



ADVANCED ENGINEERING SOLUTIONS FOR MOLDS

PASSION FOR TOOLING

AES MANUFACTURING LDA

Rua das Rosas, Nº108, Pedra de Baixo
2430-400 Marinha Grande - PORTUGAL

AES MOLDES, LDA

Travessa de Oeiras Lt67 nº47 Vergieiras
2430-523 Marinha Grande - PORTUGAL

AES MOLDS, Inc.

1950 W. Corporate Way
Anaheim - CA 92801 - USA

ABOUT US

- TOOL ENGINEERING COMPANY
- PRODUCTION AND MANAGEMENT OF TOOLING PROJECTS FOR TECHNICAL PRODUCTS

KEY FEATURES

- FOCUS ON
 - Engineering
 - Tool Validation
 - Injection Process
- Exceptional tool engineering staff
- Best practices in Project Management

FACTS AND FIGURES

AES Moldes was founded in 2001

Project Management operations in

- Portugal and USA

Manufacturing Operations in

- Portugal and USA

AES Figures in 2018:

- AES Group: 7,8 M€
- Molds supplied: 94 molds



OUR SERVICES



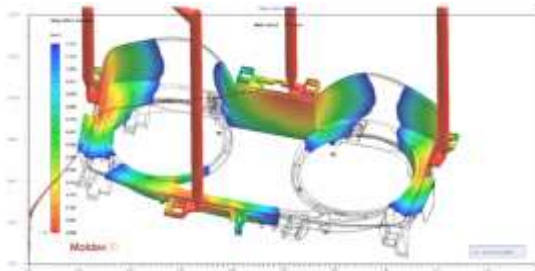
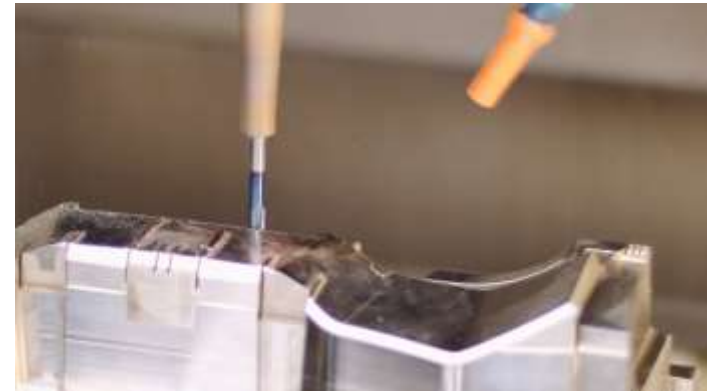
**GLOBAL PROJECT
MANAGEMENT**



**PRODUCT DEVELOPMENT
SUPPORT**



**MOLD
ENGINEERING**



**MOLD
MANUFACTURING**



**MOLD
VALIDATION**

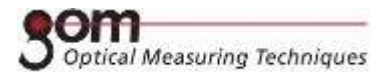


**PRE-SERIES
PRODUCTION**

AES MOLDES LDA



Some of our partners in technology :



www.aesmolds.com

AES MFG, LDA



Some of our partners in technology :



CAD / CAM / CAE Equipment

Sector	Type	Description
Engineering	Software	Creo 4.0
		Cimatron v.14
		MoldFlow Adviser
		Moldex 3D
		Ansys Mechanical 18.1
		Transmagic R12
		Spinfire Professional 8.3
		Como (Kistler)
		e-Dart (RJG)
		Zeiss (novo software)
Schmale		
Milling and Electrodes	Software	Cimatron and WorkNc for CAM
Metrology	Software	Zeiss Calypso 2018
		Atos Professional v.7.5 (GOM)



AES MFG, LDA

Production Equipment

Sector

CNC MILLING

CNC DOOSAN NX6500

CNC MAKINO PS95

CNC MAKINO S33

CNC Mikron HSM 400U

CNC SUNMILL JHV-710

CNC Horizontal MATSUURA HPLUS-630

CNC ACRA AHSM 1000L

SINK AND WIRE EROSION

SINK EROSION SODICK AQ 55L

SINK EROSION SODICK AQL 35L

WIRE EROSION SODICK AQ 535L

WIRE EROSION SODICK AQ 327L

EDM Micro drilling DZNC S-26 (0,3-3,0 mm)

