

SCHAEFFLER MIDDLE EAST FZE



FAST FACTS

LEED Certification: Gold, New Construction (NC) V2.2
Square Feet: 34,523.41sq ft / Office & Warehouse
Neighborhood: Jebel Ali Free Zone, Dubai, UAE
Construction Cost: \$110.60 / square foot
Completed: January 2010
Date of Certification: September 4, 2010

BENEFITS

- 30.5% Savings on Energy Use
- 31.3% Savings on Potable Water Use
- 34.63% Materials Use with Recycled Content

PROJECT BACKGROUND

A new resolution on the implementation of green building specifications and standards in the emirates of Dubai has been issued by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE and ruler of Dubai. As per the new resolution, effective on January 2008, all owners of residential and commercial buildings and properties in the emirates of Dubai must comply with the internationally recognized environment friendly specifications to turn Dubai into a healthy city that meets the demands of best practices and benchmarks of pollution-free sustainable development.

Implementing this resolution, Dubai becomes the first city in the Middle East to adopt green building specifications and requirements. The resolution falls in line with Sheikh Mohammed's keen interest in dealing with the current environmental challenges.

In response to this resolution, we are proud to inform that "SCHAEFFLER MIDDLE EAST FZE" has been awarded with **Prestigious LEED Gold Certification** established by the U.S. Green Building Council and verified by the Green Building Certification Institute (GBCI). It is the fourth project in the UAE to achieve the LEED NC 2.2 Gold Certification.





PROJECT PROFILE

SCHAEFFLER MIDDLE EAST, JAFZA, Dubai, UAE

THE NEW BUILDING

Schaeffler Middle East FZE is a subsidiary of Schaeffler Group in Jebel Ali Free Zone, Dubai, UAE. The total built-up area of 34,523.41 sq ft office and warehouse facility split with one quarter as office to be used for white-collar plant staff as well as technical staff.

The Schaeffler Group is a leading partner in the automotive and commercial vehicle original-equipment and replacement markets in the Middle East.

The new office and warehouse construction is designed in accordance with the managements' vision and principles to work towards environmental sustainability.

INDOOR ENVIRONMENTAL QUALITY

Superior environmental quality was achieved by Schaeffler ME through many design features and in compliance with the minimum requirements of ASHRAE Std 62.1-2004, Ventilation for Acceptable IAQ. The building has strategically placed carbon dioxide monitors, and the ventilation system automatically increases fresh air intake if CO2 concentrations exceed specified level. Increased breathing zone, outdoor air ventilation rates to all occupied spaces by 30% is above the minimum required by ASHRAE Stds 62.1-2004. Temperature and humidity controllability are available for all shared occupant spaces, meeting ASHRAE 55-2004 accepted comfort standards. The facility uses building finish materials with low emission of volatile organic compounds (VOC) for adhesives, sealants, paints and coatings. Schaeffler also provides direct line of sight views for 96.48% of all regularly occupied areas.

ENERGY EFFICIENCY AND RENEWABLE ENERGY

Schaeffler ME FZE achieved an energy cost savings of 30.50% using the ASHRAE 90.1-2004 Appendix G methodology.

Energy efficiency measures includes:

- High efficiency HVAC equipment with VAV units
- Improved thermal envelope
- High efficiency glazing
- Reduced lighting power density
- Occupancy sensors
- Utilization of the renewable resources like Solar Hot Water system and Solar PV panels for external lighting

About 3.39% of the project's energy cost is being offset by renewable energy generated on-site – namely the Solar Hot Water System and Solar External Lighting.

OTHER GREEN FEATURES INCLUDE

The building has a designated recycling storage and collection areas. A construction waste management plan was developed and implemented that resulted in the recycling or reuse of 61.18% of construction waste. About 20.85% of the building materials, by cost, were manufactured locally and 34.63% have been manufactured using recycled materials. 100% of the on-site parking stalls are located under cover and 100% of non-roof impervious surfaces have been constructed with high-albedo materials, which meets exemplary performance requirement. It also provides vehicle access to support car and vanpooling as well as providing preferred parking for low-emitting and fuel efficient vehicle. Exemplary performance for maximize open space, which exceeds local zoning requirements by 50%, was met by planting with either native or adaptive plants and trees.

LESSONS LEARNED

- Project team submitted 42 credits and achieved 42 credits. It was a 100% of acceptance.
- Teamwork and dedication certainly paved the way for it to achieve the certification.
- Early decision and implementation of the LEED process is required for the success of a sustainable project.
- Proper documentation and delegation of work is needed.

THE TEAM

Owner: Schaeffler Group

Design Consultant: Orion Engineering Consultants

Contractor: Fujairah National Construction

Green Building Consultant: Middle East Centre for Sustainable Development (MECSD), Dubai, UAE

LEED AP: Mr. Ashraf Khan & Ms. Melanie Bacho

Commissioning Authority: Pacific Control Systems

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