



Mokarrar Trade & Engineering Service Company (MTES)

A Subsidiary of Mokarrar Industrial Investment Group

An introduction to Mokarrar railway department agencies

MTES



MTES CO

Railway Department



Signaling and communication



Non Destructive Testing



Measurement of track and fleet parameters



Depot Equipment



Track Superstructure Materials



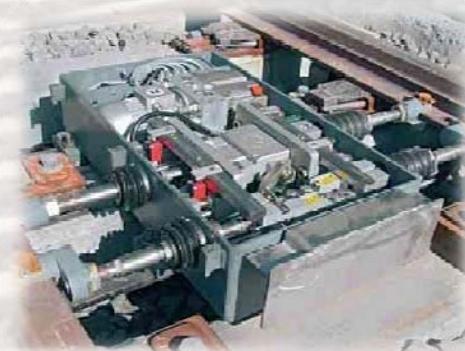
Over Head Catenary System



MTES CO.



Signaling and communication



MTES

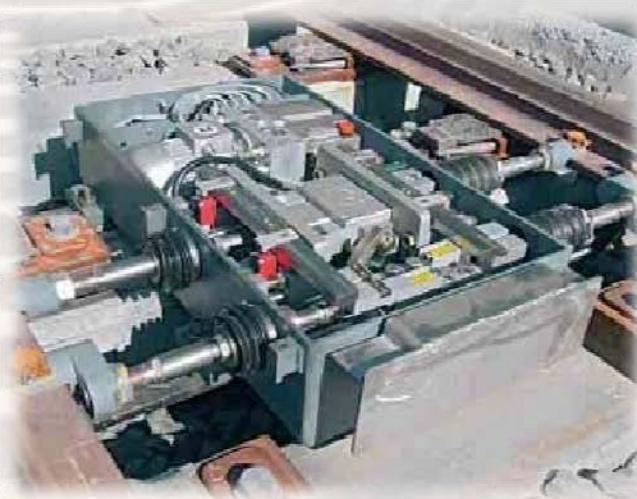
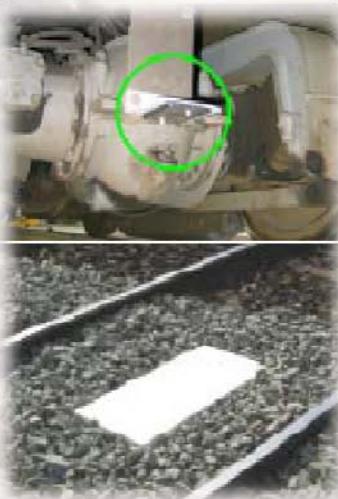


MTES CO.

HANNING & KAHL, Germany



- **point machines:** electro hydraulic, electromagnetic, mechanical automatic level crossing system
- **depot control management,** RFID solution, Train Tracking and Event Recording



MTES

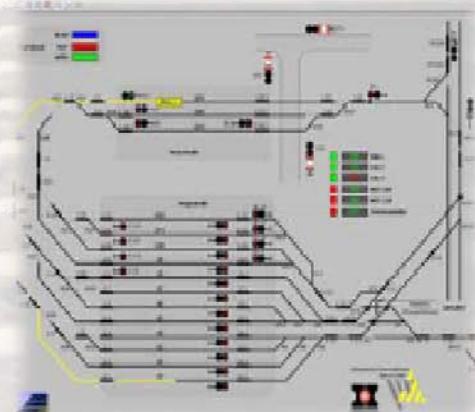


MTES CO.

HANNING & KAHL, Germany



- **Accessories:** point controller, point heater, signal lights, axle counter, testing
- service equipment, track circuit, **track brake**, etc.



