



Potencia Industrial

March 3, 2021

Due to the lack of thorough research and due diligence performed by “Mariner Group” we invite you to review the following document.

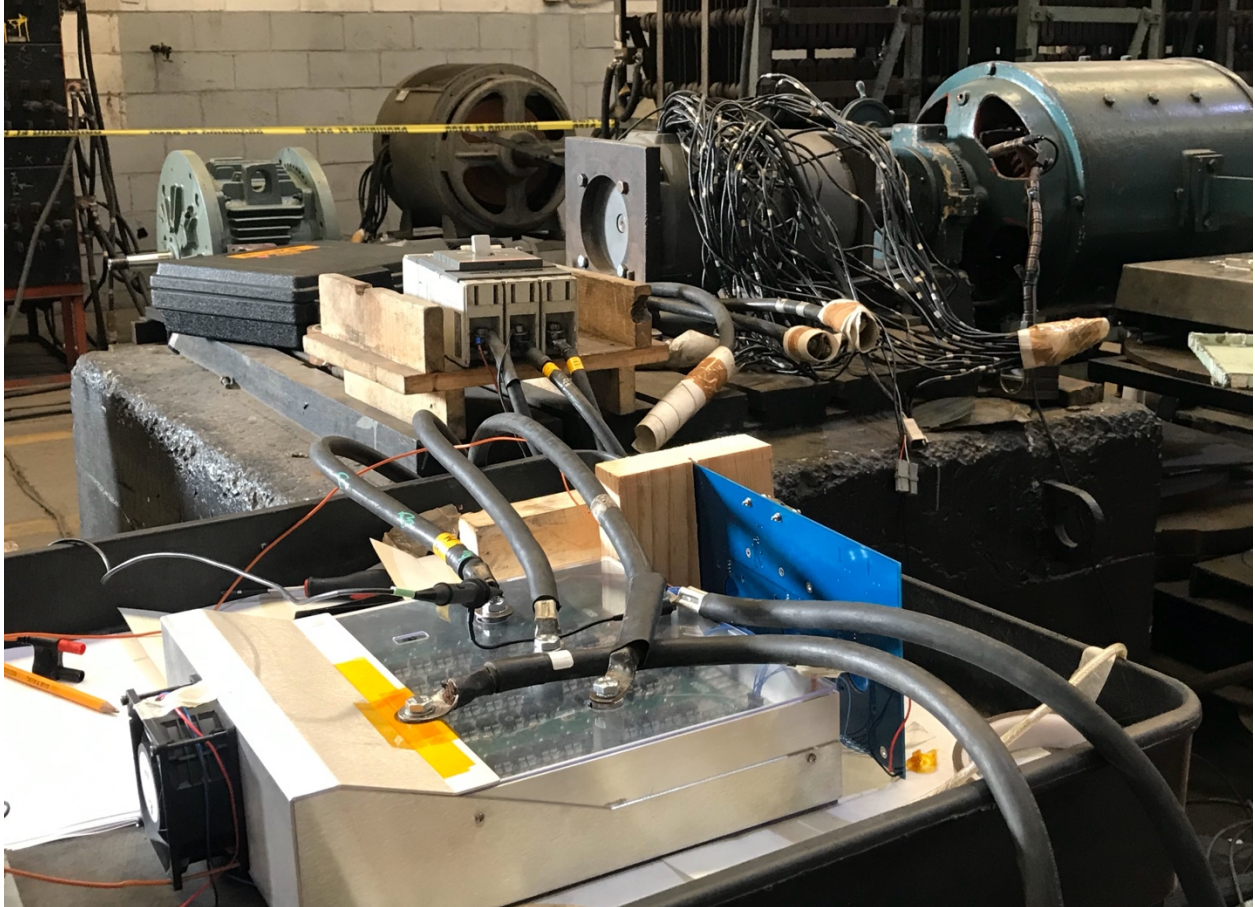
Exro’s partnership with Potencia began in 2018 as a result of Potencia successfully completing a prototype for underwater current generator for one of Exro’s early investors. At that time Exro Technologies was starting to develop the concept of a coil switch drive capable of leveraging the potential of an electric traction motor by modifying in real time the internal connection of the stator windings. For such partnership Potencia was at the time (and still is) the best option for Exro for several reasons:

