



## MIDDLE EAST SPECIAL

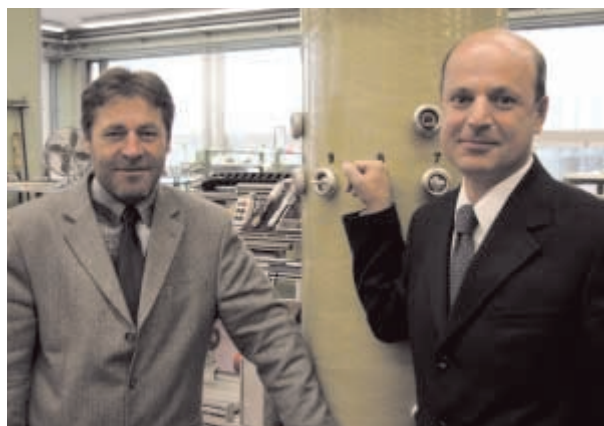
**Dear Readers,  
Dear Customers,**

For the first time, this issue of INSIGHT offers an introduction to an entire economic region. Our big Middle East Special uses real-life examples to illustrate how we utilize our products and services to contribute to the reliable energy supply in Gulf region countries. And naturally there is also news about the rest of the world. We would like to express our particular thanks to all partners who supported us during preparation of this issue.



## Our Middle East Sales Team :

*„Since our service begins in earnest after the sale, I like to be on site when questions arise concerning service or special needs of our customers. I have been working in the Middle East region since*



Eng. Werner Fleischmann

Eng. Mehdi Djamali

*1989 and especially enjoy the many personal contacts and long-term business relationships throughout the entire region."*

Contact: [w.fleischmann@reinhausen.com](mailto:w.fleischmann@reinhausen.com), Fax: +49 941 4090-700

*„As a bi-national (German/Persian), it is easier for me to build bridges between the Orient and the Occident. I see myself as an intermediary between my customers and MR. Only when I understand their*

*requirements and desires I am able to offer them a customized solution. A real relationship of trust often develops from this - the basis of fruitful cooperation."*

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# Messko : Fresh Air for Old Transformers

BAHRAIN



MEW, the Ministry of Electricity & Water in Bahrain has started a project to upgrade its old transformers from ONAN to ONAF. Messko was chosen to deliver several Oil Temperature Indicators and Winding Temperature Indicators for the first stage. Due to the remarkable flexibility, these pointer thermometers can be easily applied to the different types of transformers MEW has in operation. Now they are controlling reliably the new fans from Krenz, which replace the mobile fans used during the summer months. The first substation chosen was Manama town, with Mr Babu (Hajar Trading) and Mr Lodig (Messko) supervising the installation. After the successfully concluded test period, the remaining 100 to 150 transformers will be upgraded in succession. ●

For further information please contact: [a.lodig@messko.de](mailto:a.lodig@messko.de), [www.messko.de](http://www.messko.de)

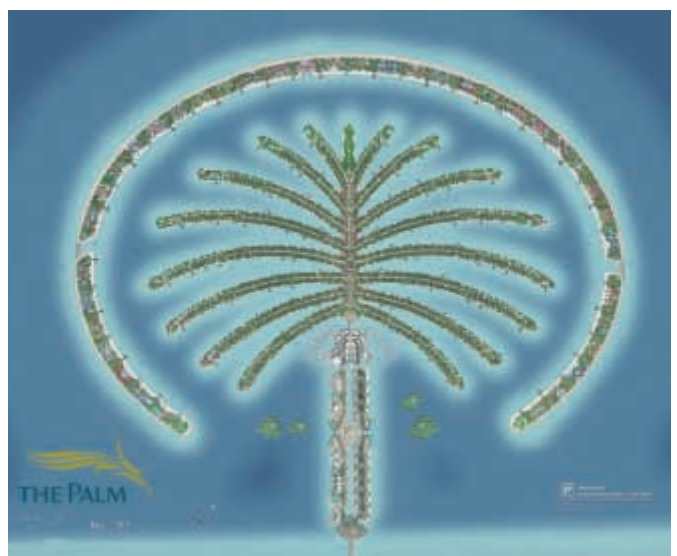
## Providing the 8th wonder of the world with electricity

DUBAI

The Palm Islands, also referred to as The Palm Dubai and The Palms, are the world's two largest man-made islands, which are being built on the coast of the emirate of Dubai, in the United Arab Emirates. MR-OLTCs built into power transformers from Areva have been delivered in four substations (Hilali, Lulu, Yebri and Fardh) for a reliable and smooth electricity supply. The two Dubai islands, The Palm Jumeirah and The Palm Jebel Ali, will be built in the shape of date palm trees and consist of a trunk; a crown with 17 fronds; and a surrounding crescent island - the back of which forms the breakwater.

