



## Dear Readers,

here is the new issue of INSIGHT, the quarterly online newsletter of Maschinenfabrik Reinhausen (MR). It contains interesting news about innovations, reference projects, user reports, events and much more. In this issue we would like to show you a few ways to obtain more information concerning our products and services even easier and faster. No matter whether you prefer online communication or rather read the printed word - the choice is up to you. We are looking forward to hearing from you.

P.S. If you are not an INSIGHT subscriber yet, you can sign in right now at: <http://www.reinhausen.com/mr/en/news/>

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### ON.LOAD. MR's customer magazine



All around the world: We are right where our customers need us. Providing problem solutions, engineering services or our technical service. ON.LOAD, our worldwide customer magazine, gives you more information on new standards of on-load tap-changer technology, motor drives or automatic voltage regulators. And we tell you about the well-tested products of our specialists at Power Quality Management (PQM) or from our subsidiaries Messko and HIGHVOLT.

ON.LOAD is published once a year. Order your personal copy today at: [c.schulz@reinhausen.com](mailto:c.schulz@reinhausen.com)



### Sharing our knowledge with you

Our vacuum switching technology is only one example of the creativity of our engineers and designers. We would like to share this ongoing progress with you - the experts, working for utilities, transformer manufacturers or industrial companies.

That's why we have launched MRcademy, our worldwide clients' academy. There you will get the latest information on new technologies and trends around the transformer. There is no sales show but practical examples and solutions for professional users. We successfully visited The United Arab Emirates, Thailand, Spain, the Netherlands, Belgium and Germany, United States, China, Vietnam, Malaysia and many more countries.

Our website [www.mrcademy.com](http://www.mrcademy.com) has all the news on upcoming MRcademy events worldwide. So if you are interested, check back from time to time.



### TRANSFORM

Every three years it is time for our flagship event - the TRANSFORM. We have created this as an international communications platform covering all facets of the transformer. This year it will be held in Doha/Qatar from March 18 to 19, 2007 ([www.transform2007.com](http://www.transform2007.com)).

High-ranking specialist from utilities, transformer manufacturers, consultant and industrial companies are the target group of this big event. Together with Messko and HIGHVOLT as well as other premium manufacturers such as Asta, HSP, Pfisterer, Röchling Engineering Plastics, we cordially invite you to attend lectures, workshops and an exhibition. Of course we will keep you posted in INSIGHT and on our website about where the next TRANSFORM will be held in 2010.

# MR in China at two Locations

## Opening Ceremonies in Shanghai and Suzhou



The morning of January 26, 2007 marked the official dedication of the commercial partnership MR China Ltd. in Shanghai, celebrated by leading representatives of MR together with more than 100 high-ranking guests from power provider, industry, commerce and trade, and the media sectors. In the afternoon followed the ground-breaking ceremony for the new manufacturing plant Jiangsu MR Manufacturing Co. Ltd in Suzhou. After already over 25 years of successful commitment in China MR pays tribute to the tremendous importance of the Chinese market by founding two new locations.

Things could not have been more festive. In the amply decorated conference hall of Shanghai's Xijiao State Guest Hotel, MR Managing Director Michael Rohde and General Manager of MR in China Hubert Häring greeted the guests to the opening of MR China Ltd. Laudations followed honoring Qian Hongjin, owner of Jiangsu Huapeng - one of the largest makers of transformers in China, Zhu Yinghao (Chinese Academy of Engineering, Shenyang Transformer Institute) and Fu Xinian (Wuhan High Voltage Research Institute). The button was symbolically pressed to mark the start of the 100% MR subsidiary accompanied by confetti and classical German music. The participants were then taken 80 km by bus to the industrial zone Suzhou where they visited the construction site of the 27,000-square-meter Jiangsu MR Manufacturing Co. Ltd. Following their speeches, Michael Rohde, Hubert Häring, Bruce Tian - new Plant Manager, Project Manager Gerald Güntner, and Raj Narayan Sah as well as Qian Hongjin,

Zhu Yinghao and Fu Xinian raised the spade to mark the official start of construction.

