



An IECEx Certified Motor Repair Company



ISO 9001:2000

Maintenance Resources Company



www.marcthailand.com

VERSION 4.0

Our Mission

" To provide our customers with intergrated services of innovation excellence via delivery of diverse resources of competitive and organisational capabilities , through a distributed and interdependent network of facilities , to add value to our customers and employees "

Quality policy

- 1) Our services quality is guaranteed to be as per international standard - IEC , IEEE & NEMA .
- 2) Reliable quick turn around.
- 3) Competitive prices.
- 4) Continuous quality improvement.

Ex Quality policy

" MARC (Thailand) commits to perform all services of Ex motor to be exactly according to IECEx sheme OD 015 and IEC 60079-19 total quality system is maintained by IECEx OD 014 and ISO 9001 : 2000 "

1. Facts & Figures

Founded : May 2001 (Establishment)

Paid – up Capital : THB 32,000,000

No. of Employees : 186

Head office : 3 Moo 6 Putthamonthon VII Rd., Homkred, Sampran , Nakornpathom 73110, Thailand.

Tel. (66) 034 - 312089 (Auto 15 Lines)

Fax. (66) 034 - 312106- 7

Rayong Office : 9 Soi G3 Pakornsongkorad Rd.,Huaypong,Muang, Rayong 21150, Thailand

Tel. (66) 038-693152-63

Fax. (66) 038-693162-3

Saraburi Office : 789/459 Phaholyothin Road, Pak-Preaw, Muang, Saraburi 18000, Thailand

Tel : +66 (036) 223 962

Fax : +66 (036) 223 963

email : admin@marcthailand.com

website : www.marcthailand.com



2. MARC Maintenance Service Brief Introduction

MARC (Thailand) is established as a maintenance and electrical equipment repair center with a total operating covered workshop space of more than 6,400 sq.m. MARC (Thailand) employs 180 personals in the discipline of engineers, technicians, mechanics and support staff.

Main activities are as follows:-

2.1 Electrical Workshop Repair

MARC repair AC and DC motors and generators of all voltages and sizes locomotive traction motor, low and high voltage transformer, lifting magnets. We also supply motors and generators parts i.e.: slip rings, commutators, carbon brushes, brush holders, cooling fans, shafts, winding temp sensor, etc.



2.2 Electrical Engineering Service

MARC field testing service will benefit you by verifying the condition of electrical apparatus and ensuring the integrity of electrical protective devices including providing accurate and professional engineering reports.

Engineering service activities

- Circuit breaker and relay test / calibration
- Trouble shooting on generation problems
- Breakers Retrofitting
- Substation work
- Cable high potential tests
- Test & inspect motor starter
- Test & commission switchgears, transformers, generators, protective relays, UPS and battery charger system
- Dissolved gas in oil analysis
- Transformer oil tests for dielectric strength
- Transformer inspections and field repair



2.3 Mechanical and Prime Mover Services

MARC offers you the capabilities to service your machinery equipment ie, engines, gearbox, pumps, propeller including the repair of electronic, hydraulic and mechanical governors of all makes.

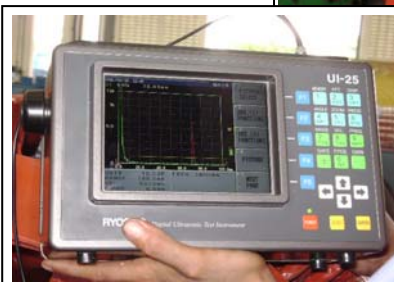


2.4 Coating Services

MARC has specialized processes to harness the intended utility of mechanical components. Through proper selected coating processes, new parts are upgraded and used or worn parts given a new lease of life. Our coating applications add value and create cost effective solutions through these upgrading and life extension capabilities.

