

# The Future of Die Casting Engineering is changing

Innovation,  
Creativity,  
Technology Integration  
Research & Training  
Are Critical needs....



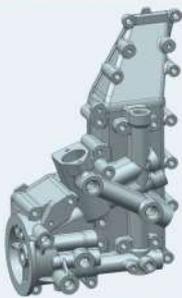
## TECHSENSE

*Simplified Engineering*

**Reliable Customized Solutions for  
Die Casting Design**

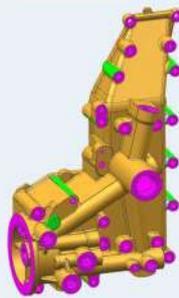
## Product design

Old Casting



Casting Weight: 4617 gm.

Modified Casting



Casting Weight: 3987 gm.

Actual Casting



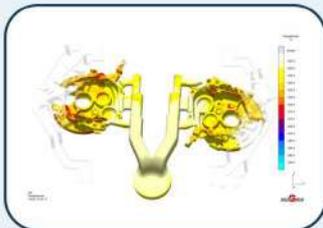
Saving of Rs. 185 / casting

## Die Casting Engineering

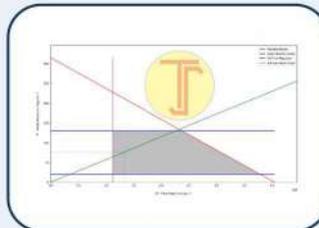
Casting Model



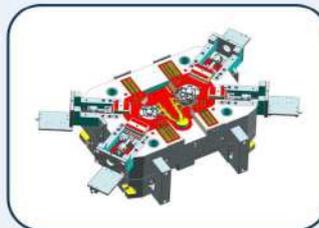
Simulation Analysis



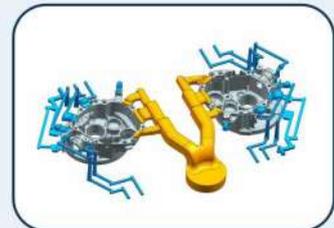
PQ<sup>2</sup>



Tool Design



Shot Model



Full shot



## Consulting

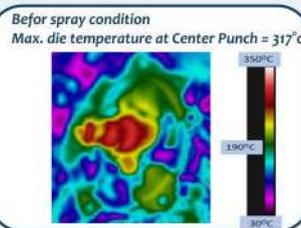
Die temp in simulation  
@ Punch ~420°C



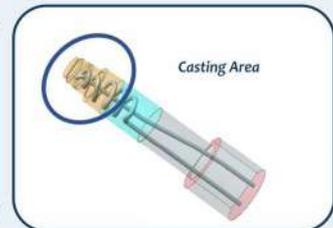
Max temperature at Centre Punch = 420°C



Die temp in production  
@ Punch ~317°C



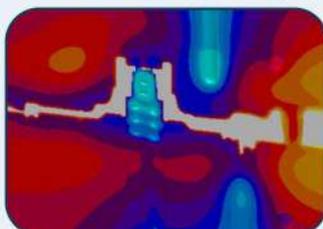
New Punch design with  
3D cooling Casting Area



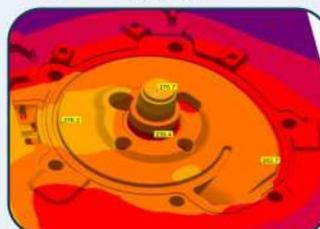
New Punch with 3D cooling



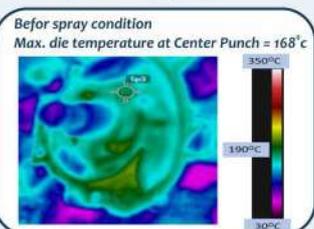
Simulation with 3D cooling



Die Temp in simulation with  
3D cooling @ 239°C



Die Temp in production with  
3D cooling @ 168°C



Rejection reduced from average 47% to below 5%

# Offerings For Die Casting Industry

## Feasibility - DFM

Machine Tonnage

Estimation  
& Costing

Die Cost Estimation

HPDC

Die Casting  
Process

GDC

LPDC

Product Design

Die Casting  
Engineering

PQ<sup>2</sup>

Gating  
Design

Simulation

Tool Design

Understanding Root  
Cause

Defects  
And Solutions

Elimination

Die Quality

Die  
Maintenance

Die Life Improvement

## Skill enhancement short term & long term courses

- 8 Hrs to 40 Hrs duration for Die Casting Professionals
- 24 hrs to 64 hrs duration for Casting Buyers and Product Designers
- 6 Months course in Product and Tool Design for fresh Engineers



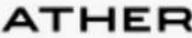
### FOUNDER PROFILE

- 35+ Years of experience in Aluminium Die Casting Design and Engineering
- Masters in Industrial Engineering with Tooling Design Specialization
- Received NADCA International Die Casting Competition Award in 2011.
- Rich professional experience with companies like Hero Motors, Godrej Tooling, Packsys Global, Sunbeam Auto & Endurance Technologies
- Extensive International experience in South East Asia, Europe, USA, Mexico & China



**Rajesh R Aggarwal**  
Founder - Techsense

## Services And Training Beneficiary Clients

OEM / Tier 1	Foundry	Tool Room	Member of Industry Associations
       	                     	             	    



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