MoSi₂ COMPOSITES
FOR HIGH-TEMPERATURE
APPLICATIONS

Production of structural parts by pressureless sintering

Advantages
- Production of MoSi₂-X-composites (X = SiC, TiB₂, ZrO₂, ...)
- Improvement of strength (σₚₑ) and fracture toughness (Kₑ)
- Lower sintering temperatures due to powders with high sintering activity
- Application temperatures up to 1700 °C in oxidative and corrosive atmospheres

Applications
- Heating elements (bar, pipe, susceptor)
- Components for heat exchangers in corrosive environments
- Heat shields
- Reaction vessels
- Protective covering of thermocouples
- Crucibles, hot gas filtration
- Radiant plate
- High-temperature isolation components
- Parts for high-temperature mechanical testing

Products
- Prototypical parts:
  - Dimensions:
    - Diameter: 5 - 165 mm
    - Length: up to 250 mm
  - Powder:
    - Sinter-active powders for silicide alloys

Services
- Component development and production
- Starting powders for further PM processes (pressing, sintering, MIM, ...)
- Alloy development (e.g. with respect to dispersion hardening and gradient structures)