

# *Die Casting Consultants Group*

*Decades of die casting experience available for your company's strategic initiatives.*

- Die Casting Process Optimization (conventional, vacuum)
- Die Casting Defect Prevention
- Specialists in multiple Aluminum and Magnesium Casting Alloys
- Die Casting Problem-Solving
- Tooling Design / Build Optimization
- Product Quality Enhancement
- Design for Castability
- APQP activities

Die Casting Consultants Group is your support resource, helping you get the most out of your die casting process. We've "been there and done that," with years of experience in casting both Aluminum and Magnesium parts. Our experience may be that 2<sup>nd</sup> pair of eyes that you need from time to time.

If you are dealing with a difficult casting problem, we have probably already dealt with a similar situation. We have extensive experience with:

- Transmission components (stators, pump bodies)
- Pressure-tight castings (compressor Front & Rear Heads, Cylinders)
- Steering Wheel components (Al and Mg armatures).

If you are thinking of expanding your current facilities, building a new facility (greenfield), or purchasing an existing plant (brownfield), we've experienced the ins and outs of each of those situations. We can help eliminate potential mistakes and can help you fast track your expansion.

You'll find us responsive, knowledgeable and cost-effective. Contact us to discuss how we can help with your specific need.

## *Die Casting Consultants Group*

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# Die Casting Consultants Group

## Our Principals

**Joe Stone** – [jstone@mccgangroup.com](mailto:jstone@mccgangroup.com) – Cell: 270-748-1936

- 32 years with Gibbs Die Casting Corporation, including management responsibilities in Tooling, Melt Preparation, Casting, Estimating, Product and Process Design.
- Experience with die casting machine sizes from 400 to 1800-ton horizontal and vertical, utilizing both conventional and vacuum ladling / casting techniques.
- Multi-cavity tooling expertise, tooling design optimization/
- Extensive experience casting numerous Aluminum and Magnesium alloys, as well as R&D activities to develop specialty Aluminum and Magnesium alloys.
  - o Aluminum: 380, 413, 362, 356, 390, as well as other experimental alloys
  - o Magnesium: AM-50, AM-60, AZ91
  - o Specialty alloys: Almag, Gibbsalloy™
- Precision trimming methods
- Secondary operations, including shot blasting (zinc, iron, cut wire, aluminum oxide media), vibratory deburring operations utilizing various types and sizes of media.
- Experience with Plant Start-up operations and facilitation as Gibbs expanded into Texas, Korea, Brazil, Hungary and China.

**David McGan** – [dmcgan@mccgangroup.com](mailto:dmcgan@mccgangroup.com) – Cell: 270-823-2831

- 36 years with Gibbs Die Casting Corporation, including management responsibilities in Quality, Supplier Development and Lean Methods
- Led team for site selection and start-up in South Texas and Brazil.
- Expert in die casting-focused disciplines, including:
  - o Advanced Quality Planning / Built-In Quality methods
    - APQP, PPAP, FMEA, Control Plans
  - o Process Optimization
    - Uptime, Quality, Flow
  - o Process Problem Solving
    - Root Cause Analysis, 8D, A3
  - o Casting Defects Solutions
  - o Die Cast Alloy Metallurgy
  - o Development / Enhancement of Quality Management Systems
    - ISO-9001, TS16949
  - o Quick Die Change methods
  - o Minimizing Destructive Testing Scrap
  - o Die Casting Safety / Ergonomic Process Design
  - o Use of Real-Time X-ray to assist in process optimization
  - o Member of *North America Die Casting Association, American Society for Quality*