Repair Facilities

- Dynamic balancing machine (20 tons)
- 2 x 10 tons crane and 2x20 tons
- High speed coil winding machine
- Hydraulic coil spreader
- Armature banding machine
- Large baking oven.
- Vacuum pressure impregnation tank. (VPI tank)
- Lathe machines
- Milling machines
- Bearing Puller
- Mica under cutter
- Regulating transformer (11,000V.)
- Steam / chemical cleaning machine
- Metal spray machine
- TIG welding machine
- Transportable baking / curing ovens
- High potential test up to 60 KV.DC
- Polarization index test from 250V to 10,000V
- Flux test facilities to determine stator lamination conditions.
- 10 KV surge comparison insulation analyzer
- Test panel 0-11,000 KV
- Test bed
- Winding resistance test set
- Insulation resistance test set
- Vibration recorder
- Laser alignment



Service facilities

- Relay Test Set
- Insulation Resistance test set. (500 V DC. to 10 KV. DC.)
- Winding Resistance test set.
- Micro ohm meter
- Breaker analyzer
- Transformer turn ratio
- DC Hipotential test 120 KV
- Primary injection test set
- Oil tester
- Digital Multimeter
- Clamp-on meter

MARC (Thailand) Co.,Ltd. has got facilities to repair AC and DC motors and generators of all voltages and sizes, locomotive traction motors, low and high voltage transformers and lifting magnets.

We also manufacture and supply the motors' and generators' parts ie : sliprings, commutators, carbon brushes, brush holders, cooling fan, new shaft, winding temp sensor etc.

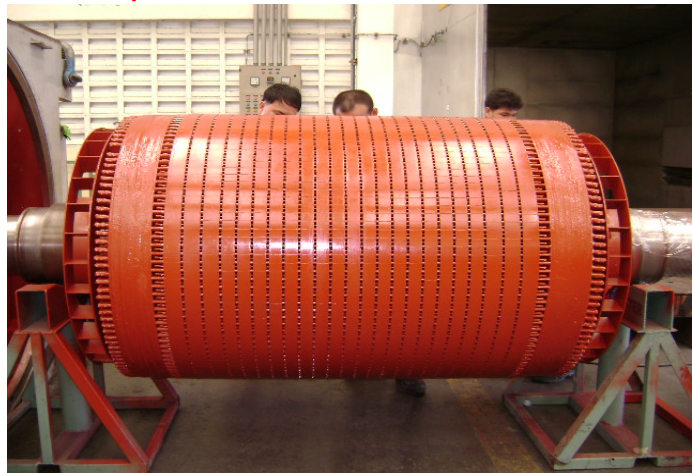


Reliable quick turnaround services made possible through MARC unique repair process ensures the highest quality of services, include :

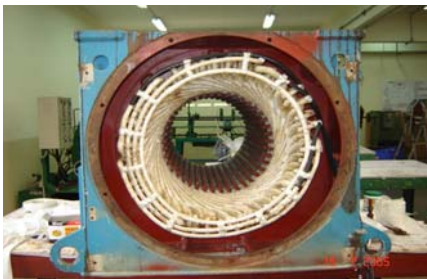
On-site Inspection



Rotor Inspection



Rewinding



Installation at Site



Reliable quick turnaround services make possible through MARC unique repair process and ensure the highest quality of services, including :

Steam & Chemical cleaning



Red Varnish Surface Coating



VPI Process



Loop Test



Restack Stator Core



Re-banding



Dynamic Balancing



Machining Process



UT & PT Test



Re-wedge of HV. stator



Confirm commutator profile



Shaft Metal Spray



Partial Discharge Measurement

AC & DC High Potential Test

Predictive main turnaround program

Redesign & Upgrade Capability

Generator Inspection at site



Generator Repair at workshop



MARC (Thailand) Co.,Ltd.

provides all kinds of mechanic repair and services from machining repair and fabrication of rotating part - commutator , slipring , brush holder , rebar , etc.

