

Over 45 years experience  
in identifying & supplying  
highly effective technical  
solutions for your applications



**ALUMINIUM**  
consumables area



# temperature control

## melting & holding continuous dip

high quality stainless steel thermocouple assemblies, straight or square, ready to use, designed to adapt optimally and safely to field application; the assemblies include quick-opening connection heads, internal thermocouples DIN610 ceramic insulators or MgO mineral insulation, stainless steel sleeves and adapters for fitting the protective sheaths available in the following materials:

- KCSN240, the state-of-art of "fully-sintered" ceramic materials, with exceptional lifetime and suitable for the most critical applications
- KCSN, the reference standard: high mechanical resistance at high temperature, thermal shock and chemical aggression
- HPSN, the new standard, high mechanical resistance at high temperature, thermal shocks and chemical aggression; excellent value for money
- BetaSN, available in 3 diameters, to meet many and specific application needs in harsh environment
- CERT, silicon carbide with steel core reinforcement, the even improved version of the most common material in foundries for the excellent price-quality ratio
- NiCARB, silicon carbo-nitride, for more aggressive alloys, constitutes the evolution of silicon carbide with the properties of silicon nitride
- SiSiC, alternative to silicon carbide, where a better thermal response is required at a particularly interesting cost
- AISI310, AISI316, AISI446 and Inconel 600, for zamack and magnesium molten baths





## temperature control

### melting & holding discontinuous dip

### instruments

- MARSHALL K type thermocouples with protected element, the most effective, long-lasting and convenient solution for measuring the temperature of the aluminum bath, available in different lengths, can be supplied complete with steel lance, handle, cable and class 1 connector
- MGO mineral insulated thermocouples complete with handle, coiled cable and connector, the quickest way to get the molten bath temperature
- LHM-401: reliable, precise and economic digital pyrometer
- LHM-402: portable digital pyrometer with backlit display and automatic shutdown
- LHD-301: 1-channel portable data logger pyrometer with data processing software
- LHD-304: 4-channel portable data logger pyrometer with data processing software
- LHD-502: 2-channel multi-probe data logger pyrometer with advanced storage features
- LHC-302: 2-channel portable calibrating pyrometer, for thermocouples K, J, T and E
- LHC-400: portable digital calibrator
- LHR-500 and LHR-900: infrared pyrometers
- Panel temperature gauges and controllers
- WI-PROBE, wireless systems for temperature monitoring and control, working under protected frequency with dedicated software, which can also be installed on equipment while operating







## temperature control

### **solid surfaces and coatings**

- LHT: contact thermocouples with armored tip
- type J or K thermocouples for moulds, shells and profiles, both in standard configuration and custom made according to users request
- thermocouples type J, K, N, for refractory linings sintering and checking the internal temperature of the material, standard or according to user requirements

### **atmosphere, fumes and treatment furnaces**

- MARSHALL T type K thermocouples with protected element and connection head
- Pt100:3 or 6 wire resistance thermometers
- standard thermocouple assembly with thermocouples type J, K, N, S, R and B, with ceramic, metallic or metalceramic sheath and various connection solutions
- custom-made assemblies designed and assembled with thermocouples K, N, S, R and B, with ceramic, metallic or ceramic / metallic sheath and various connectivity

### **miscellaneous**

- Support in the technical definition of applications
- Certification service at ACCREDIA centers
- Aftersales service
- Extension cables and compensated cables
- Thermocouple elements and accessories
- Thermocouple bars for billet heat treatment equipment



# handling, transferring and degassing

## liquid metal transport and casting

- steel ladles of all types and capacities (up to 90 t), with manual or motorized tilting, standard or based on customer's specifications and, if required, complete with refractory lining suitable for the handled alloy
- preheating stations for ladles
- heated and unheated receivers

## refractory materials

- refractory and preformed refractory materials for ladle coating
- refractory materials for melting furnaces and holding furnaces
- monolithic transfer ladles with and without siphon
- vibrating systems for ramming linings
- refractory lining installation for ladles

## degassing and treatment

- KCSN lances for fluxing and degassing
- standard or customized graphite lances for fluxing and degassing
- standard and customized graphite lances for fluxing and degassing
- porous plugs for melting furnaces, holding furnaces and ladles for improved homogenization of alloy and temperature
- porous graphite heads for mounting on our ceramic and cast iron lances





## special applications

### low pressure machines

- KCSN 240 and HPSN stalk tubes
- Nicarb, and HPSN radiant tubes
- HPSN and KCSN 240 ceramic bushings
- standard and custom-made thermocouples
- HPSN and KCSN 240 vertical and horizontal heating tubes

### precision casting dosing furnaces

- filling cones in innovative refractory materials, with protective painting
- porous plugs and gas diffusers
- standard and customized thermocouples and thermocouple assemblies
- HPSN or KCSN240 dosing tubes
- Nicarb radiant tubes

### heating

- HPSN and KCSN 240 radiant tubes

### aluminizing

- standard and customized hooks in KCSN240 and HPSN ceramic materials

