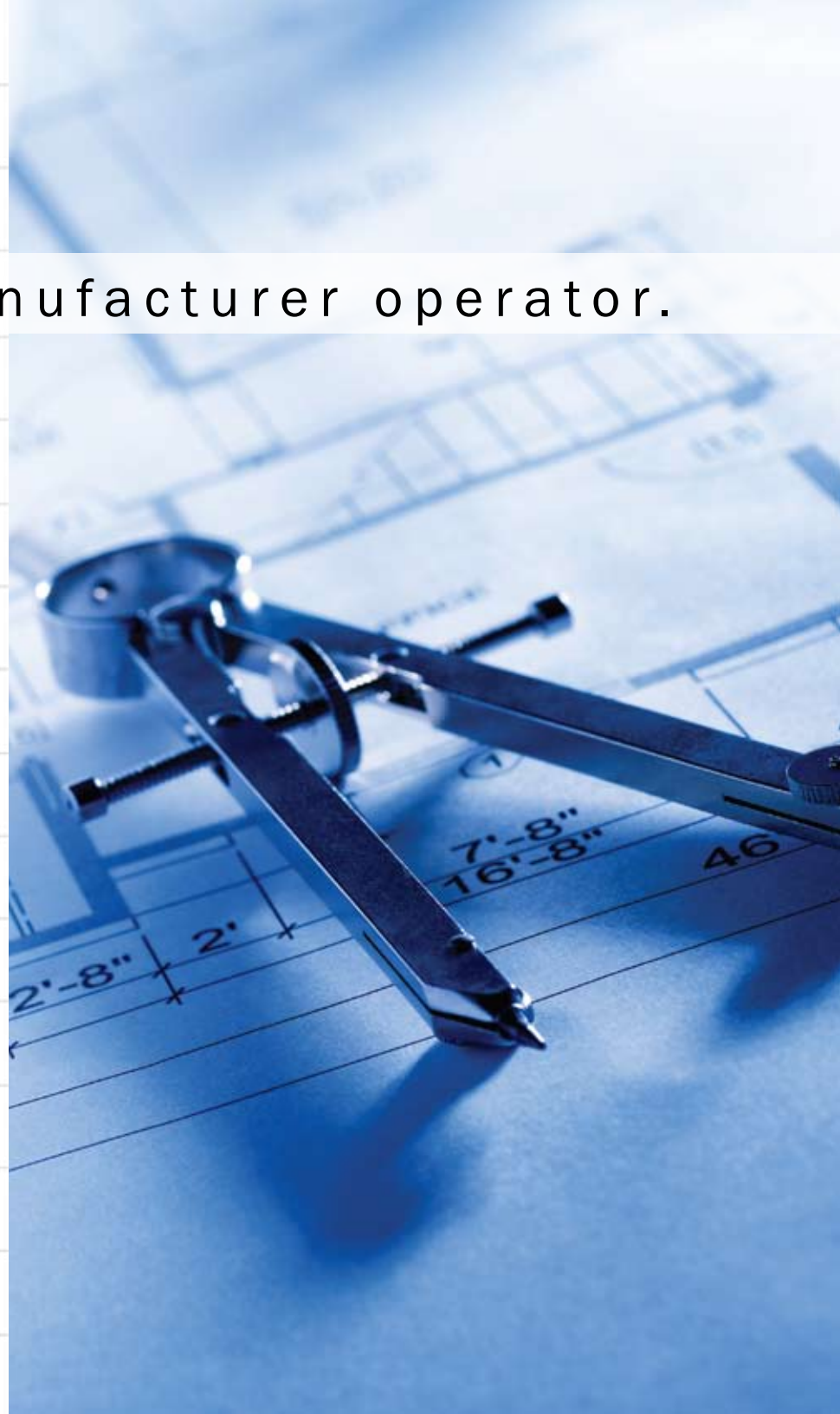
Godfrey & Wing service centers utilize the DVP process, the most robust in vacuum impregnation, to consistently deliver superior results regardless of material, porosity type or machining content.

At Godfrey & Wing our goal is to ensure complete customer service and satisfaction. Whether it be through delivery of the highest quality sealants, most advanced equipment or through providing sealed components through one of our service facilities, experience the difference this commitment can bring by contacting a Godfrey & Wing Sales Engineer at 800.241.2579.





...designer manufacturer operator.





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