



Advanced Induction Materials and Technology



A D V A N C I N G   I N D U C T I O N   T E C H N O L O G Y

# We are Fluxtrol

A world leader in induction heating solutions  
since 1981.



# Our Mission

To provide superior  
electromagnetic induction  
technologies, products and  
services that implement  
successful induction  
solutions

[LEARN MORE](#)

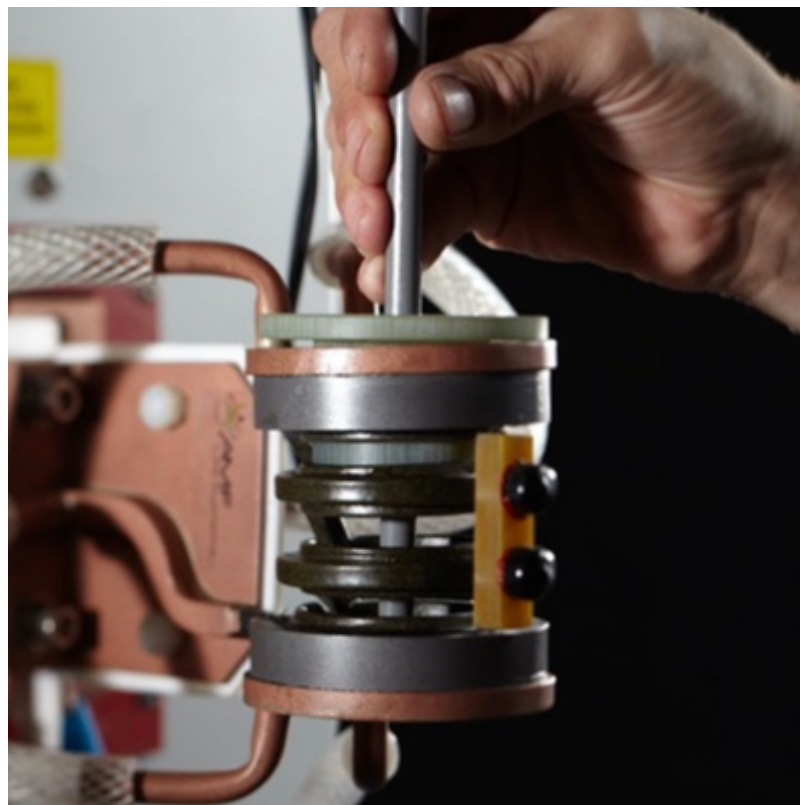




W H A T   W E   D O

# Value Driven Induction Technologies

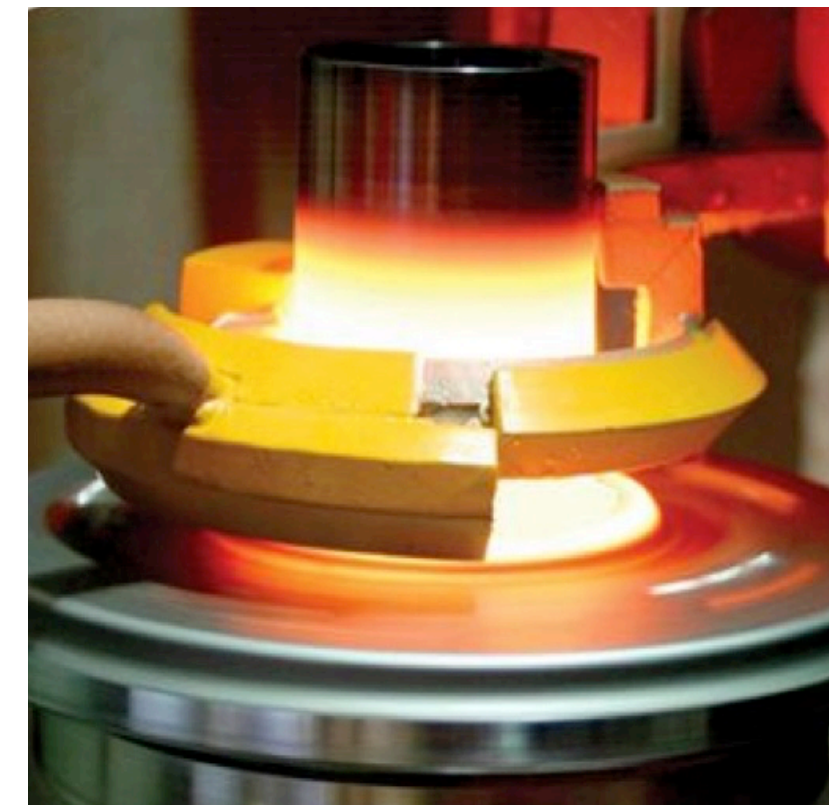
Fluxtrol Inc. has not only been advancing induction technologies for almost four decades, but also has become a world leader in the manufacture and supply of soft magnetic composites (SMC). Additionally, we provide a wide range of electromagnetic induction technology solutions to a multitude of global industries.



