



**/// CONTOUR®**



## CONTOUR: DESIGNED TO DO WHAT OTHERS SAID COULDN'T BE DONE

Contour was established in 1986 with the goal of providing a cost-effective solution to difficult heat treatment applications.

This goal was attained through the development of an advanced computer-controlled induction heating technology known and patented as the Micropulse™ Process. Contour developed the Micropulse™ Process to rapidly harden gear teeth and other irregularly shaped parts requiring a high degree to case depth hardening and pattern accuracy.

In 1986, a system was built specifically for Contour. This first system is still used today for processing parts and developing

applications for customers. Contour has been building systems for its customers since 1990.

During the fall of 2007 Contour created a satellite location in Silao, Guanajuato, Mexico.

Our Mexico facility also includes purpose-designed utilities, computerized gear inspection equipment, and a complete metallurgical laboratory to support our customers in Central and South America.





## EXPERT HEAT TREAT PROVIDERS

OVER 100 YEARS OF COMBINED, IN-HOUSE HEAT TREAT  
ENGINEERING EXPERTISE



### WE KNOW HEAT TREATING INSIDE & OUT

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- Tier 1 Supplier of Engineered Heat Treat Services and Solutions
- End Markets – Light Auto, Heavy Truck, Aerospace & Off-Highway & Power Tools...to name a few.
- Providing Heat Treat Solutions since 1986 - Over 35 years of experience
- IATF 16949 Certified, ISO 9001, CQI9 Compliant
- High volume in-house production
- Specialized niche processing & problem solving
- Research & Development

## **| CENTRALLY LOCATED**



### **INTERNATIONAL HEADQUARTERS**

INDIANAPOLIS, IN

PROCESSING & ENGINEERING



### **MEXICO PROCESSING HEADQUARTERS**

SILAO, QUANAJUATO, MEXICO

PROCESSING FACILITY

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# QUALITY ABOVE AND BEYOND

STATE-OF-THE-ART  
METROLOGY  
AND  
DIMENSIONAL SYSTEMS

- Environmentally conditioned shops for greater process control
- Full service application development team dedicated to finding solutions for problem-parts

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# UNMATCHED ENGINEERING EXCELLENCE

OVER 100 YEARS OF IN-HOUSE HEAT TREAT  
ENGINEERING EXPERTISE



- 4 Full-time Metallurgists with over 50 combined years experience
- 5 Mechanical & Electrical Engineers
- 2 Registered Professional Engineers
- 2 6 $\sigma$  Black Belt Holders