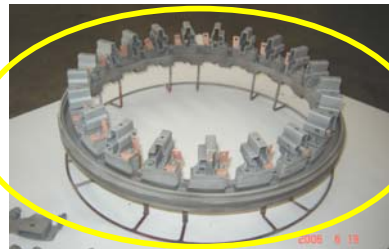


Renew Shaft



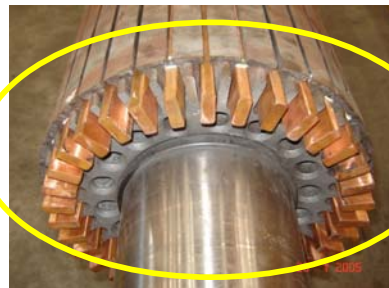
SERVICE CAPABILITY

- General Precision Machining
- Thermal Spray Coating and Hard Facing
- Sandblasting
- Shaft Straightening
- Rotor Rebuilding
- Renew Shaft
- Renew Rotor bar
- Turbine Services



Sandblasting

Prepare Surface



Renew Rotor Bar



Authorized Service Agents of



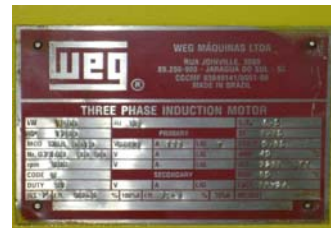
We are an authorized service agent of many world class motor manufacturers.

TOSHIBA



BALDOR

BALDOR • DOUG • RELIANCE



ANSALDO

SISTEMI INDUSTRIALI



SICNEMOTORI



ALSTOM



Explosion Proof Certified Motor Repair Shop



IECEx CoC Certified Service Facility

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx SFR 50001 Issue No. 0 Certificate history:

Status: Current Date of issue: 2007-11-06

Applicant: MARC (Thailand) Co., Limited
3 Moo 6 Putthamonthon VII Road
Homked
Sampran
Nakhonpathom 73110
Thailand

Type of Service: Repair and Overhaul according to IEC 60079-19

Type of Protection: Flameproof Enclosure "d"
Increased Safety "n"
Other
Type of Protection "n"

Scope of Service: Repair and overhaul of rotating machines and enclosures

Locations covered by this Certificate: MARC (Thailand) Co., Limited
3 Moo 6 Putthamonthon VII Road
Homked
Sampran
Nakhonpathom 73110
Thailand

Facility Audit Report: GBSIR/AFR/07/000100
This certificate is issued as verification that the Service Facility and associated locations were assessed and found to comply with the IECEx Scheme requirements, relating to the type and scope of service listed above. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx (S) and Operational Documents as amended.

Approved for issue on behalf of the IECEx Certification Body: Mike Shearman
Position: General Manager
Signature:
Date: 6/11/2007

Certificate issued by: SIRA Certification Service
Rake Lane
Exceston
Cheshire
CH4 9JN
United Kingdom

sira
CERTIFICATION

Underwriters Laboratories Inc.

UL

UL Program Real
Underwriters Laboratories Inc.
3301 Riverchase Center (Cable)
P.O. Box 6800
Houston, Texas 77261-6800
http://www.ul.com

UL 803408 Vol. 1 January 2000-12-19 Revised

UL-1000
PULVER-OF-EXPLOSION PROTECTION
(TYPE 1)

EXPLOSION PROTECTION
PULVER-OF-EXPLOSION PROTECTION
(TYPE 1)

Manufacturer: MARC (THAILAND) CO. LTD.
(100941-001)
1/3 Moo 6 Putthamonthon VII Road
Homked
Sampran
Nakhonpathom 73110 Thailand

Applicant: MARC (THAILAND) CO. LTD.
(100941-001)

Location: MARC (THAILAND) CO. LTD.
(100941-001)

This Procedure authorizes the above Manufacturer to use the marking specified by Underwriters Laboratories Inc. for the use of the above Manufacturer in connection with the UL-1000 marking system. The marking shall be used only on the above Manufacturer's equipment in accordance with the UL-1000 marking system. The marking shall be used only on the above Manufacturer's equipment in accordance with the UL-1000 marking system. The marking shall be used only on the above Manufacturer's equipment in accordance with the UL-1000 marking system.

The Procedure authorizes information for the use of the above Manufacturer and representatives of Underwriters Laboratories Inc. and it shall be used for any other purpose. It is not to be used for any other purpose. It is not to be used for any other purpose. It is not to be used for any other purpose.