Research & Development



SMC Material



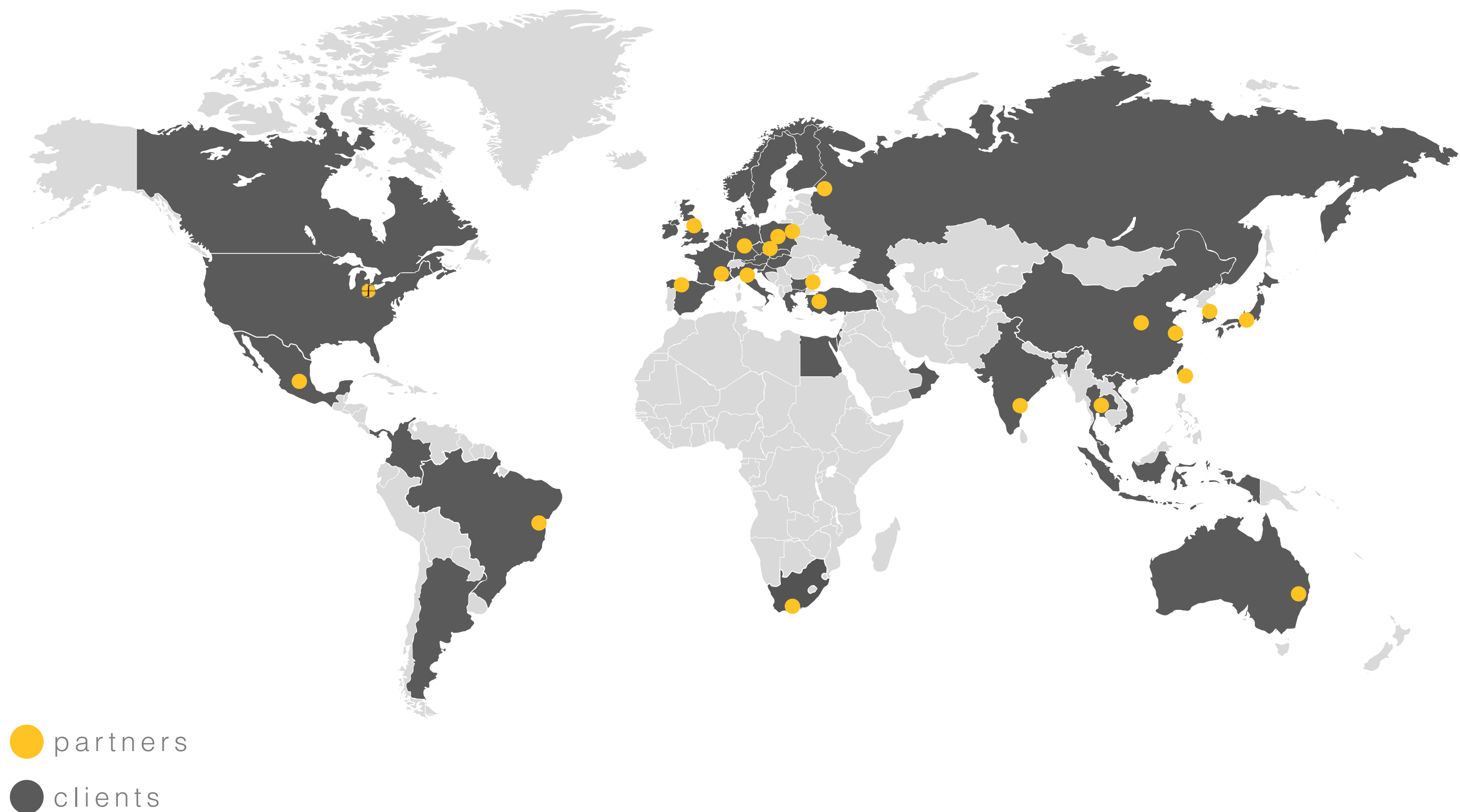
Engineering Services

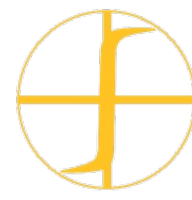


W E A R E T H E

# World Leader in Induction Heating Solutions

We have a team of induction heating experts with a wealth of real industry experience that service a global distribution network covering more than 50 countries.





W O R L D C L A S S

# Magnetic Flux Control for Variety of Applications

Fluxtrol is actively working not only in traditional induction heating areas such as heat treating, joining, and melting, but also in many other specialty areas ranging from antennas to biomedical.

## HEATING TREATING

Hardening  
Tempering  
Annealing  
Stress Control

## SURFACE ENGINEERING

Curing  
Plasma Coating  