**FOCUS ON PROBLEM SOLVING**

**RIGOROUS APPROACH TO THE SCIENCE OF HEAT  
TREAT TECHNOLOGY**

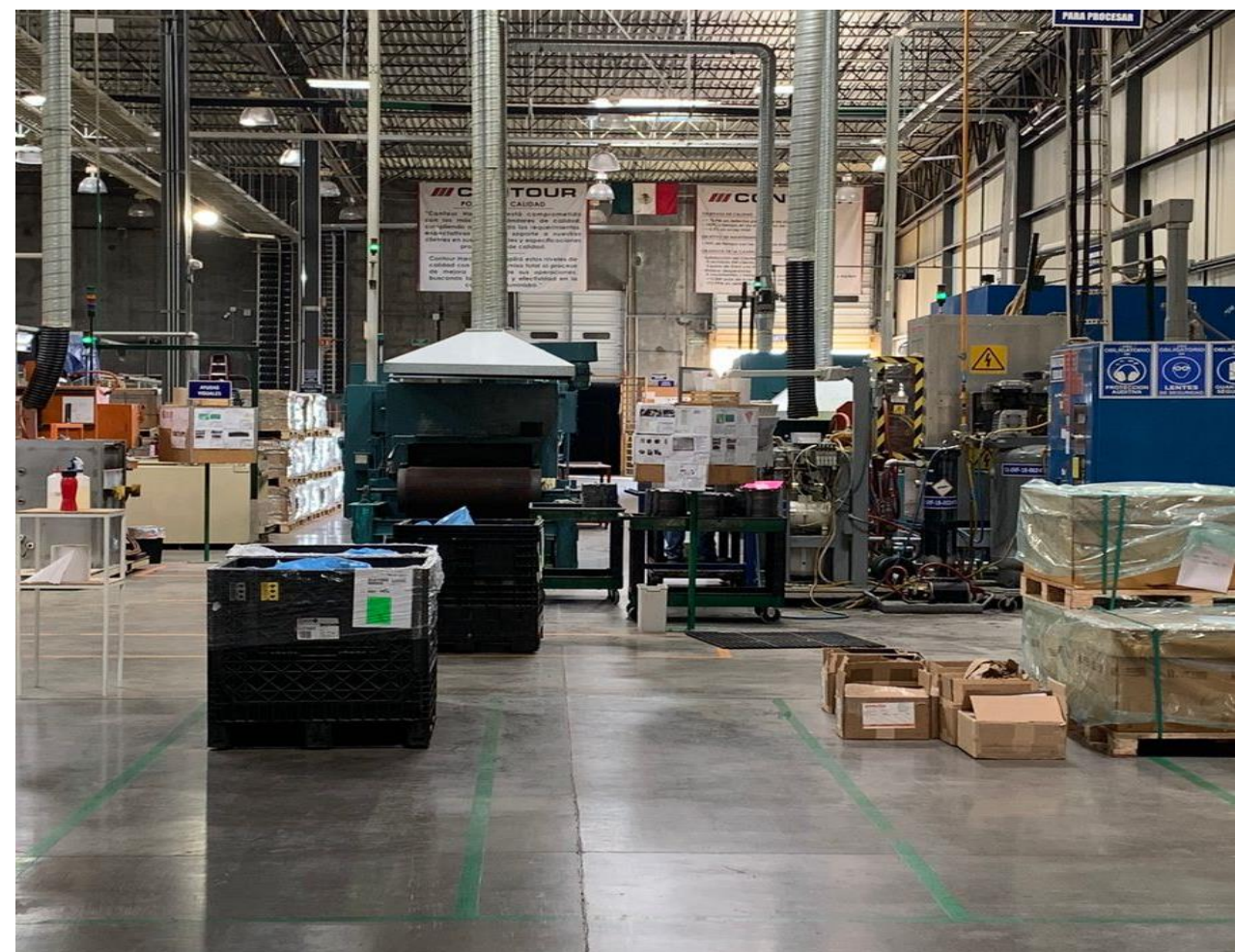
# CONTOUR

BOTH LOCATIONS



## MACHINES

- 15 INDUCTION MACHINES
- 4 FURNACES
- 7 WASHERS
- 4 SHOT BLASTER
- 1 NITROCARBURIZING FURNACE
- 2 WET LAB
- 2 DRY LAB
- 1 SEDIMENT LAB

