



30 June 2016

CR&OU: 26/2016

**SAUDI ARABIAN ENGINEERING
CO. LTD. (SAECO)
WORKSHOP TECHNICAL RE-
EVALUATION**

MR. MAHMOUD HENDAWI,
GENERAL MANAGER
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A visit was conducted on June 20, 2016 by Saudi Aramco/MSSD's technical team to re-evaluate SAECO's workshop capability. The team highlighted the following findings:

Repair capability

The followings are confirmed repair capabilities:

- Perform overhaul, repair and test for valves and calibrate actuators.
- Perform small/large machining and fabrication.
- Perform overhaul & calibration of pressure gauges, flow meters and instrument.
- Existing approved repairs for gas turbine parts/components.

Limitation

- Not qualified to repair/overhaul rotating equipment since mobilization is not completed.
- Not qualified to perform balancing for rotating parts since mobilization is not completed.
- Not qualified to perform HVOF coating.

Recommendation

The followings are the recommendations to SAECO Co. workshop readiness:

- HVOF facility requires a specific procedure for lifting shafts and parts to the coating booth.
- Fire extinguishers need to be distributed to cover all shop areas.
- Shop environment needs to be considered since there is no A/C and roll-up doors are open for ventilation which may affect the personnel, calibration and machines quality.

- Upon completing mobilization the facility will be re-evaluated to assess their capability to perform balancing for rotating parts and repair/overhaul rotating equipment such pumps, compressors, gearboxes and engines.
- MSSD/CROU should follow up with SAECO on the above mentioned recommendations.

This approval is limited to conducting the business of services with MSSD and adherence to MSSD procedures, Saudi Aramco standards and specifications and QA inspections for the services SAECO provides. This information should not be construed as a commitment by Saudi Aramco MSSD to guarantee any level of services for SAECO. However, it does provide SAECO with the opportunity to bid for these services on a competitive basis.

Please note this letter is not to be circulated or used as a basis for conducting business with third parties (other than Saudi Aramco).

Should you have any further questions regarding subject matter, please don't hesitate to contact Ahmed Alsager on 872-7390.



GHANEM K. AL-RUMAIHI, Supervisor
Contractor Repair Operations Unit

Cc: DSD Supt.
P&TSD Supt.
SMEU Supv.
CROU Letter Book



23 January 2017

CR&OU: 02/2017

**SAUDI ARABIAN ENGINEERING
CO. LTD. (SAECO)
WORKSHOP TECHNICAL RE-
EVALUATION**

MR. MAHMOUD HENDAWI,
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Email: mhendawi@rezavat.com.sa

A visit was conducted on January 5th 2017 by Saudi Aramco/MSSD's technical team to re-evaluate SAECO's workshop capability. The team highlighted the following findings:

Repair capability

Previously qualified for large/small machining and valve overhaul/testing. The followings are confirmed repair capabilities during the latest re-evaluation visit:

- Qualified to overhaul and repair pumps and end suction pumps
- Qualified to assemble liquid mixers including plenty, lighten and jensen mixers
- Qualified to overhaul and repair engine driven air compressors, maximum dynamometer test capacity is 600 hp at 1000 rpm.
- Qualified to overhaul and repair a/c and refrigeration compressors
- Qualified to overhaul and repair mechanical tools, lifting tackles and hydraulic hoses
- Qualified to grinding crankshaft and rebabbit bearings (puddling method & static casting method)
- Qualified to perform Low speed balance
- Qualified to overhaul and repair John Deere engines and associated accessories.
- Qualified to repair equipment with probe track
- Qualified to preform HVOF with 7 axis robot controls both HVOF and plasma spray applications

Limitation

- Not capable for steam turbine repair
- Limited size and weight of rotors for HVOF coating (3 tons max weight capacity; 4m x 1m opening at the top for vertical entry to booth)
- Limited size and weight of rotors for low speed balance (4 tons max weight capacity; 4m length)
- Limited to 50 tons max weight capacity for heavy rotating equipment handling

- No expertise/tools to demagnetize rotors in-house; would have to hire contractor
- Not qualified to repair large or complex rotating equipment such as injection pumps or multi-stage steam turbines
- Not qualified to repair Woodward governor
- Not qualified to repair Carrier and Trane A/C compressors.

Recommendation

- Increase the access for the HVOF booth to accept larger rotors
- Increase the maximum weight capacity and maximum length capability for balancing larger rotors
- Whilst Saudization percentage is acceptable, MSSD would like to see a greater proportion of technical craftsmen on the workshop floor and not only in management positions
- Ensure Shop environment is equipped with satisfactory Air Conditioning to provide healthy environment for personnel operating and working in the facility and minimize fatigue due to heat
- Re-evaluate after approximately 1 year to check if HVOF and balance machines facility has increased capability for larger rotors

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