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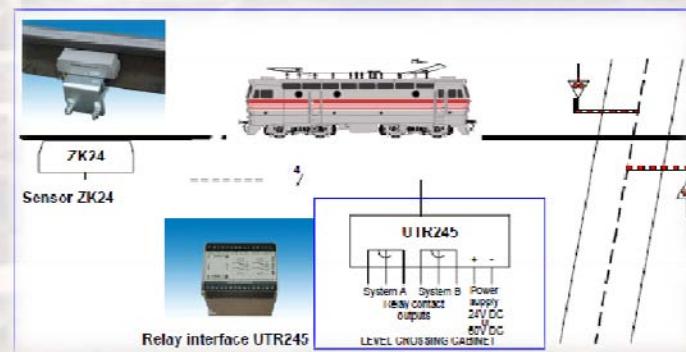
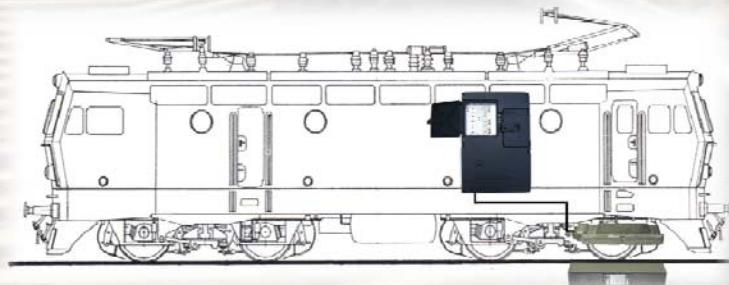


ALTPRO d.o.o., Croatia

AP ALTPRO

MTES CO.

- Axle counter used at stations and crossings
- Track and locomotive balises used in ATP system
- Train presence detection at crossing using ITR/UTR system



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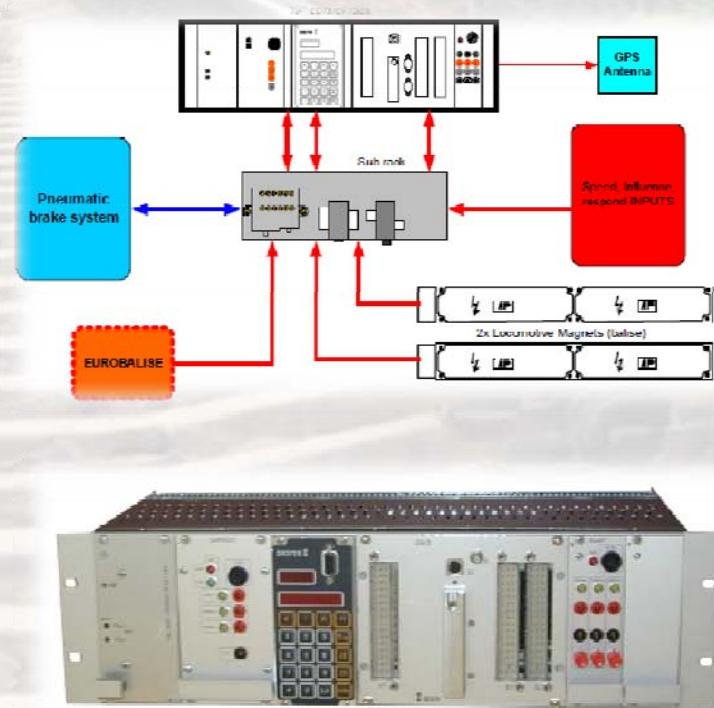


ALTPRO d.o.o., Croatia

AP ALTPRO

MTES CO.

- Automatic train detection system and dead man control unit
- Automatic train stop (AS)



MTES



MTES CO.

Non Destructive Testing



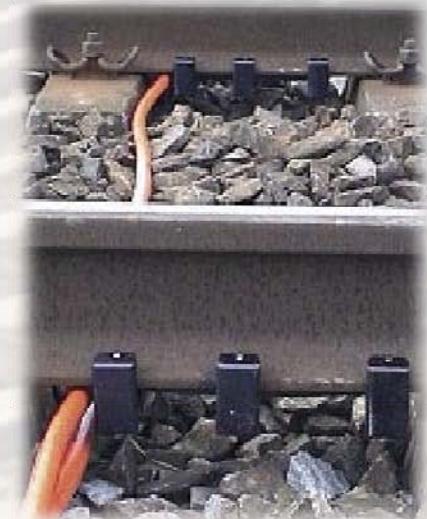
MTES



RTI Group, Australia

MTES CO.