The Jumeirah Palm is primarily a retreat and residential area for living, relaxation, and leisure. It will contain themed boutique hotels, three types of villas (Signature Villas, Garden Homes, and Town Homes), and shoreline apartments. Construction began on this island in June 2001 and is expected to be completed by late 2005, early 2006. ●

[www.thepalm.ae](http://www.thepalm.ae)



## VACUTAP® Recommended by Moshanir Consultant Engineers



Moshanir, the leading Iranian consultant engineers in the region, who designed and commissioned the Iran Power Development Company (IPDC) 400 and 230 kV substation projects, are now considering application of VACUTAP® in coming projects due to the advantages of longer inspection intervals (in fact maintenance free for most network applications) and of lower operating costs.

The photo shows from left to right: Mr. Asadi, transformer project manager; Mr. Ghahremani, HV equipment manager; Mr. Moallemi, deputy managing director for network project; Mr. Ahmadipour, head of system study and transformer group; and Mr. Madjidi, project manager for 18 substations. ●

[www.moshanir.com](http://www.moshanir.com)

## Vacuum OLTCs for Iran-Transfo



The photo shows one of the power transformers under H.V. test at the Zanjan plant.

The sales figures of MR's VACUTAP® OLTCs are increasing steadily at the Iran-Transfo Zanjan plant, the leading transformer manufacturer in the Middle East region. Since being introduced to this major customer, MR's vacuum OLTCs purchased by Iran-Transfo will reach more than 150 VACUTAP® VV (out of 1200 delivered worldwide) by the end of 2004. These OLTCs are in use at the Tehran Regional Electric Company (63-KV star point) as well as in the 132-KV delta network in the Khuzestan region near the Persian Gulf. ●

[www.Iran-Transfo.com](http://www.Iran-Transfo.com)

## Well-Trained is Well-Prepared : TAPCON® Seminars in Iran



Continuous effort and marketing for TAPCON® 230/240 and TAPGUARD™ take place in Iran. MR's agent Sense Co. in Iran offers half-day seminars for end users followed by hands-on training with TAPCON® 230/240 demo units. The photo shows such a seminar held at the Azarbaydjan Regional Electrical Co. north-west of Iran. The number of TAPCON® in operation is now reaching about 160 units by the end of 2004. ●

[www.sense-eng.com](http://www.sense-eng.com)

# Indestructible : MR and Messko Products

BAHRAIN

Almost 30 years of heat, dust and cold nocturnal temperatures: Even these extreme conditions could not affect MR OLTCs, motor-drive units and Messko indicator devices at the Muharraq North Substation (built in 1975) in Bahrain. They are still running as reliably as on the first day. A primary reason why time and again the local power supplier MEW falls back on the quality products from Regensburg and Oberursel. ●



## VACUTAP® VR in Abu Dhabi

UNITED ARAB EMIRATES



The Abu Dhabi Gas Liquefaction Company ADGAS is betting on the latest in OLTC technology. It decided to purchase two VACUTAP® VRC 700 Y. Up to 150,000 operations, they are maintenance-free.

The maintenance interval for VACUTAP® VR is based on the number of operations only. Since network transformers rarely reach 150,000 tap-change operations during their lifetime, this means that network transformers with VACUTAP® VR require no OLTC maintenance. This fact is a big advantage to all MR customers. The VACUTAP® VR is a true alternative to the proven OILTAP® M. ●

For further information: [www.vacutap.com](http://www.vacutap.com), [www.adgas.com](http://www.adgas.com)

## Pakistan Utilities Prefer VACUTAP®

PAKISTAN



For the 132-kV national grid of Pakistan the two utilities WAPDA and KESC are going to use proven MR VACUTAP® OLTC technology. Reduction of transformer size and lower maintenance costs are not the only advantages. In the future there will be also fewer logistic procedures in preparation for maintenance. The introduction of VACUTAP® technology began with a two-day seminar in Lahore in cooperation with IEEEP (The Institution of Electrical and Electronics Pakistan) in Lahore. Participants came from WAPDA, KESC, Heavy Electrical Complex, Siemens Karachi, NESPAK (consultants) and other governmental and private customers. ●