MR China Ltd. had already moved into its new Shanghai offices during August of last year. The staff which has meanwhile grown to just under 50 employees is already successfully promoting MR interests in China. MR China is responsible for the sale and after-sales service of the products of the MR Group in China. The new factory in Suzhou will be ready for use by mid 2007. The production of M on-load tap-changers and ED motor drives will already begin this year. By 2010 approximately 220 employees will be working in Suzhou. ●

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# Brand New from Reinhausen. TAPCON® 250

A New Generation of AVR Digital Controllers for U.S. Utilities



**TAPCON®:** A name that is synonymous for an entirely new and groundbreaking series of voltage regulators uniquely designed by Maschinenfabrik Reinhausen (MR). The voltage regulators of the TAPCON® series are suitable for all applications. The most favorable characteristic is the ease of operation coupled with the high degree of reliability typical of all MR products.

The all new TAPCON®250 is a state-of-the-art electronic design backed by nearly 35 years of Reinhausen expertise in voltage regulation. It is the result of years of collaboration with

many North American based utilities as to what is important in automatically controlling on-load tap-changers.

TAPCON®250 provides the operator a wealth of information by scrolling with a simple push of a button. The display shows more vital information continuously than all other controllers combined. The multiple LED indicators arranged about the display offers the operator conditions of the power system.

The menu structure is very straightforwardly divided by function into sub-groups of menus such as "Parameters", "Configuration" and "Info" among others. The depth of the menu structure is minimized to offer more horizontal or left/right movement within the specific sub-group.

## TAPCON® 250. Now you really have a Choice

Most important: The physical design of the TAPCON®250 provides the North American utilities a valuable alternative choice in their upgrade programs of older obsolete controllers. It can be adapted via adapter plates or enclosures to connect directly to the old terminal points and mounting

holes that the utilities want and expect.

The TC 250 can operated in most if not all past control schemes as well as provide the new advantages of the Reinhausen technology and reliability in controlling load tap-changers. These advantages will offer considerable cost savings and substantial benefits in the installation and operation of today's control schemes.

Features and capabilities of the TAPCON®250 are too many to completely list yet several do rise to the top when it comes



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→ to meeting and exceeding today's control schemes for on-load tap-changers for the North American utilities. The wide range of benefits include simplifying a variety of schemes, reducing the number of components required in these circuits and offering more features needed by the users.

### Tailormade Features for North American Utilities

- Four (4) adjustable voltage levels are available to regulate during either voltage reduction or increase events as needed for the power system. This is selectable simply by a DC signal to the TAPCON®.
- Regulation settings such as bandwidth, under-voltage, over-voltage, etc., can be set in either a percentage or an absolute value.
- tap-changer position can be an input of either a potentiometer from the motor drive or a generated milliamp current signal *directly into* the TAPCON®250 controller. An answer to many utilities needs today is now available in the TC250 - a selectable milliamp current signal output (0-1mA, 0-20mA or 4-20mA) of tap-changer position for the utility's use with the substation conditions.
- Substantial cost savings are available as the TAPCON®250 is applied especially in new installations regarding components, integration, assembly and field retrofit applications.
- An extended warranty is available.
- Windows based PC parameter software is provided with every controller to set parameters via download or manually directly at the display of the controller
- The TAPCON®250 can be powered by an alternative external 12VDC power supply for continuous operation during an AC power outage.
- A large 128 x 128 dot multi-graphic display is standard on the TC250 provides a variety of continuous information at a single glance.
- A *communication interface card* with RS232, RS485, Modem/Ethernet and fiber optic connection is available as an option. This card can be added in the field if a *future upgrade is needed*. Communication protocols to all renowned manufacturers of operating control systems can be supported.
- The TAPCON®250 is the **perfect solution** for upgrading both today's and past control schemes:

- Paralleling of power transformers - these schemes can finally be simplified and understood straightforwardly with the TAPCON® series of controllers.
- A choice of paralleling methods is now available in the TAPCON®250 as either "minimum circulating reactive current" or "master/follower" simply as a menu selection.
- The past difficult CT wiring schemes from one transformer to another is no longer needed unless the utilities chooses to stay with that technology. Major cost savings are available in this area especially at the utilities installation and operation actions.
- MR offers the TAPCON-XPA external paralleling assistant to allow these CT circuits to be properly connected and measured at each transformer per the ANSI scheme.