- UT test of railway track using 8000SX vehicle: economical, easy operation, high
- precision
- Design, execution, consulting in the field of UT testing and defects detection
- Portable Hand held UT test device



MTES

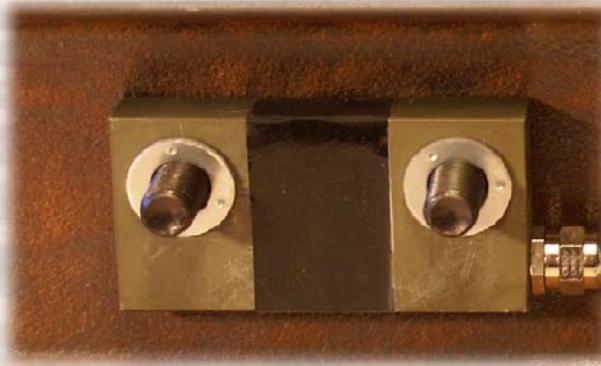


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MTES CO.

Measurement of track and fleet parameters



MTES



P.U.T.**GRAW** sp. z o.o., Poland



MTES CO.

➤ wheel diameter and flange profile total Solution



MTES

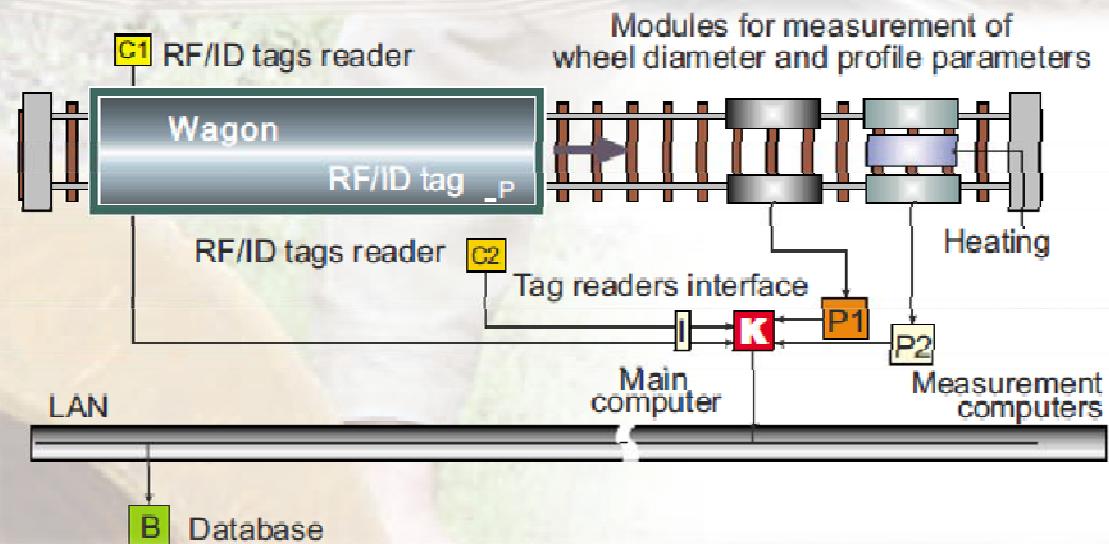
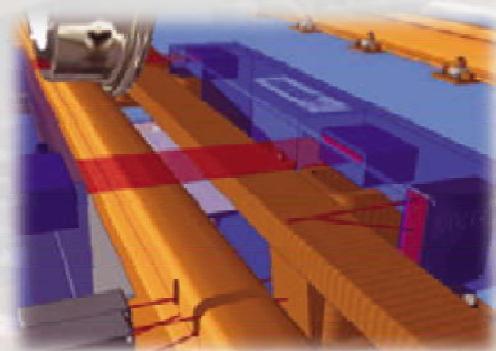


P.U.T.GRAW sp. z o.o., Poland



MTES CO.

- Measuring wheel diameter and wheel flat in Depot



MTES



P.U.T.**GRAW** sp. z o.o., Poland



MTES CO.