[www.kesc.com.pk](http://www.kesc.com.pk), [www.pakwapda.com](http://www.pakwapda.com)

## Training for Young Kuwait Engineers

### KUWAIT

A two-week course on on-load tap-changer functions was attended by six young Kuwait engineers from MOE (Ministry of Energy) at the MR Training Center in Regensburg. During the informative course, MR specialists explained the operation of on-load tap-changers, voltage regulators and motor-drive units. Furthermore, they introduced and discussed matters related to the operation and maintenance of tap-changers. It was emphasized during the informative course that MR has introduced a number of significant

innovations during the past few years including the production of VACUTAP® tap-changers which require no maintenance up to 150,000 operations. The informative course was an excellent opportunity for the MOE Kuwait engineers to learn about the latest tap-changer technology and to increase their technical know-how. In addition to being provided with extensive basic information, the guests also visited PQM Power Quality Management® in Erfurt and the production plant of HIGHVOLT in Dresden. The extracurricular program also included sightseeing and a soccer match against MR sales engineers. ●



## Customer Portrait : HADEED (Saudi Iron & Steel Co.)

### SAUDI ARABIA



Saudi Basic Industries Corporation (SABIC) is the foremost non-oil company in the Middle East. It was established in 1976 as a leading global manufacturer and marketer of hydrocarbon and metal products. The Metals Group is a major part of SABIC's diversified manufacturing portfolio in Saudi Arabia. Today, its wholly owned HADEED (Saudi Iron & Steel Co.) affiliate is the leading steel maker in the Gulf region. Since 1983, HADEED has produced long steel products for the Kingdom's construction industry. Its output now includes flat, hot and cold rolled steel for expanding Saudi and regional engineering and manufacturing industries.

Since the very beginning, MR has been a partner of HADEED. In the meantime more than 20 OILTAP® M on-load tap-changers are in operation - reliably and without problems - under the most difficult conditions (furnace operation) in one of the largest steel plants in the world. ●

[www.hadeed.com.sa](http://www.hadeed.com.sa)

# Customer Portrait : Kahramaa

QATAR

Qatar General Electricity and Water Corporation (Kahramaa) moved ahead successfully, ably handling all the new developments and applying the latest technologies to electricity and water services. The distribution network and electrical load stations have been brought up to date. A long network of overhead lines and underground cables has been established. In this connection, the 66/11 kV West Bay station was inaugurated. It is the first transformer station to be completely designed and built without the help of consultants. It is equipped with the latest digital and remote control instruments for emergencies, and a control and inspection system which utilizes the latest technologies to resolve congestions and connect New Doha stations to supply uninterrupted electricity in the West Bay area until 2010 when extensive construction and development are planned.



Essa Hilal Al-Kuwari, Director of Electricity Networks, said that during the summer the electricity consumption in Qatar increased three-fold, but the distribution network would not be affected. He said that this summer the maximum demand for electricity was expected to reach 2,530 mega watts. By comparison, the demand in April totaled 1,800 mega watts. It gradually increased to 2,200 mega watts in May. Then 2,400 mega watts in July and finally 2,500 mega watts in August. He said that Kahramaa was working together with power stations to program their networks to ensure a steady supply of electricity. He said that Kahramaa is committed to smooth distribution of electricity throughout the year, but that special arrangements have to be made for the summer. ●

[www.kahramaa.com](http://www.kahramaa.com)

## "It pays to rely on MR quality"

*"For several years now, our OLTC maintenance has been performed in close cooperation with MR. Just recently a contract for 125 OLTCs expired and we are now considering an extension. The service and advice of MR specialists have convinced us. We operate a total of approximately 200 OLTCs from MR. They run reliably even under extreme conditions. That's what counts. And it pays off."*

Ali Jassim Al-Najjar, Manager, Electrical Transmission Dept.  
Electricity Networks Affairs, Qatar General Electricity & Water Corporation

# Interconnecting Africa, Middle East and Europe

EGYPT

[www.egelec.com](http://www.egelec.com)  
[www.gecol.ly](http://www.gecol.ly)  
[www.steg.com.tn](http://www.steg.com.tn)



MR products also play an important role in the consolidation of the power grids of Africa, the Middle East and Europe. In Egypt the New Suez substation was built as the junction point for the electrical connection with the neighboring countries. It has been in operation since 1994. The 167-kV transformer banks with four OILTAP® T-OLTCs are operating to the full satisfaction of the users. Two other energy providers - GECOL (Libya) and STEG (Tunisia) - also purchased MR OLTCs for their interconnection projects. MR voltage regulators handle the automatic regulation of the transformers.