- Potencia has proprietary technology (see below patents) for permanent magnet systems, in both concentrated flux array and surface mounted magnets.
- Our company is vertically integrated for the design and manufacturing of highly specialized electrical motors, this allows Potencia to develop and manufacture a permanent magnet electric motor satisfying the need of Exro for winding connections, rotor design and also we currently have the facilities and engineers capable of validate the results of Exro’s development independently and finally, at the time.
- Potencia was starting the development of a business unit for the development and manufacturing of electric drivetrains and Exro’s technology would allow Potencia to provide cutting edge technology to a market that at the time and currently is growing.

## **MOTOR DRIVER DEVELOPMENT**

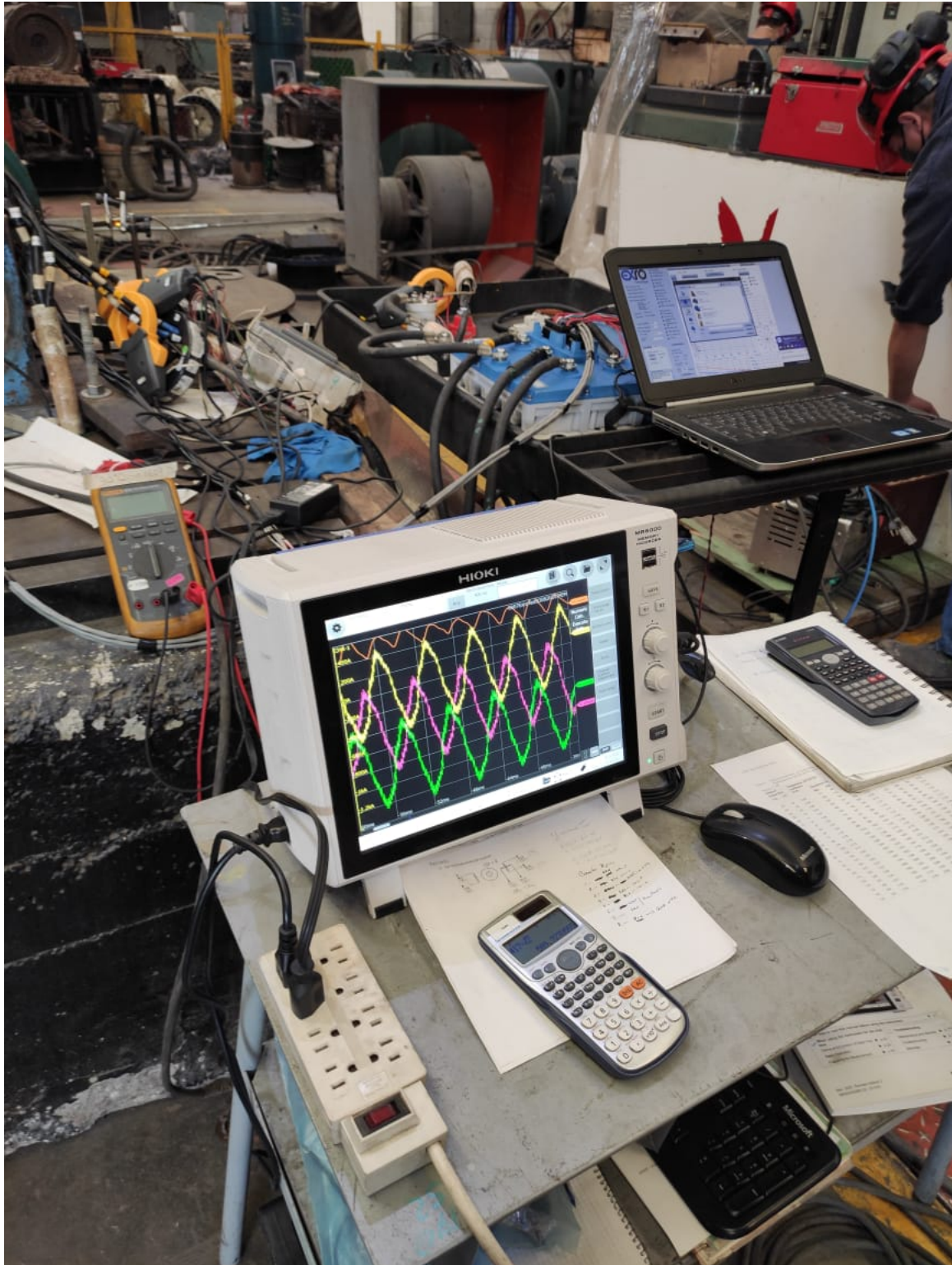
Since the day the motor driver development was announced Potencia and Exro have made significant advances in both design and validation. The report failed to mention the exceptional people behind the design of the 100V system. For Potencia is an

