Visit to the SAUDI FRENCH COMPANY (SAFC) Riyadh

On June 6th students from TTC's *Electrical Machines 4* made a factory tour to the SAUDI FRENCH COMPANY (SAFC) in Riyadh. SAFC is the leading company in motor maintenance and repair in the region. Quality Control Manager Mr. Hosam Al-Deen Nada gave us a warm welcome and accompanied us during the entire tour of almost 2 hours to the following 5 stations:

1. **Rewinding Workshop**
2. **Disassembly Section**
3. **Balancing Section**
4. **Testing Area**
5. **High-power Section**

Station 1: Rewinding Workshop

Our trainees recognized a lot of tools, technical drawings and machines they also use at the TTC and were deeply interested in the variety of motors and winding types which the skilled workers were working on.

Station 2: Disassembly Section

Clients' defective motors are tested to determine and allocate the defects.

Here the worker determines the electrical values (type of winding, number of turns, cross-section area of the wire) of a broken motor.

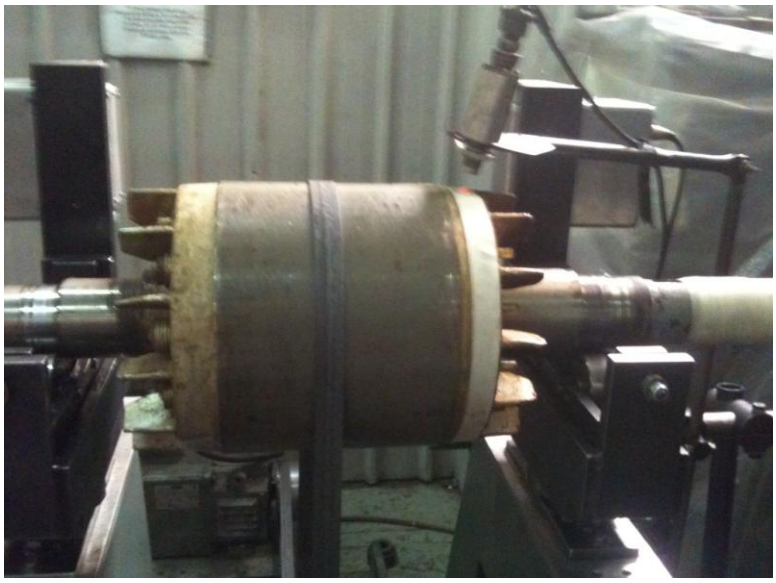
Station 3: Balancing Section

The aim of rotor balancing is to achieve satisfactory running when installed on site. No more than an acceptable magnitude of vibration is caused by the unbalance remaining in the rotor.

The trainees also gained insight into condition monitoring. The goal of this technique is to trend and analyze the equipment operating data in sufficient time to minimize failures and prevent unplanned downtime.

Station 4: Testing Area

SAFC offers electrical testing, troubleshooting and engineering services on all types of electrical apparatus such as motors, drives, transformers, power system relays.



The following testing methods are being applied:

- IMCA Induction Motor Current Analyser
- Insulation Resistance
- Partial Discharge Analyzer
- Tan Delta Tests
- TVA Probe Tests
- Underwater Testing
- HV Testing AC/DC
- No Load Testing

Station 5: High-power Section

Here mainly the refurbishment, repair and rewinding of Diesel/Turbine Generators is being provided.

The service includes:

- The removal of the rotor end bells and steel wedges from the rotor body, utilizing a temperature controlled electrical and mechanical process.
- Windings can be cleaned to remove carbon and other contaminants, and damaged insulations and blocking supports can be repaired or replaced.
- Total windings can be removed and replaced with annealed insulated copper conductors. Insulated with purpose designed Class H or C system of high mechanical strength designed to withstand the centrifugal forces of over 3000RPM on the windings.

Our 90 minutes-tour ended with a group photo and a great insight in the capability and the high standard of SAFC. We would like to thank all staff members of Saudi French Company for giving time and information.

by Stephan Plichta

If you would like to find more information about SAFC click on: http://www.saudifrench.com.sa/index.html.