Being a North African, Middle Eastern and Mediterranean country, Egypt is anticipated to play a vital role in enhancing cooperation in the field of electrical interconnection. The development of the electricity exchange which will contribute to the optimization of the use of the electricity regional power pool is now becoming

possible with the construction and operation of the following interconnection projects.

- The interconnection between Egypt and Jordan has now been in operation since October 1998.
- The link from Jordan to Syria has been operational since March 2001.
- The link from Syria to Lebanon and Turkey is expected to be commissioned by the end of this year.
- The interconnection between Egypt and Libya was completed in 1998.
- The link between Tunisia, Algeria and Morocco and Spain is already in operation.
- The link between Libya and Tunisia is also completed and expected to be in operation by the end of this year. ●

## Oman : First-Class Spare Part Service

During a sales meeting, Sales Manager Werner Fleischmann (center) used the time to visit the Al Falaj Substation (near Muscat in Oman) to check the position transmitter of a Trafo Union motor-drive unit. For 15 years MR has been providing maintenance and spare parts for MR license products and OLTCs made by Siemens, TU and AEG. MR grants a 2-year warranty on all original MR Spare Parts as well as on all service and maintenance works performed by their specialists. So the brand-name quality pays off in the long run. ●

For further information:  
[service@reinhausen.com](mailto:service@reinhausen.com)



OMAN

## First Offshore Transformer with VACUTAP® VRC



A consortium formed between KBR (the engineering, construction and services subsidiary of Halliburton) and Vestas Celtic Wind Technology Limited has been awarded an EPC contract by Barrow Offshore Wind Ltd (BOW) to build and operate the proposed Barrow Offshore Wind Farm, located 7 km offshore from Walney Island, Cumbria, UK. BOW is owned by the Danish Energy Company, DONG, and UK-based Centrica plc.

The contract will comprise the design, fabrication, installation, and commissioning of 30 Vestas V90-3.0MW wind turbines and their offshore foundations. The turbines will be connected to an offshore transformer platform where a VACUTAP® VRC III 700 Y will provide stable voltage. From there a transmission cable will take the power to shore at 132 kV and be connected to the national grid at Heysham.

Barrow Offshore Wind Farm will supply enough green electricity for approximately 80,000 homes. Construction is scheduled to commence in the spring of 2005 and completion is due in late 2005. ●

For further information: [www.vacutap.com](http://www.vacutap.com)

## New and only from MR: Voltage Regulator with IEC 61850

Many engineering companies such as Siemens, ABB, Areva or VA Tech already offer solutions in accordance with the IEC 61850 standard. IEC 61850 is the new standard protocol for seamless communication within substations.

However, compatible components such as suitable voltage regulators are lacking. With its TAPCON® 260, MR offers the first device which meets this standard. Pilot projects already exist in which MR has been active in the engineering. In Germany, RWE Rheinbraun AG used six TAPCON® voltage regulators with integrated IEC 61850 protocol when it built a new 110/25/6 kV transformer station. The regulators are linked to the control system conceived by SAG EL which is due to be commissioning at the beginning of 2005.

In Italy, ENEL subsidiary TERNA is studying this subject as it can be applied to the high-voltage network. During the first phase of the SICAS pilot project, MR supplied three TAPCON® voltage regulators within the station automation STCE of the company Selta SpA. ●

For further information: [www.iec61850.de](http://www.iec61850.de)



# CEPSI 2004 : Success in Shanghai

From October 18 to 22, 2004, MR presented its complete program of on-load tap-changers and accessories at the CEPSI in Shanghai. Its trade fair presentation in China was a full success.

The Chinese organizers were also very satisfied with the visit. A total of about 3000 specialists from China and neighboring countries attended the many lectures to gather information on the

latest trends in the area of energy provision. At MR the focus was naturally on the new VACUTAP® VRC/VRE 700. The introduction of the TAPCON® 260 - the first voltage regulator worldwide to meet the international IEC 61850 standard - met with wide interest. Also very popular: the Messko program including attractive products such as MPreC® Pressure Relief Device and MTrab® Maintenance-free Dehydrating Breather. ●



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