- Complete Track & points Geometry Measurement



MTES

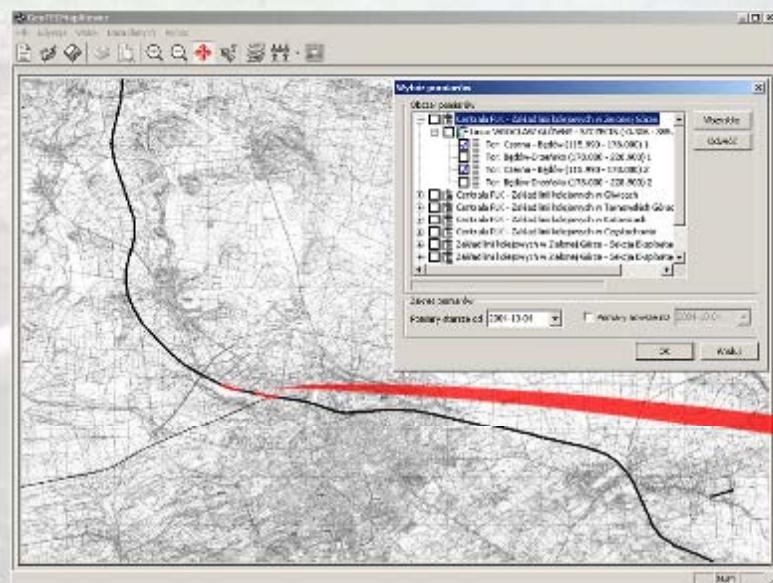


P.U.T.GRAW sp. z o.o., Poland



MTES CO.

- interactive GIS map service
- Forming database for condition monitoring



MTES



Dr. D. Wehrhahn, Germany

MTES CO.



- Portable non-contact laser device for rail profile measuring
- Mount-on-fleet non-contact laser devices for rail profile measuring
- Portable non-contact laser device for wheel profile measuring



MTES

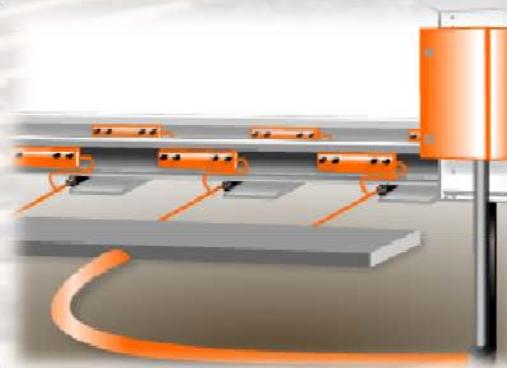
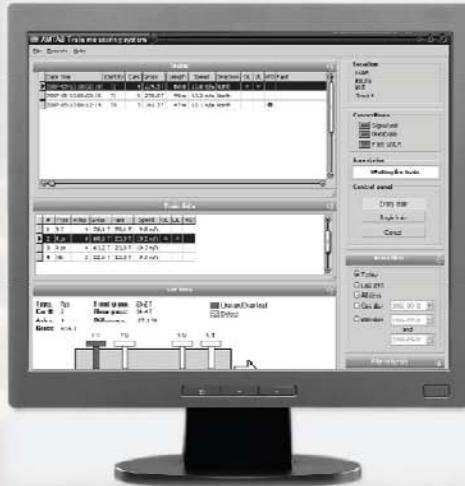


AMTAB, Sweden

MTES CO.



- Fully automatic, dynamic vehicle weighing systems
- Train detector
- Wheel flat detector



MTES



VEIC China

MTES CO.

- Hot Box Detector system (HBD)
- Shunting Vehicle
- Dynamic Train Imaging (DTI)
- Train Washing Machine



MTES



Rail Automation United States of America

MTES CO.

- Hot Box Detector system (HBD)
Automatic Equipment Identification



MTES



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Depot Equipment



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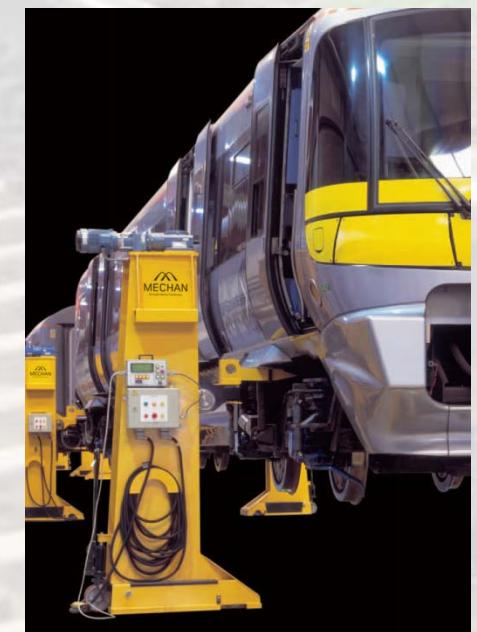
MECHAN from England



Quality, Safety & Reliability

design, development and manufacture of

- mechanical handling equipment
- and protection systems (Depot Manager)



MTES



MTES CO.

