

### DESIGN, PROTOTYPING AND PRODUCTION OF INDUSTRIAL MOLDS MANUFACTURING OF INDUSTRIAL TRAYS





### THE KEYS TO OUR SUCCESS

#### **OUR EXPERIENCE**

More than 250 prototypes created More than 1,600 series launched More than 500,000 plates and molds manufactured

### THE DIVERSITY OF OUR MATERIALS

- R Résist +
- Aluminized sheet
  Blue sheet
  Tinplade
- Steel
- Stainless steel
- Aluminium

### OUR WORKSHOP



### 10,000 square meters More than 50 employees

Significant number of machines including a YASKAWA/ARO robotic welding cell

### OUR PROXIMITY AND FLEXIBILITY



### OUR DETAILED EXPERIENCE

Specializing in the design and manufacture of molds, trays and plates for industrial baking.

Tailored solutions for your profession, your needs, your production constraints, and your products such as :

- Sliced bread, toast bread, whole grain bread, gluten-free bread, hamburger buns, hot dog buns, baguettes...

- Croissants, madeleines, brioche bread, and all types of pastries.

Folded or deep drawn molds, proven raw materials, mold protection belt, optimized ventilation, reduced weight: your partner Guery accompanies you!

With all projects studied, designed, and carried out, Guery takes into account all your parameters such as all elements that may be damaged due to the automation of the line.







### **OUR DETAILED EXPERIENCE**

We pay attention to the quality of the material (aluminized steel, sheet with applied coating, etc) as well as to the quality of the welding. We recommend to avoid to us sharp or metallic objects that could degrade the quality of the material or coating.

All the materials we use are recyclable.

We also work in collaboration with leading coating partners and can help you to define the best demolding solution.

#### Our goals :

A design and easy implementation that will extend the life of the molds or trays and thus ensure you a better return on investment.





## OUR ACTIVITY

#### **OUR GUERY PROCESS : FROM DESIGN TO DELIVERY**



#### QUOTING

Preparation of a detailed quote within a quick turnaround time. Tranparency on tooling, prototype, and series costs.



#### DESIGN AND CAD

Researching technical solutions in accordance with the customer's specifications. Production of comprehensive drawings considering budgetary aspects and quality.



Commitment to prototype production within a reduced timeframe following quote approval. Cost savings on tooling with inserted molds.





#### SERIES PRODUCTION

Launch of series production, within our 10,000 square meter workshop equipped with laser cutting and a robotic cell for welding.

DELIVERY





Packaging and shipment of products directly to your company or to a coating facility for further processing if necessary.







#### SIMULATION AND FEASIBILITY OF MANUFACTURING THE STAMPED PLATE (DEEP DRAWN)

#### MANUFACTURING SIMULATION

Detail of the different stages for the plate manufacturing: 1- Stamping, 2- Cutting, 3- Edge trimming,

4- Calibration





**MOLD SIMULATION** Research to obtain the desired number of cavities



THE MANUFACTURING TOOLS Design of tools for the manufacturing of the stamped plate



#### FORMING SIMULATION

Simulation and verification of the formability of the plate



#### DESCRIPTION OF OUR DIFFERENT MATERIALS

RESIST+	Sheet Aluminized including an anti-adherent allowing for the saving of a coating - Good thermal conductivity (36 W/m.K) High elongation rate (34%) - Friction resistance - Good corrosion resistance, easily cleanable - Product durability may decrease if used <250 °C and washed in a dishwasher
ALUMINIZED STEEL	Resistance to corrosion and ability to work in very thin thickness - Excellent conductor of heat and electricity (Thermal conductivity: 36 W/m.K) - Good formability - Low density - High elongation rate (up to 34%) - Excellent heat resistance - Anti-adherent coating required
BLEU STEEL	Special high-temperature cooking sheet - Thin thickness - Excellent hardness homogeneity - Without coating and polluting particles - Superior quality, virtually indestructible - Energy saving thanks to rapid heat absorption (thermal conductivity: 40 W/m.K) - Maintenance: seasoning of the mold necessary before first use, dishwasher not recommended, drying after washing recommended
TINPLATE	Good hardness - Guaranteed high corrosion resistance - Easy maintenance - Resistance to high temperatures High yield strength (up to 340 MPa) - Strong resistance to impacts and cutting utensils
STEEL	High formability and durability (Yield strength: 170-340 MPa) - Good thermal conductivity Easy to manufacture and use - Optional anti-adherent coating
STAINLESS STEEL	Optimal material for food standards - Easy maintenance - Unalterable - Good corrosion resistance (protective layer of chromium oxide) - High shock resistance - High heat resistance (t < 600 °C) - Magnetic or non-magnetic depending on the type of stainless steel chosen - Thermal conductivity 10 to 30 W/m.K
ALUMINIUM	Non-magnetic - High corrosion resistance - Good weldability - Excellent thermal conductivity (204 W/m.K) - Good cold forming ability

COMPARISON OF MATERIALS USED

	ANTI CORROSION	COOKING	AMAGNETISM	FORMING	THERMAL CONDUCTIVITY	COATING	PRICE
RESIST +	•	•	٠	•	•	•	•
ALUMINIZED STEEL	•	•		•	•	•	•
BLUED SHEET	•	•	•	•	•	•	•
TINPLATE	•	•	•	•	•		•
STEEL		•		•	•	•	•
STAINLESS STEEL	•		•	•		•	
ALUMINIUM	•	•	•	•	•	•	•

## OUR BEST-SELLER ALUMINIZED SHEET "ALUSI"

«Alusi» is a steel traited on both sides with a protection composed of aluminum (90%) and silicium (10%)

It has high resistance to oxydation as well as to temperatures up to 450°C without major degradation.

Its characteristics allow to combine it perfectly with an anti-adherent coating





Steel resistant to corrosion and chemical attacks







7 route de Chemillé - La Tourlandry 49120 Chemillé-en-Anjou - FRANCE

(2) +33 (0)2 41 64 41 03

contact@guery.com