Hard Facing  
PVD CVD

## JOINING

Brazing Soldering  
Welding  
Sealing  
Adhesive Bonding

## MELT & MASS HEATING

Melting  
Forging  
Forming  
Cold Crucible Melting



**Striving for Perfection**

## SPECIAL APPLICATIONS

Crystal Growth  
NMR Antennas  
Biomedical  
Inductive Power Transfer



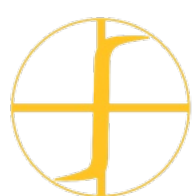
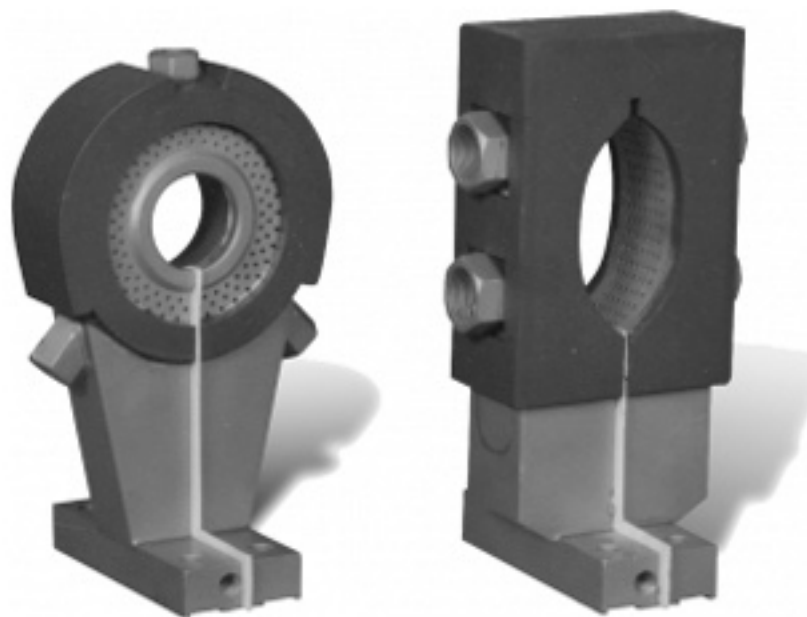
C O M M I T T E D

# Trusted by Every Industry Around the World

Our engineering and research team along with the combined efforts of our customers' specialists has brought forth a wide variety of innovative solutions being used in thousands of applications ranging from automotive, alternative energy, aerospace, oil and gas, special metallurgy, biomedical, the food industry, and many more.