MECHAN from England



Bogie/Wheel Set Drops



MTES



MTES CO.

TRANSIT & ACCOMODATION BOGIES



MTES



MTES CO.

Bogie Frame Rotators



MTES



MTES CO.

A Different Class of Jack



MTES



MTES CO.

Traction Motor Removal Trolley



Bogie Press



Bogie Test Machine



MTES



MTES CO.

Track Superstructure Materials



MTES



PLOETZ from Germany

PLÖTZ

MTES CO.

3-in-1 Thermite weld

- Cost Effective
- Inexpensive Equipment Costs
- Good Quality
- Extremely portable
- Limited Setup required
- Less steps for installation
- Lightweight equipment



MTES



MTES CO.

Safetrack from Sweden



- Bonding Technology
- Safety Devices
- Rail Welding accessories
- Lightings
- Rail Heating
- Measuring
- Trolleys



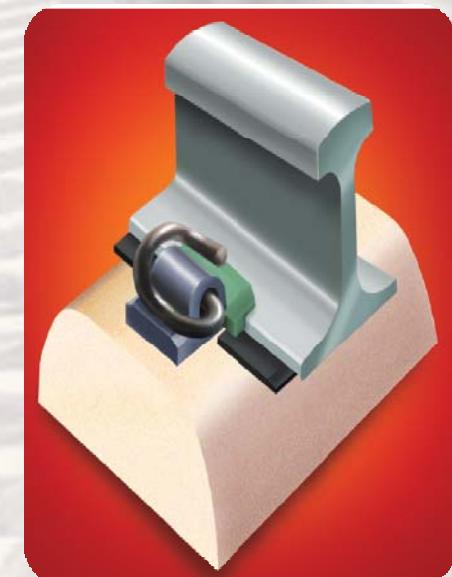
MTES



MTES CO.

- Screw Spike
- Rail Spikes
- Roll Plug
- Railway Fastenings (Vossloh, pandrol ...)
- Sleepers (Steel, composite)
- Rail Pads
- Guide
- Rail Anchor
- Bolts, Nuts & Washers
- Fishplate

Track Superstructure Materials





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OVER HEAD CATEINARY SYSTEM



MTES



MTES CO.

Kruch from Austria

KRUCH

➤ Catenary Hanger Test



MTES



MTES CO.

Kruch from Austria

KRUCH

➤ Flexible Catenary Hanger

insulating or marginally conducting or spark-free



MTES



Kruch from Austria

Kruch

MTES CO.

- Flexible light weigh hanger with thimble
(INSULATING, EXTREMELY LIGHT)



Figure 2: clamp on catenary cable



Figure 3: clamp on contact wire



MTES



MTES CO.

Kruch from Austria

KRUCH

➤ Flexible Catenary Hanger Without Thimble

Adjustable and spark-free current proof



MTES



MTES CO.

Kruch from Austria

Kruch

➤ Contact wire crossing clamp

For high speed rails/points
(easy to install & light weight)



MTES



MTES CO.

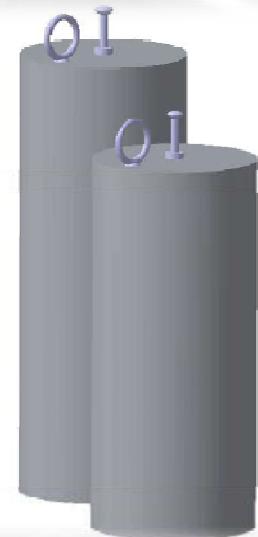
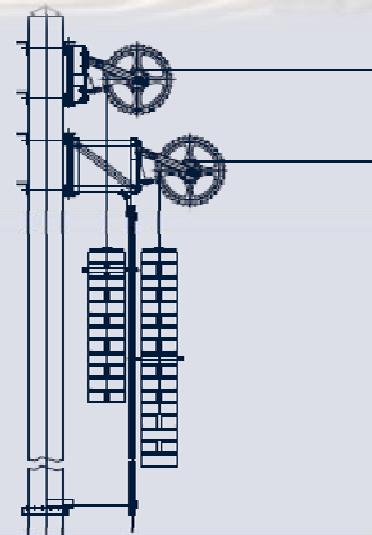
Kruch from Austria

