

KLINGER Turn-Key Mechanical Maintenance



Your partner in optimizing your performance.

























Since 2006 KLINGER has consistently provided top quality maintenance support services to South Africa's petrochemical, power generation, mining, pulp & paper and sugar industries. We bring you the cornerstones of a safe, successful and leak free start up and commissioning.

WHY KLINGER?

Because safety is our top priority and Integrity Management has always been part of our **DNA**.

OUR SHUTDOWN MANAGEMENT TURN-KEY SOLUTIONS INCLUDES:

- » Mechanical Maintenance
- » Joint Integrity Management
- » On-Site Valve Reconditioning
- » Hydraulic Bolt Tightening
- » Valve Repacking
- » On-Site Flange Face Machining
- » On-Site Gasket Manufacturing and Inventory Control







WHAT DO WE BRING TO A SHUTDOWN THAT IS DIFFERENT?

KLINGER's Turnaround Management offering is not just a single mechanical maintenance service offering, but it is the culmination of every thing we do. Our comprehensive, all inclusive, approach is essential to ensure a safe start up of an operational asset or facility.

Standard market shutdown offering

Turnaround Management + Mechanical Maintenance Incorporating

KLINGER Field Services Turnaround Management Mechanical Maintenance Incorporating **Shutdown Offering** Mechanical Joint Integrity On-Site Valve Services **Inventory Services** Pre and Post Shutdown Valve On-Site Shutdown Gasket Controlled Bolt Tightening **VOC Leak Surveys Inventory Management** Trevitest On-Line **On-Site Gasket Reconditioning** Joint Integrity Quality Control and Manufacturing Valve Testing On-Site Flange Face Valve Machining Reconditioning "If we are going to do it, Valve **Bolt Load and Torque** we'll do it right." Determination Repacking



OUR 5-PHASE MANAGEMENT SYSTEM OFFERS:

- » Focused attention to detail and coordination
- » Industry skills and experience
- » Effective estimations and cost control
- » Efficient safe executions, in the time-frame and budgets

START-UP AND HANDOVER PLANNING AND PREPARATION PRE-SHUT PREPARATION » Plan for plan » Start-up support » Cost proposal & development » Sub-contractor implementation » Post shutdown review » Basic logistics » Schedule freeze/review - Productivity » Readiness review - Safety » Equipment mobilization - Schedule performance » Labour mobilization - Cost control » Close out report » Demobilization **DETAILED PLANNING**

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- » Site establishment
- » Detailed scope ID
- » Strategy development:
 - HSE QA/QC HR/IR
 - Sub-contracting Project controls
- » Execution plan development
- » Bolt load and torque determination

TURNAROUND EXECUTION

- » Daily reporting
- » Management of processes and execution



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