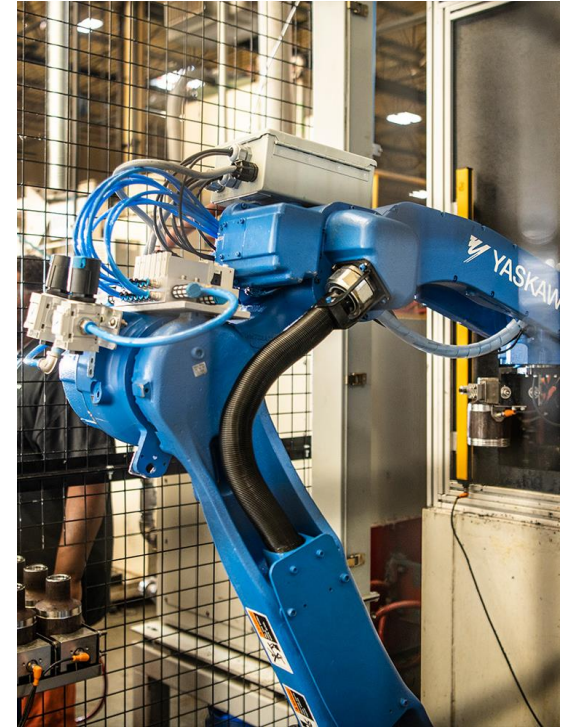




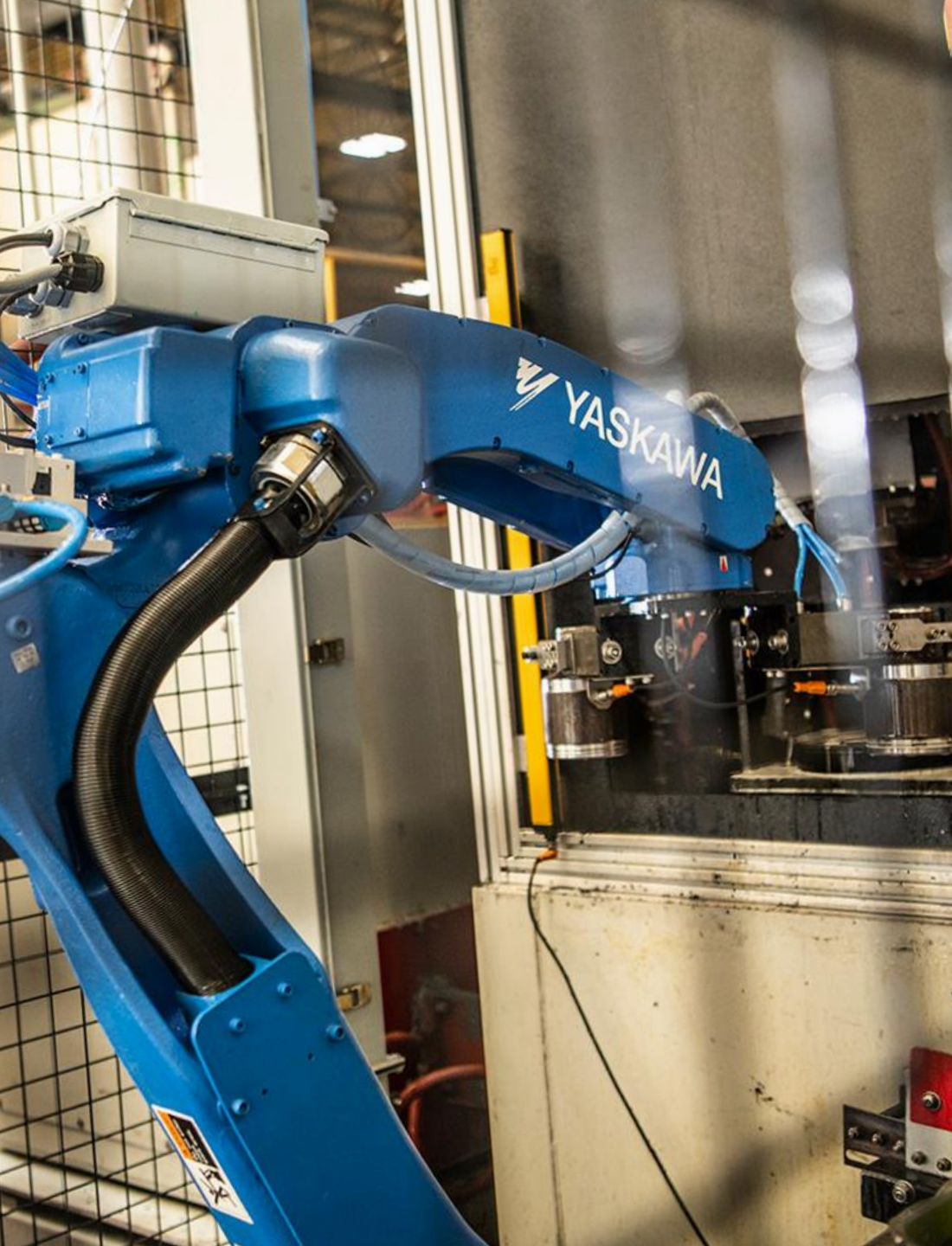
# GLOBAL LEADER

IN THE SCIENCE OF INDUCTION HARDENING

- Precise control of case depth and hardness on thin, complex, and high-speed components
- Improved strength, wear, fatigue characteristics
- Longer life, reduced part width / weight
- Unparalleled distortion control