GRINDER

GRINDER OKAMOTO LINEAR 350B

GRINDER OKAMOTO GRIND X

FLAT GRINDER ACRA ASG-2045

FLAT GRINDER FSG-618M

FLAT GRINDER ACRA

SPOTTING PRESS

Spottingpress REIS TUS 1150 K-100

MEASURING EQUIPMENT

ZOLLER SMILE 400 MEASURING MACHINE

ZEISS CMM MACHINE (RDS + VISCAN + CALYPSO + HOLOS)

3D OPTICAL MEASURING MACHINE GOM

Laser engraving HBS SUNO20CR



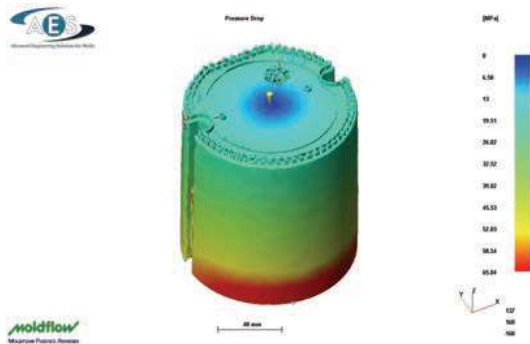
OUR TECHNOLOGY

Rheology Analysis



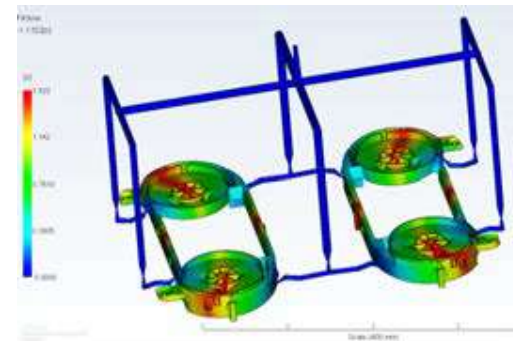
Autodesk Simulation Moldflow Advisor Ultimate 2014

- Mold Advisor
- Performance Advisor
- Cooling Circuit Advisor



Moldex Professional (BLM Technology)

- Fill Packing
- Cooling
- Warp
- Multiple Component Molding (MCM) Fiber orientation



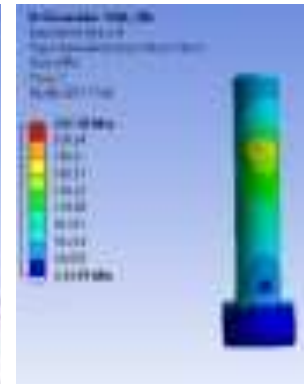
OUR TECHNOLOGY

FEA Ansys Mechanical analysis



Ansys Mechanical Pro 18.1

ANSYS Mechanical Pro is a finite element analysis (FEA) solution that provides robust general purpose stress and fatigue simulations to solve complex structural engineering problems and make better and faster design decisions. This technology allows us to study and predict stress and efforts our molds are subjected to during their production life.



OUR TECHNOLOGY

Metrology lab



CMM MACHINE:

Measuring Machine: X=700, Y=1000, Z=580

RDS – Indexing Probe Holder with articulation of 2,5° in any position

VISCAN - Vision system integrated that will mount to the RDS head

Measuring accuracy – NDI/VDE
2617 – R2 = 10 Microns m

Capability to perform full dimensional reports:
CPK and ISIR.

Gauge production and validation



3D Optical Measuring Machine from GOM

GOM Inspect automatically converts point cloud data into high quality 3D mesh data and offers extensive post processing functionalities

Used on every FOT parts it allows to understand general part size and to perform a geometry check for a quicker FOT part evaluation.