WATCH VIDEO





S M C F O R A L L I N D U C T I O N C O I L S T Y L E S & S I Z E S

## Fluxtrol Soft Magnetic Composite (SMC)

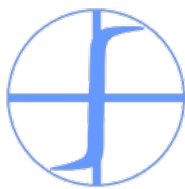
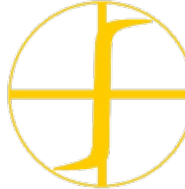
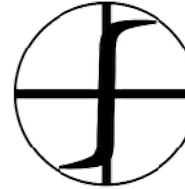
Fluxtrol Inc. is the world leader in magnetic flux control in induction heating systems and other applications. Fluxtrol does research, develops and manufactures magnetic flux controllers using propriety soft magnetic composites (a.k.a. MagnetoDielectric Materials) produced in both machinable and moldable (formable) varieties. The properties and characteristics of these materials allow for effective use in a wide range of applications with frequencies from 50 Hz to 13.56 MHz. Fluxtrol, Inc. welcomes collaboration with customers and research groups for the advancement of new ideas and special applications.





F L E X I B I L I T Y

# Properties of Magnetic Field Concentrators

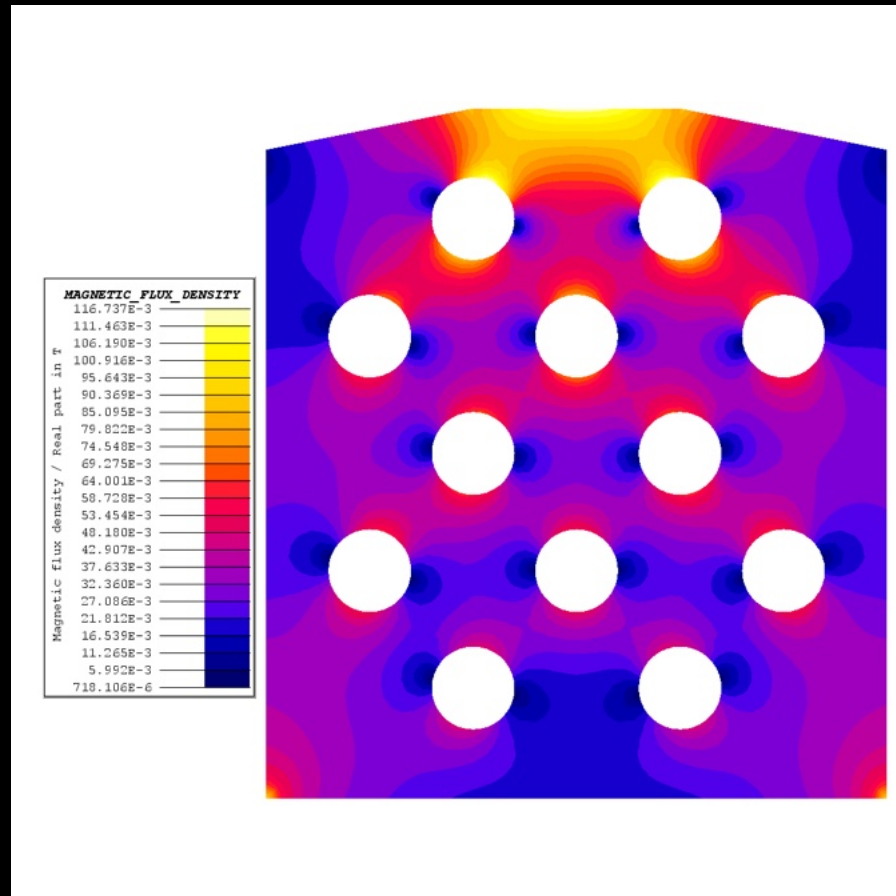
|                               |                   | Machinable                                                                        |                                                                                     |                                                                                     |                                                                                     | Formable                                                                            |                                                                                     |
|-------------------------------|-------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Properties                    | Units             | Fluxtrol 100                                                                      | Fluxtrol A                                                                          | Fluxtrol 50                                                                         | Ferrotron 559H                                                                      | Alphaform LF                                                                        | Alphform MF                                                                         |
| Product Identifier Color      |                   |  |  |  |  |  |  |
| Density ( $\pm 2\%$ )         | g/cm <sup>3</sup> | 6.8                                                                               | 6.6                                                                                 | 6.1                                                                                 | 5.9                                                                                 | 4.1                                                                                 | 4.0                                                                                 |
| Operating Frequency Range     | kHz               | Up to 50                                                                          | Up to 50                                                                            | 10-1000                                                                             | 10-3000                                                                             | 1-80                                                                                | 10-1000                                                                             |
| Maximum Relative Permeability | None              | 130                                                                               | 120                                                                                 | 55                                                                                  | 18                                                                                  | 13                                                                                  | 10                                                                                  |
| Saturation Flux Density       | T                 | 1.7                                                                               | 1.6                                                                                 | 1.5                                                                                 | 1.0                                                                                 | 1.0                                                                                 | 0.9                                                                                 |
| Temperature Resistance        | °C                | 225 Long Term 300 Short Term                                                      | 250 Long Term 300 Short Term                                                        | 250 Long Term 300 Short Term                                                        | 250 Long Term 300 Short Term                                                        | 225 Long Term 300 Short Term                                                        | 225 Long Term 300 Short Term                                                        |
| Thermal Conductivity          | W/cm-°C           | 0.23                                                                              | 0.20                                                                                | 0.06                                                                                | 0.04                                                                                | 0.02                                                                                | 0.02                                                                                |
| Resistivity                   | kΩcm              | 12.5                                                                              | 0.5                                                                                 | 0.5                                                                                 | >15                                                                                 | >15                                                                                 | >15                                                                                 |