# | **A FOCUS** ON AUTOMATION

- Our fully-automated heat treat lines eliminate variation
- Increase consistency, quality and repeatability throughout
- 100% Eddy current
- Dimensional check / gauging

**AUTOMATION DESIGN PRINCIPLES ARE THE  
FOUNDATION OF CONTOUR PROCESSING  
MACHINES**

# RESPONSIVE BUILD TIMES

OUR IN-HOUSE DESIGN & BUILD  
CAPABILITIES REDUCE LEAD TIMES  
AND INCREASE FIT

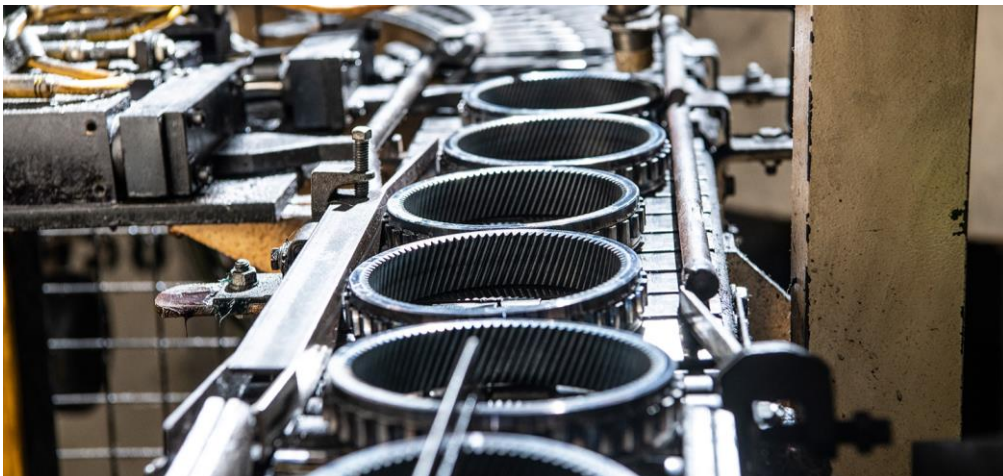
Contour's in-house mechanical and electrical engineering teams offer custom, from the ground up, real-time design and development solutions executed in the 3D SolidWorks environment.





## MULTI-SERVICE OPERATION

ENTIRE RANGE OF VALUE-ADDED SERVICES AVAILABLE FROM  
SINGLE OPERATION TO COMPLETED FINISHED PRODUCTS



## IN-HOUSE OFFERINGS

- Thermal Processing
- Rust Preventative
- Dimensional Inspection (Pre and Post Operation)
- Shot Peening
- Washing
- Inventory Management
- Magnetic Particle
- Inert Atmosphere Processing (N2) - Feintool
- Eddy Current
- Sediment Lab (MX)

# | CUSTOMER FOCUSED

## AWARD-WINNING SUPPLIER PERFORMANCE

- Scalable production capabilities from 10 to 10 million parts and beyond - Deliverable from our plants in United States and Mexico.
- Your problem-solving partner