This PROCEDURE, and any subsequent revisions, is the property of UNDERWRITERS LABORATORIES INC. and is not transferable.

UNDERWRITERS LABORATORIES INC.
Art 14
A. W. Schaefer
Vice President and General Manager
UL and Location, Operations

A not for profit organization
dedicated to public safety and
improvement in quality.



MARC (Thailand) Co., Ltd. is proud to be part of your success in eliminating the risk of explosion in your workplace. We are **THE ONLY SHOP** of the major authorised service agent in Thailand for explosion proof motor repair service. You can trust our services as well as our workmanship as we are certified by world - class and well known certified bodies like .

IEC Ex and UL (Underwriters Laboratories Standard)

Ex Services

- Repair & Overhaul Explosion Proof Motor
- Audit & Classification of Hazardous Area
- Seminar & Training
- Competence test



MARC (Thailand) Co.,Ltd. is equipped to maintain your transformer under routine shutdown schedule and emergency repair as requested. We also carry out periodic inspection, maintenance check and gas analysis for preventive maintenance.

REPAIR & TESTING SERVICES

- Oil sampling, analysis and result interpretation
- On-site replacement of gasket, bushing and other repair
- On-side radiator repair and replacement
- OLTC overhaul and services
- Complete winding and insulation testing
- Commissioning and acceptance testing of new transformer
- Bushing repair, overhaul and testing
- Factory test and field inspection
- Oil filtering services
- Overhaul & Rewinding services



Overhaul OLTC "ABB" Type: UZ

Test Turn Ratio of transformer



Overhaul OLTC "MR"

Transformer Coil Inspection



MARC (Thailand) Co.,Ltd. field testing service will benefit you by verifying the condition of your electrical apparatus and ensuring the integrity of your electrical protective devices including providing accurate and professional engineering reports.

MAINTENANCE & TESTING SERVICES

- Circuit breaker and relay test / calibration.
- Trouble shooting on generation problems.
- Breakers Retrofitting.
- Sub-station project work.
- Test & inspect motor starter.
- Cable high potential tests.
- Test & commissioning for switchgears, transformers, generators, protective relays, UPS and battery charger systems.

Service Substation



Test Breaker and accessories



Test Incoming Panel



Test protective relay



Test Battery Charger



2004 10 18

MARC (Thailand) Co.,Ltd. has got facilities to overhaul, repair, inspect all kinds of breaker (Moldded case circuit breaker, vaccuum circuit breaker, gas circuit breaker etc.).

We can repair your breaker and its components back to good working condition. Types of services that we can provide are main contact, arcing extinguisher, silver plating, and blasting service.



Support insulator of Oil Circuit Breaker

After repair condition



Moving contact of Oil Circuit Breaker



Vacuum Circuit Breaker



Oil Circuit Breaker

MARC (Thailand) Co.,Ltd. offers you the capabilities to service your Governors. We provide fast, reliable and high quality services backed by a team of skill engineers and technicians with many years of experience in this business.