opportunity to have access to a technology developed for our specific needs. The focus of the system is to provide the best efficiency and reliability, it gives the company the opportunity to integrate power electronics designed specifically for our permanent magnet motor architecture. Only with this approach we can achieve the maximum efficiency of our drivetrains.

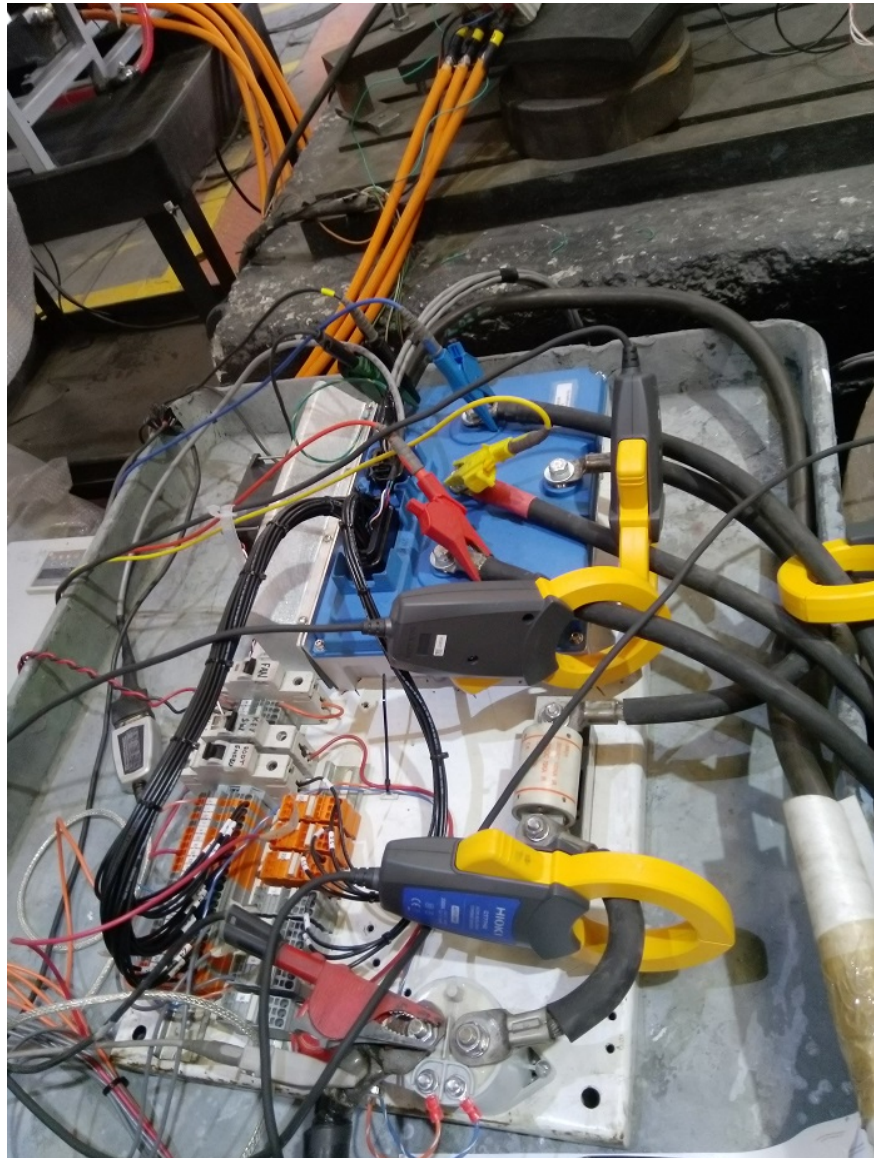


The picture shown above was taken during the testing of the first version of the motor driver with Exro's engineering team. During this process the company was able to test different drive architectures, mosfet quantity and brands, fine tune the software in order to optimize the control of our system. After this test both Exro and Potencia came to an agreement in terms of capacity, both peak and continuous of the system. With this information Exro proceeded to develop the second version of the system.





