

## Job Charter – Refractory Engineer (rev. 3)

**JOB TITLE:** Refractory Engineer  
**SGL:** TBD  
**DEPARTMENT:** Mechanical Integrity & Reliability  
**DIVISION:** Project Services  
**LOCATION:** Houston, TX or Ponca City, OK

### **BASIC PURPOSE/ACCOUNTABILITIES:**

Provide consultation to operating facilities and project design teams pertaining to refractory lining systems for the purpose of continually upgrading lining system performance and to continuously improve the safe, reliable operation of plant equipment within reasonable costs. Focus for support will be world-wide Refining, Specialty Businesses, JV's, and Downstream Capital Projects, with support provided as requested by other areas of the company.

### **PRIMARY FUNCTIONS/RESPONSIBILITIES:**

- Provide technical support related to refractory lining during maintenance activities and system applications in a proactive fashion to reduce possible future problems.
- Implement refractory best practices for operating facilities so that continuous improvement can be accomplished corporate-wide in design, operation, and maintenance of equipment. Ensure that best practices are documented in COP knowledge management systems, and that related company engineering standards are kept current.
- Provide technical leadership to solve problems related to refractory lining failure & develop recommendations to reduce or eliminate future failures.
- Work closely with plant maintenance, inspection, reliability, operations, & process personnel to:
  - Consult on refractory problems & recommend appropriate mitigation and repair actions.
  - Recommend material upgrades or changes.
  - Evaluate process operating parameters which impact refractory.
  - Provide field technical oversight to critical refractory installations, including liaison with vendor personnel.
  - Develop & maintain a refractory lined equipment history.
- Provide refractory technical support during the project FEL process regarding new and/or revamp projects. Follow through with fabrication and construction support, including shop fabrication Q&A, as appropriate.
- Keep abreast of new developments in the area of refractory systems and materials of construction in order to address problems using the latest technology available.
- Participate in the activities of applicable refining industry technical societies and other organizations in order to leverage industry knowledge and experience.
- Participate on COP internal technical networks as appropriate.

**CRITICAL SKILLS:**

- Bachelors or advanced degree in Ceramic Engineering, or other related field
  - New college graduates will be considered, however, experience in refractory systems and materials of construction are a plus
  - Experience in coatings and insulation systems are a plus
- Strong networking/team building and interpersonal skills
- Strong customer/business focus
- Strong focus on delivering results
- High level of personal motivation and initiative
- Solid communication skills - oral and written
- Legally authorized to work in the United States on a regular full-time basis without restrictions

**LEADERSHIP SKILLS**

- Ability to positively influence others
- Innovation and risk orientation
- Ability to balance short and long-term priorities
- Self-starting/managing