BRANDS

Woodward

Heinzmann

Regulateurs Europa

Russian made

Mechanical, Electronic and Hydraulic made

Diesel kiki



SCOPE OF SERVICES

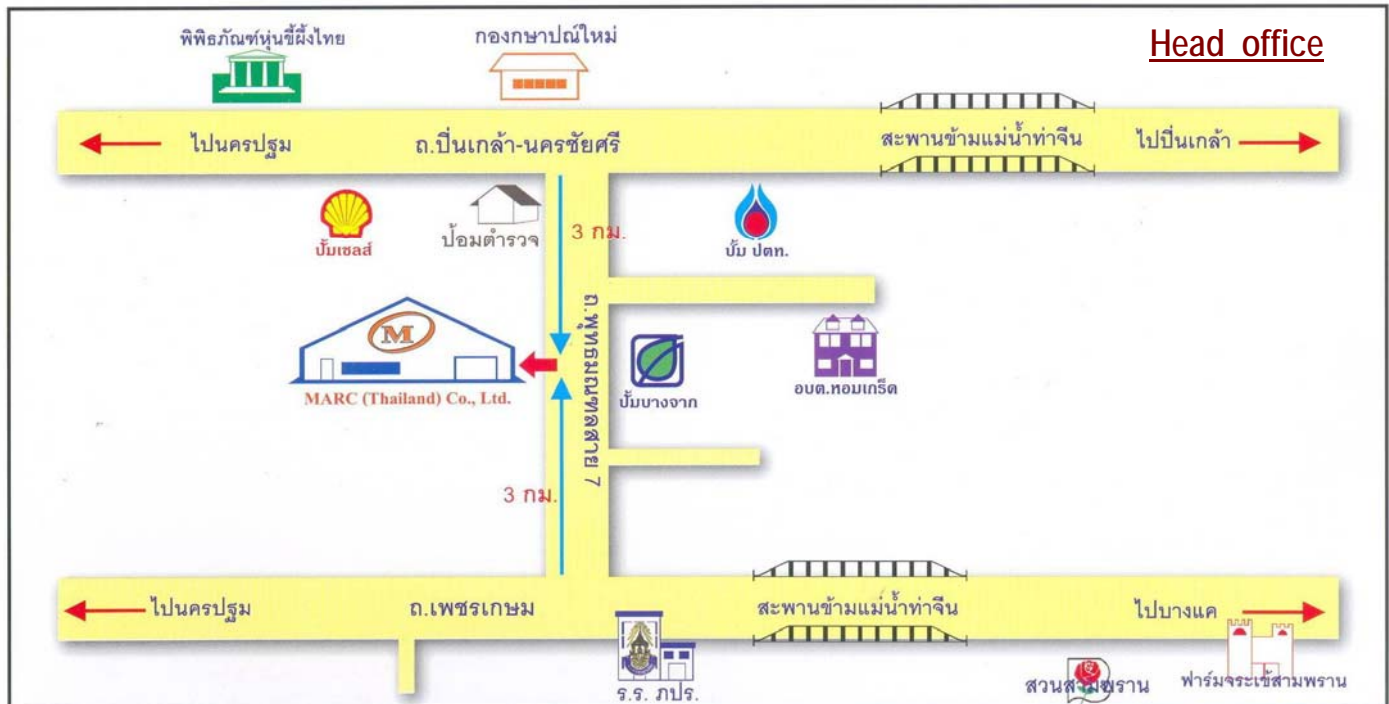
- Overhaul
- Service
- Repair
- Troubleshoot
- Calibration
- Retrofit

We provide both in-house and on site services on round the clock basis:

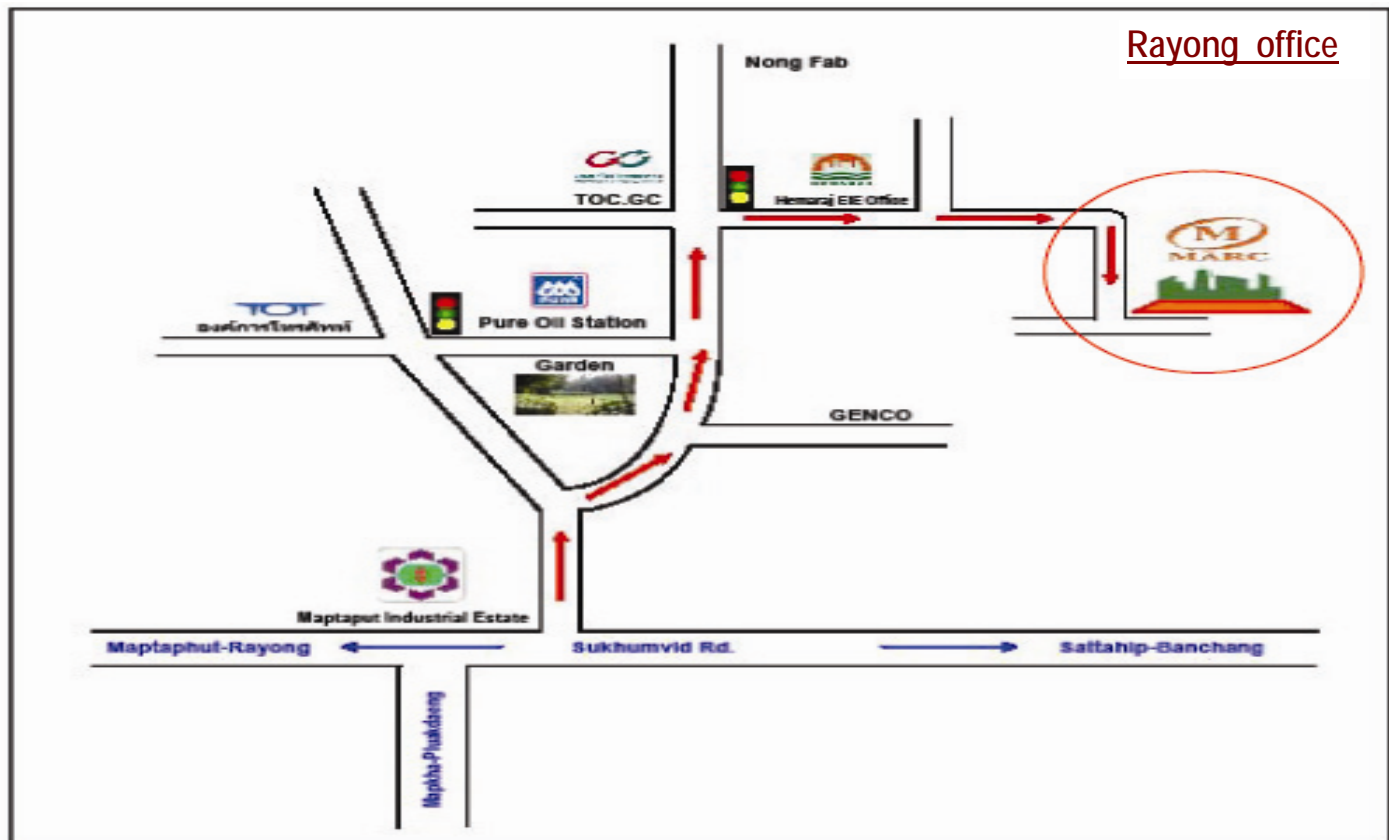
- At Anchorage
- During Voyage
- In the Shipyard
- In the Premise of Industrial Plants



3 Moo 6 Putthamonthon VII Road, Homkred, Sampran, Nakornpathom 73110, Thailand
Tel : +66 (034) 312 089 (Auto 15 lines) Fax : +66 (034) 312 106-7



9 Soi G 3 Pakornsongkorad Rd., Huaypong., Muang, Rayong 21150
Tel: (038) 693 152-63 Fax: (038) 693 162-3



Saraburi office

789/459 Phaholyothin Rd., Pak-Preaw , Muang , Saraburi 18000 Thailand
Tel: (66) 036-223962 Fax: (66) 036 - 223963



"MARC" THE NAME IS A GUARANTEE



Generator Services



Motor Services



Engineering Services



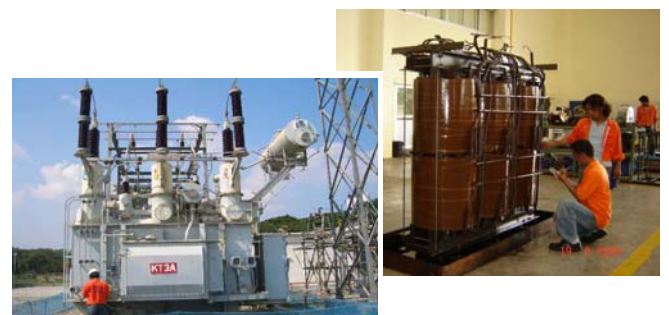
Mechanical Services



Circuit breaker Services



Transformer Services



Governor Services