KRUCH

➤ Automatic tensioning system

60 years maintenance-free (no lubrication, no replacement of wires)!

Low LCC



MTES



MTES CO.

Kruch from Austria

KRUCH

➤ Complete Color light signal

Up to 250 km/hr

Equipped with best light technology (power LED)

Great versatility



MTES



MTES CO.

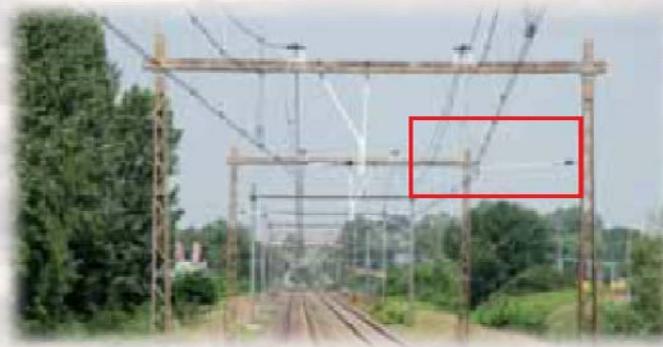
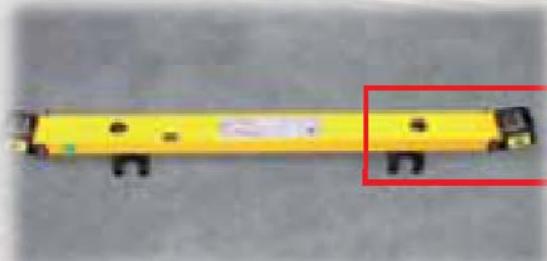
Dr. D. Wehrhahn, Germany



Dr. D. Wehrhahn

Measuring Systems for Quality Assurance

Non contact measuring system for detection of Contact wire position



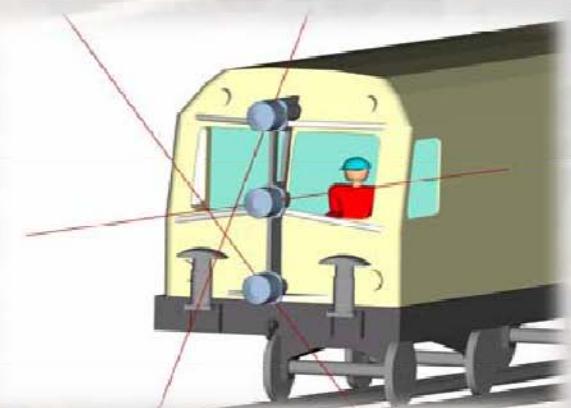
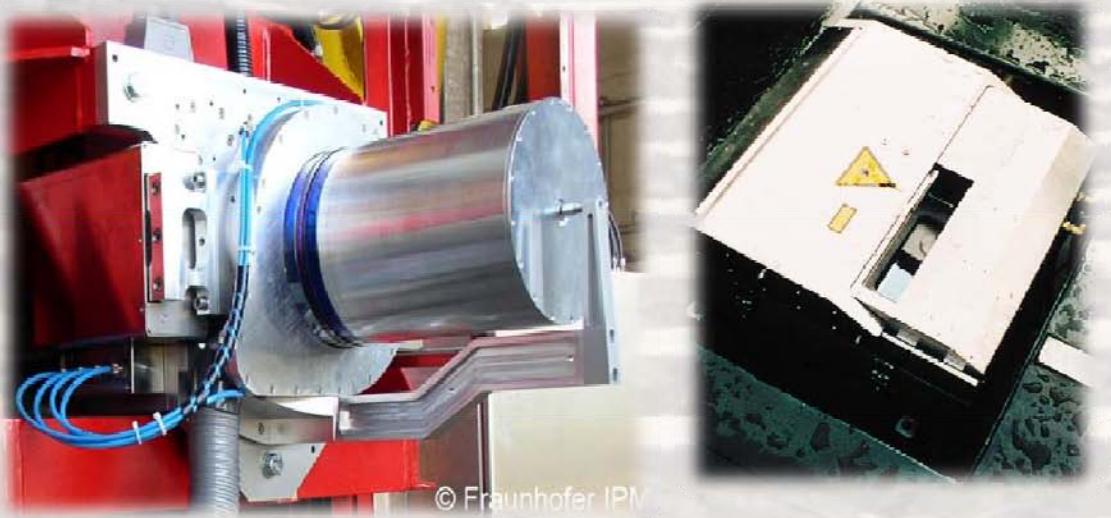
MTES



