

STONE WOOL CONSULTANCY SERVICES

Introduction / About Us

Engineering the Future of Industrial Production

Led by M. Bora Aydın, ERNERA Engineering brings over 20 years of hands-on technical expertise in mineral wool production and production line installation. We support your stone wool investments from initial feasibility to final handover, mitigating risks while maximizing operational efficiency and regulatory compliance.

Core Competencies

1. Process Engineering & Technology Selection

- **Melting Technologies Guidance:** Comprehensive comparative analysis of cupola vs. electrical furnaces to select the ideal technology for your plant.
- **Fiberization Equipment:** Optimization and fine-tuning of high-performance fiberization systems.
- **Capacity Optimization:** Strategic planning to maximize production line throughput and eliminate operational bottlenecks.

2. Formulation, Chemical Technology & Compliance Optimization

- **Advanced Formula Optimization:** Enhancing overall production efficiency and increasing final product output per hour (tons/hour).
- **EUCEB Alignment:** Ensuring full compliance with EUCEB (European Certification Board for Mineral Wool Products) requirements.
- **Environmental & Emission Control:** Developing formulation-based solutions specifically targeting SOx and NOx emission reduction.
- **Cost Optimization:** Driving systematic cost reduction through raw material efficiency and process stability improvements.

3. Binder Technology & REACH Compliance

- **Binder Formulation:** Optimization of binder recipes for both in-house resin production and purchased ready-to-use resins.
- **REACH Compliance:** Ensuring full alignment with the upcoming strict REACH regulations effective August 2026.
- **Quality & Stability:** Driving continuous product quality improvement, consistency, and long-term formulation stability.

4. Production Optimization & Efficiency Improvement

- **Holistic Optimization:** Implementing a comprehensive approach to reduce total waste ratio to a target of $\leq 1\%$ and minimize wet waste generation.
- **Energy Savings:** Optimizing coal and natural gas consumption ratios to significantly lower energy costs.

5. Project & Contract Management

- **Proactive Investment Strategy:** Anticipating and resolving potential future issues through early-stage intervention during line setup.
- **Specifications & Procurement:** Preparing technical specifications and conducting comprehensive evaluations of international supplier offers.
- **Strategic Vendor Selection:** Leading contract negotiations and executing strategic vendor selection to secure project alignment.

6. Execution, Commissioning & Handover

- **Manufacturing Inspection:** Step-by-step quality and technical inspection of equipment during the fabrication phase.
- **On-Site Supervision:** Direct on-site intervention and technical supervision during line installation.
- **Commissioning & Acceptance:** Coordinating cold and hot commissioning phases, managing performance-guarantee testing, and leading final acceptance management.

Best regards,

M. Bora Aydın

Founder & Senior Consultant, ERNERA Engineering