P R O F E S S I O N A L

# Research & Development

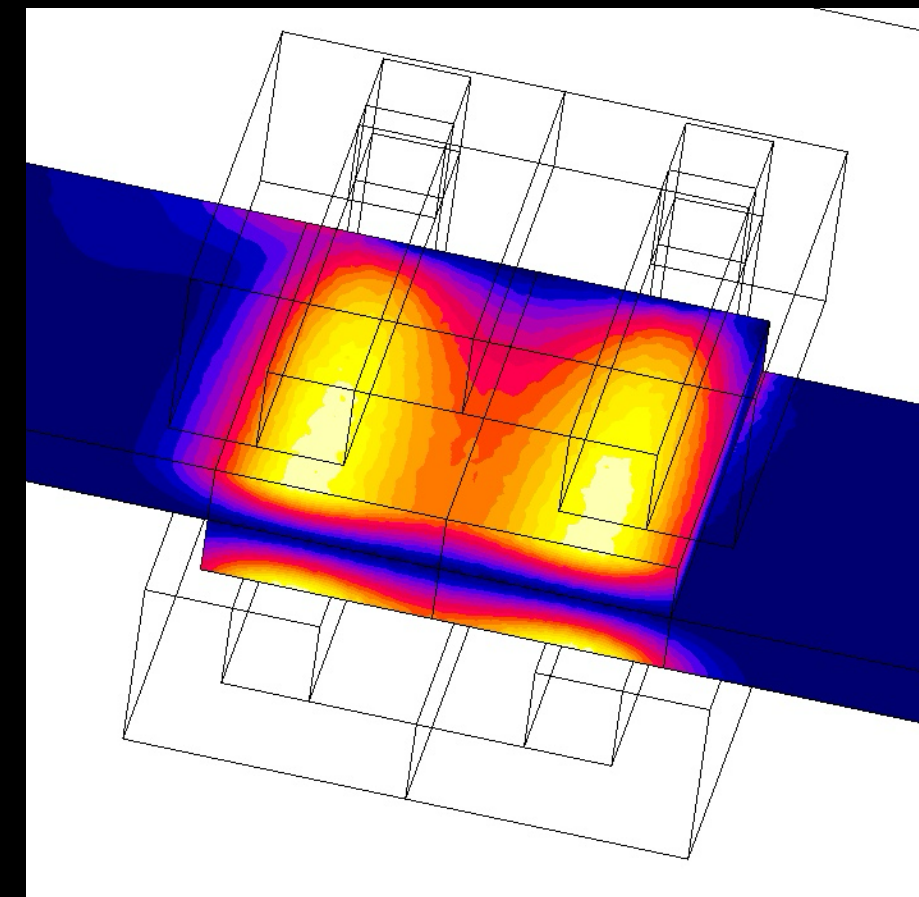
Research and development is one of the core competencies of Fluxtrol, Inc. The three cornerstones of our R&D are the control of magnetic fields, fundamental understanding of induction technique, and computer modeling and process optimization.