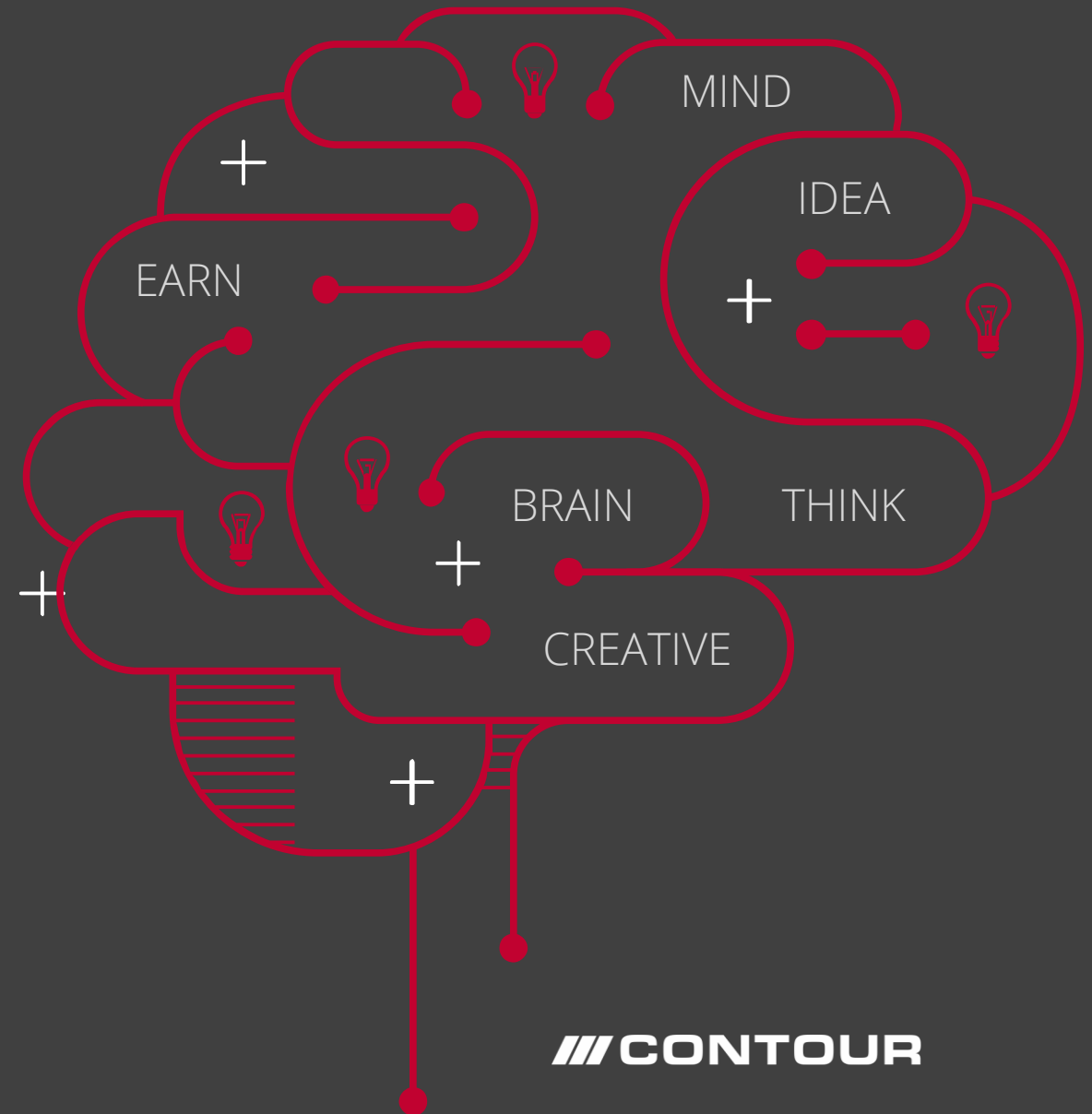




# HIGH ENGINEERING STANDARDS

Our engineering team is capable to develop the following aspects,

- Production recipes that can lead to the best metallurgical results to meet the Customer specifications.
- Tooling (coil, fixtures, etc...)
- Automation
- Coil specialist technician
- Process Improvements
- And more. . .



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# | CERTIFIED VENDOR

 **CONTOUR®**



**TIMKEN®**



 **BLACK &  
DECKER®**



**onvio**



 **FEINTOOL**



**NTN**



  
**BOEING®**  
*Forever New Frontiers*

**CROWN**



 **BorgWarner**



 **CATERPILLAR®**

  
**JOHN DEERE**



# THANK YOU

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