OUR TECHNOLOGY Scientific Process

Injection Processing Monitor System from



and

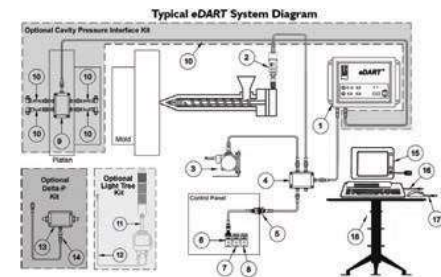


Our goal is to have our molds “production ready” before they are sent to our customers. The combination of our know how in design engineering, tool manufacturing, injection processing along with technologies such as KISTLER’s COMO and RJG’s *eDART™* System will ensure that we can accomplish our objectives

With these systems we can better develop an injection process by using scientific moulding techniques.

Once the injection process is developed, we “lock it in” and control it thereafter by using the “process curve” that is monitored by each system.

This “process curve” will assure that the injection process is duplicated at our customer’s injection machines once the molds are transferred.



MOLD TECHNOLOGIES

- TWO SHOT MOLDS
- IMD – In-Mould Decoration
- STACK MOLDS
- MOLDS FOR SPECIAL RESINS
- MOLDS FOR MULTIPLE PART VERSIONS
- INSERT MOLDS
- AUTOMATIC UNSCREWING MOLDS
- 3 PLATE MOLDS



MARKET SECTORS



AUTOMOTIVE

Instrument Clusters, Fuel Tanks,
Glove Boxes, IP Bezels, Beltline parts,
Armrest, Central Consoles,
Motor Area Parts and others



CONSUMER

Water Filters, Air Filters
and others



PACKAGING

Packaging Caps and Closures
Printer Toner Packaging and others



ELECTRONIC

Cellphones, Automotive Sensor
Parts and others



HEALTH CARE

Diagnostic Equipment
Apnea Treatment and others



INDUSTRIAL

Pipings and Fittings
and others

PORTFOLIO



INSTRUMENT CLUSTERS



PORTFOLIO



IP Bezels



PORTFOLIO



Automotive interior – Center Consoles Parts



PORTFOLIO



Glove Box Compartment



PORTFOLIO



Automotive Interior - Seating



PORTFOLIO



Automotive Interior - Seating



PORTFOLIO



Steering column parts



PORTFOLIO



Automotive interior –Handles / Trims / Pillars / Beltlines



PORTFOLIO

Fuel Systems



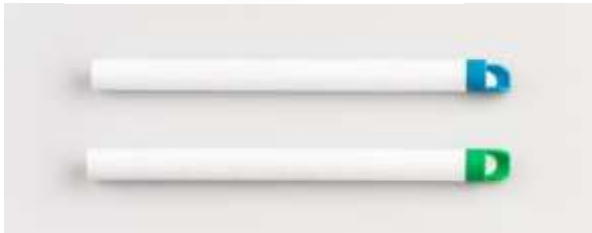
PORTFOLIO

Fluid Systems



PORTFOLIO

2-K Parts



PORTFOLIO

Overmolded insert parts



PORTFOLIO



Gear Housings



QUALITY AND MEMBERSHIP

AES is:

- Member of the Portuguese Tooling Association – CEFAMOL and
- Member of the Portuguese Tooling Technology Center – CENTIMFE
- AES DUNS NR. 33-709-8482
- ISO 9001:2015 certified by TÜV RHEINLAND



We are moving soon



- 2 New Buildings
AES Moldes Lda
AES Manufacturing
- Engineering offices and mold trials + tool production
- Conclusion planned for August 2019



Browse our new location - <https://goo.gl/maps/auerZVyBJUs>

WHY AES?

- EXTENSIVE TECHNICAL KNOW-HOW
- LOCAL TECHNICAL PRESENCE (Europe, America and Asia)
- MULTIPLE TOOL LAUNCH CAPACITY AND CAPABILITIES
- CULTURE OF QUALITY, PROFESSIONALISM AND TRANSPARENCY
- A PARTNER FOR MANY YEARS





We gladly answer any questions you may have.

Visit our website

www.aesmolds.com

and take a look in our short video presentation

https://www.youtube.com/watch?v=iDTQhq6_A8k

Thank you ...!

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