Magnetic Flux Control



Emerging Technologies



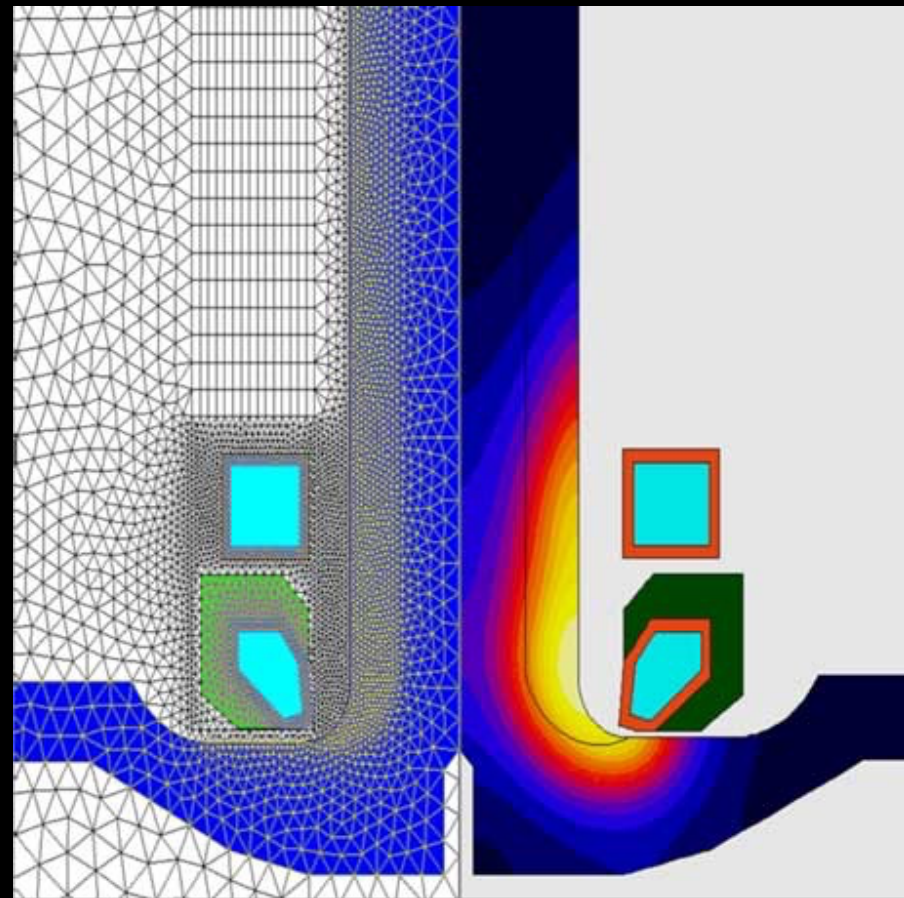
Modeling and Optimization



P R O F E S S I O N A L

# Engineering Services

We provide a wide range of engineering services; computer simulation, optimal design of induction coils and related processes, prototyping and validation, on-site set-up, operating training, and on-going technical support.



Finite Element Analysis - Simulation



Induction Coil Design



Prototype & Validation



CENTRE FOR INDUCTION TECHNOLOGY

# Fluxtrol.com Website & Links

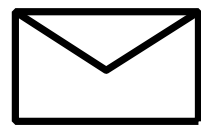
Our updated website, [www.fluxtrol.com](http://www.fluxtrol.com), is your portal to discover more about Fluxtrol, Inc. and to engage our friendly and helpful staff.

Fluxtrol.com offers training on the basics of induction heating, product selection assistance, and even real time access to news about Fluxtrol's products and services.