In Q3 and Q4 of 2020 Potencia received the second version of the EXRO drive, the system received by Potencia had the final design in both the drive and the heatsink. During the following weeks Potencia proceeded to test the system and its limits. Unfortunately, due to an error by our engineering team 2 of the 3 testing system were damaged during testing as a result of not properly setting some limit for AC current. This created some delays for both companies. In January of 2021 Potencia finalized the testing and validation of the EXRO drive with excellent results. The next step for the company is to install the system in one of our testing vehicles in order to compare its performance and test its reliability under driving conditions.





## POTENCIA FACILITIES

We remark the lack of detailed presented in their investigation and our capacity. Our social media has enough pictures that show some areas of our facilities.

Within our 17,000 sqmt facilities (see below picture) ...



Potencia is the only company in Mexico capable of manufacturing on its entirety an electric motor. With the exception of casting of housings, we do it all.



**DYE & TOOL  
FABRICATION**



**LAMINATION  
STAMPING**



**CORE  
BUILDING**



**WELDING &  
FABRICATION**



**PATTERNS+MOLDS  
METAL &  
FIBERGLASS**



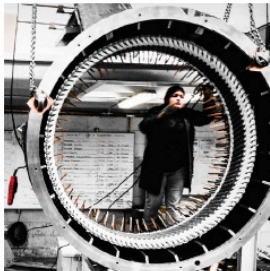
**CNC PRECISION  
MACHINING**



**COIL  
FABRICATION**



**STATOR &  
ROTOR WINDING**



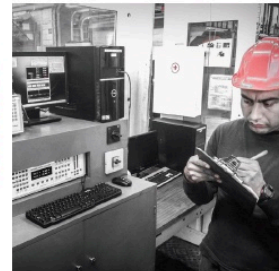
**INSULATION  
TESTING**



**LARGE  
MACHINING**



**TESTING &  
CERTIFICATION**



**QA REPORTING  
& DELIVERY**

OEM stands for Original Equipment manufacturer. 100% of the machines that leave our shop are design by our engineers and manufactured and assembled by our skilled workers.

The company is ISO9001:2015 certified





# BM TRADA

## CERTIFICATE OF REGISTRATION

This is to certify that

**POTENCIA INDUSTRIAL, S.A. de C.V.**

Av. Año de Juárez # 205,  
Col. Granjas San Antonio,  
Del. Iztapalapa, CP 09070,  
México D.F.

has been audited and found to meet the requirements of standard  
**ISO 9001:2015 Quality Management Systems - Requirements**

### Scope of certification

Design, manufacture, development, repair and tests of motors and electrical generators of induction and synchronous, power units generating and systems of uninterrupted energy of rotatory type.

“Diseño, Fabricación, Desarrollo, Reparación y Pruebas de Motores y Generadores Eléctricos de Inducción y Síncronos, Grupos Motor Generador y Sistemas de Energía Ininterrumpida de tipo Rotatorio.”

Chief Operating Officer  
Certification UK

Certificate number: MX-57996012-2012-QMS  
#1 recertification date: June 04, 2012.  
#2 recertification date: April 30, 2015.  
#3 recertification date: April 02, 2018.  
This certificate is valid until: April 01, 2021.

BM TRADA Certification Ltd, Chiltern House, Stocking Lane, High Wycombe, Buckinghamshire, HP14 4ND, UK

This certificate remains the property of BM TRADA Certification Ltd. This certificate and all copies or reproductions of the certificate shall be returned to BM TRADA Certification Ltd or destroyed if requested. Further clarification regarding the scope of this certificate and verification of the certificate is available through BM TRADA in MÉXICO Tel. +52 (55) 5310 1473

Also, we are certified to test under ISO/IEC 17025:2017



entidad mexicana de acreditación a.c.