- TAPCON®250 can be parallel multiple transformers in several combinations:
  1. TC250 to TC250 directly via CAN-bus communication cable (MR technology)
  2. TC250 with TAPCON-XPA to TC250 with TAPCON-XPA (ANSI scheme)
  3. TC250 with TAPCON-XPA to *other manufacture's ANSI scheme controllers with paralleling balancing modules and AC relays.* ●

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# Chilled to the bone

Messko MtraB® working at SaskPower in Canada

The Maintenance-free Dehydrating Breather MtraB® from Messko is made to withstand even coldest temperatures. An additional heating system prevents the filter system from freezing up at low outdoor temperatures. And it can be really cold in Saskatchewan province. According to the Canadian National Climate Data and Information Archive, the average Regina temperature in January is -16°C.

Regina is the second largest City in this province, even years ago, it was just a "pile o' bones". Buffalos grazed around this place and the Cree Indians gathered the bones from the buffalo hunt into huge round piles. These piles were two metres high and up to twelve meters in diameter. The Indians just believed that buffalos would never leave an area that contained the bones of other buffalo.



Nowadays utility SaskPower relies on facts and on products that guarantee reliable power supply. That's why they installed for instance a MtraB® DB 200 on their new 90MVA transformer from Pauwels. In addition, there is also a DB100 installed at the bolt-on LTC from Reinhausen. Both work properly up to at least -40°C air temperature within the pipe nozzle.

Regarding the picture with snowy landscape and blue sky – Regina is the sunniest capital city in Canada – you will also notice the oil temperature thermometer from Messko. It is mounted below the oil level gauge so that the transformer is nearly fully Messko-equipped. To keep on working reliably, both in winter and in summer. ●

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## We have a Good Chemistry

Messko MteC® EPT 202 for Petrochemical Manufacturer INEOS



Various industrial companies rely on Messko products, as reliable power supply is crucial for their operation. Among those is also INEOS, the world's third largest chemical company. One of its 68 production sites is near Cologne, the German city which is famous for the carnival celebrations in February. The INEOS Manufacturing Deutschland GmbH operates the petrochemical plant in the northern part of the town. They use naphtha, that

remains from the distillation of crude oil to petroleum, to produce for instance polyethylene and ethylene oxide. The latter, used for the production of detergents, is high flammable and INEOS hence always has strictest safety regulations.

The furnaces, where naphtha is cracked, depend on reliable power supply which comprehends safe operating transformers. These should therefore be equipped with suitable monitoring devices. There is the MTeC® EPT202 from Messko that addresses the key requests. It takes oil and winding temperatures and provides advanced thermal modelling through individual programmed parameters. In addition it enables load-dependent cooler control. This avoids thermal stresses in the winding insulation, caused by slowly activated cooling. Ready for remote operation, parameters like minimum and maximum values can be easily set.

INEOS in Cologne ordered 3 rail-mounted MTeC® EPT202 for installation in the beginning of 2007. In face of the short delivery time, the devices were tested thoroughly, as the strictest quality regulations at Messko require it. Part of the quality concept are also the new detailed test certificates, which are delivered with major Messko products. They document the extensive inspections, the devices have to pass before delivery. So every time you receive a white cardboard box with Messko and the Reinhausen logo on it, you can be sure to get 100% quality. That's really reassuring. ●

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## MR Japan opened new Office in Yokohama

Messko MteC® EPT 202 for Petrochemical Manufacturer INEOS

An "Office Opening Party" of MR Japan Corporation in Japan was held on December 15 2006 at their new office location, the German Centre for Industry in Yokohama. It was a great honor that many senior managers from many major Japanese customers, including Tokyo Electric Power Company (TEPCO), attended the party. Managing Director Michael Rohde, Mr. Anton Seiler, Mr. Bernhard Nick and Mr. Jürgen Schulz representing MR Germany as well as Mr. Akiharu Iida and Mr. Koji Tanaka from MR Japan Corporation joined the party event.

The reception started out with an opening speech given by Mr. Akiharu Iida, Representative Director & CEO of MR Japan Corporation, followed by a welcome speech by Mr. Michael Rohde, Managing Director of MR giving an explanation of MR Policy and MR Future Plans in Japan as well as the expression of sincere appreciation to Japanese customers. After this a warm speech of congratulations and appreciation for MR contribution to Japanese Power Industry was given by Dr. Takayuki Kobayashi, Manager of Power Network Division of TEPCO. The necessity and importance of future MR contribution to Japanese Power Industry and unchanged, close and good future relations among MR, TEPCO and Japanese Transformer Manufactures were emphasized in his speech. ●



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