Fraunhofer Institute of Physical Measurement MPI, Germany

MTES CO.

- Wire Wear System (WWS) used for Overhead Centenary System (OCS)
- Contact Wire Position measurement (250 Km/hr) (CRS)
- Measuring geometrical changes of structure gauge



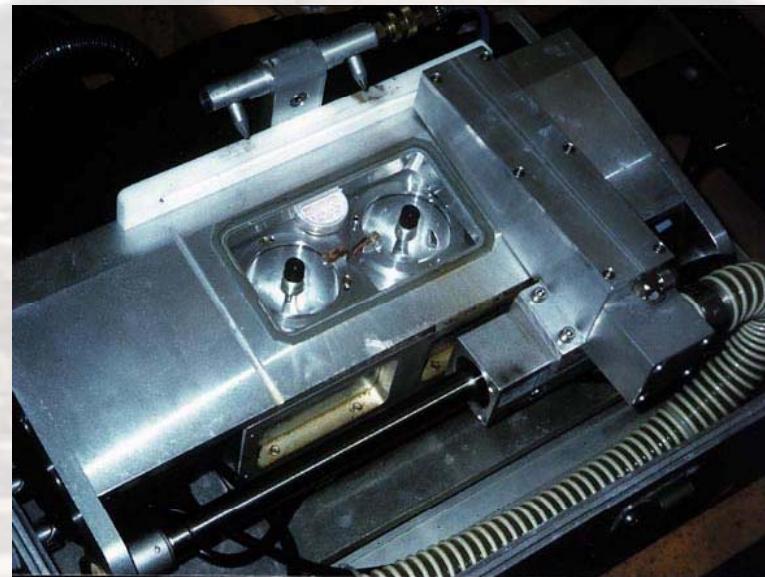
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Fraunhofer Institute of Physical Measurement MPI, Germany

- Laser Pole Detection System (LPS)



MTES



MTES CO.



KUMMLER & MATTER



MTES



MTES CO.



1-Catenary engineering for railways, trams and trolley-buses

- Catenary equipment /overhead contact systems (OCS)
- Railway and tramway power supplies / cabling
- Safety installations for railways and tramways



2-Industrial cabling / Construction and erection

- Cable installation and civil engineering
- Cable laying and grid connections
- Sheet piling and shoring of excavations
- Tunnel equipment and installations / engineering
- Cable installation for road and rail traffic
- Cable and installation work





MTES CO.

3- Overhead power lines / Energy technology

Cable laying and grid connections

Overhead power lines

Design of cable and overhead power transmission systems



4- Traffic engineering / specialized electrical equipment

Specialized electrical equipment

Lighting

Installations and equipment for sports stadiums and leisure areas





MTES CO.

Kuma Services



- Project studies
- مطالعات پروژه
- Project estimating
- تخمین پروژه
- Documents for complete installations
- مدارک برای نصب کامل
- Project engineering
- مهندسی پروژه



MTES CO.

Kuma Services



- Material procurement
- تأمین قطعات
- Project support with highly experience OCS workers
- پشتیبانی پروژه توسط افراد مجبوب
- Project advice and planning
- برنامه ریزی و ارائه توصیه برای پروژه
- Installation or installation support
- نصب و پشتیبانی از نصب



**THANK YOU
FOR YOUR ATTENTION**

MTES