TELEPHONE

[1-248-393-2000](tel:1-248-393-2000)



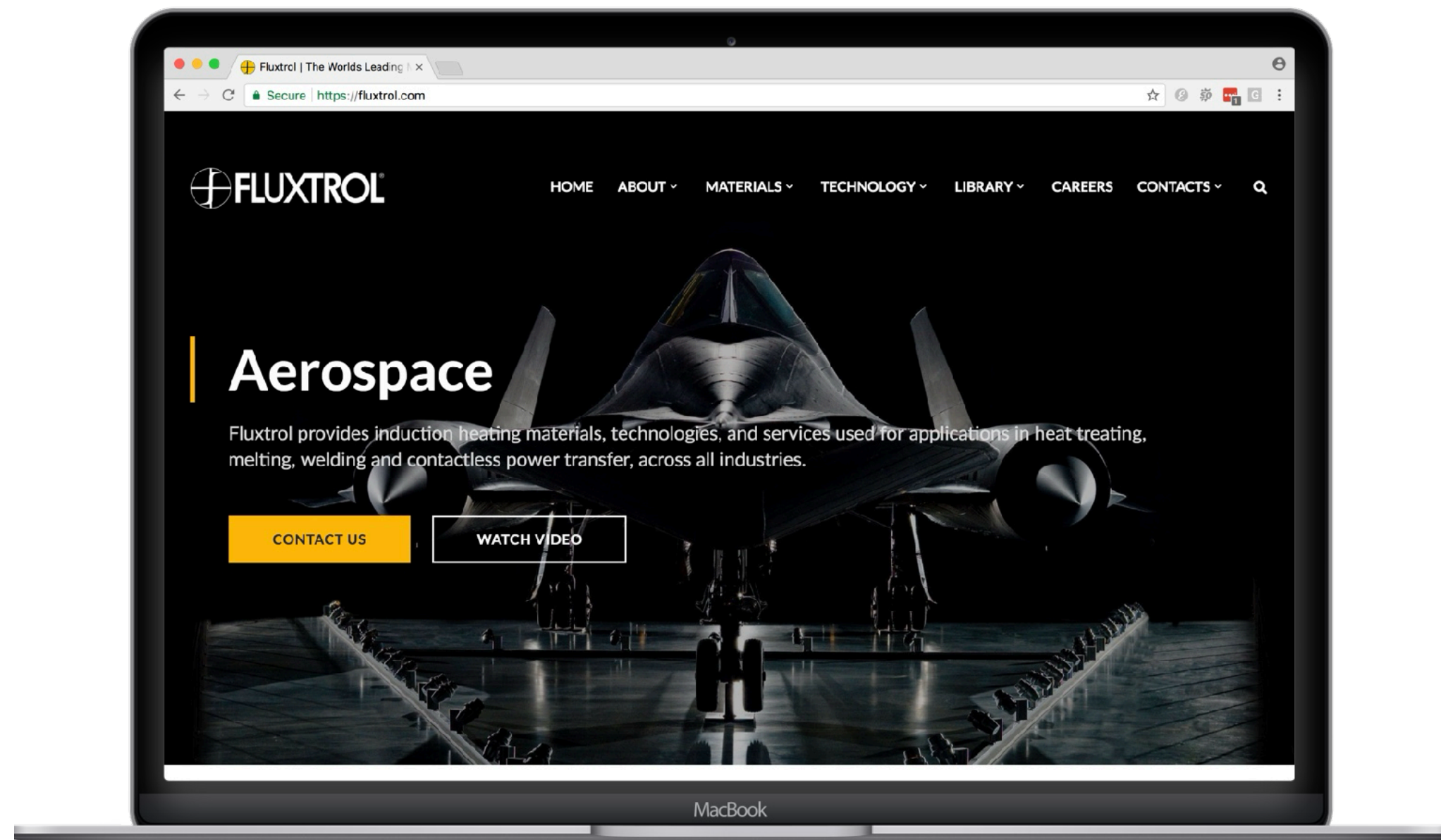
EMAIL HERE

[sales@fluxtrol.com](mailto:sales@fluxtrol.com)



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