ACREDITA  
A

**POTENCIA INDUSTRIAL, S.A. DE C.V.**

**AV. AÑO DE JUÁREZ No. 205, COLONIA GRANJAS SAN ANTONIO,  
C.P. 09070, IZTAPALAPA, CIUDAD DE MÉXICO, MÉXICO.**

*Como Laboratorio de Ensayo*

*De acuerdo a los requisitos establecidos en la norma NMX-EC-17025-IMNC-2018  
ISO/IEC 17025:2017, para las actividades de evaluación de la conformidad en la  
rama:*

**Eléctrica Electrónica\***

**Acreditación No: EE-0408-017/12  
Vigente a partir del: 2012-11-16**

*El cumplimiento de los requisitos de la Norma NMX-EC-17025-IMNC-2018 ISO/IEC 17025:2017 por parte de un laboratorio significa que el laboratorio cumple tanto los requisitos de competencia técnica como los requisitos del sistema de gestión necesarios para que pueda entregar de forma consistente resultados técnicamente válidos. Los requisitos del sistema de gestión de la Norma NMX-EC-17025-IMNC-2018 ISO/IEC 17025:2017 están escritos en un lenguaje que corresponde con las operaciones de un laboratorio y satisfacen los principios de la Norma ISO 9001:2015 "Sistemas de Gestión de la Calidad- Requisitos" y además son afines a sus requisitos pertinentes."*

Por la entidad mexicana de acreditación, a.c.



**María Isabel López Martínez  
Directora Ejecutiva**



**\*19LP5154 Actualización de la norma de acreditación vigente a partir 2020-01-30.**

Siempre que se presente este documento como evidencia de acreditación, deberá estar acompañado del anexo técnico. Para verificar el estatus de la vigencia de este certificado, consultar la página de ema.

FOR-LAB-011-01

Our company is part of the AWEA, AMDEE, EASA, EGSA, CANAME





We manufacture equipment up to 30,000 hp, all nema enclosures, liquid and air cooling, offshore ratings, explosion proof, Extreme low noise, API, UL, ETL, CSA, ATEX and ABS

In addition, we are in the process of finishing the installation of state-of-the-art battery testing equipment for our drivetrain systems.



## **PATENTS**

Our president Carlos Gottfried and our Chief Engineer Tomas Gottfried have several patents registered for state-of-the-art electrical machines including permanent magnet system, rotary UPS, etc.

Specifically, for permanent magnet systems the company has 3 patents that protect IP related to this kind of equipment.



US009479018B1

(12) **United States Patent**  
**Gottfried Blackmore**

(10) **Patent No.:** **US 9,479,018 B1**  
(45) **Date of Patent:** **Oct. 25, 2016**

(54) **ELECTRICAL MACHINE HAVING LOCKED PERMANENT MAGNETS AND ROTOR SLICES**

(56) **References Cited**  
U.S. PATENT DOCUMENTS



US 20090256435A1

(19) **United States**  
(12) **Patent Application Publication**  
**Gottfried**

(10) **Pub. No.:** **US 2009/0256435 A1**  
(43) **Pub. Date:** **Oct. 15, 2009**

(54) **DEVICE AND METHOD TO CLAMP AND LOCK PERMANENT MAGNETS AND IMPROVE COOLING WITHIN A ROTATING ELECTRICAL MACHINE**

**Related U.S. Application Data**  
(60) Provisional application No. 60/711,243, filed on Aug. 25, 2005.



US008203252B2

(12) **United States Patent**  
**Gottfried**

(10) **Patent No.:** **US 8,203,252 B2**  
(45) **Date of Patent:** **Jun. 19, 2012**

(54) **CLAMP AND LOCK PERMANENT MAGNETS WITHIN A ROTATING ELECTRICAL MACHINE USING PITCHED FOCUSED FLUX MAGNETS**

(52) **U.S. Cl.** ..... 310/261.1; 310/61  
(58) **Field of Classification Search** ..... 310/156.01–156.84, 61, 261.1  
See application file for complete search history.

(76) **Inventor:** **Carlos Gottfried, México (MX)**

(56) **References Cited**

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 355 days.

U.S. PATENT DOCUMENTS

2004/0217667 A1\* 11/2004 Popov ..... 310/156.57  
2006/0043811 A1\* 3/2006 Ong et al. .... 310/156.08