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Main ///

THE IMPORTANCE OF MAINTENANCE



"The maintenance activity cannot only be efficient, it must make it effective; that is to say, it is not enough just to repair the equipment or installation as quickly as possible, but above all to keep the function of the equipment available for operation, avoid equipment failure and reduce the risks of an unplanned production stoppage"

KARDEC & NASCIF (2009)

Maintenance, seen as a strategic function, is directly responsible for the availability and reliability of physical assets and the quality of the end products, and therefore represents a key importance in the company's results. Understanding the type of maintenance appropriate for the organization is to ensure the optimization of processes, enabling the expansion of the company. It is necessary to plan maintenance in order to correctly manage the most diverse variables involved in its management: from

the planning of purchases and sizing of material stocks to interference in production, with stop plans. Without a thorough study of each area and each physical asset, highlighting the criticality to the process and the impacts of a possible failure, it will be difficult to establish a maintenance plan that will greatly benefit the company, reducing costs, increasing the availability and useful life of equipment and improving the safety of the working environment.

THE IMPORTANCE OF REGULAR MAINTENANCE

No matter whether you run a power plant or a cement factory, a refuelling station or a regasification plant, maintenance is of the utmost importance.

Maintenance is something that all operators and plant managers must take seriously. There are major negative consequences of not regularly servicing the equipment of a plant or facility, and these negative consequences can ultimately result in job losses due to poor performance.



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BROKEN EQUIPMENT LEADS TO LOST PRODUCTION

The main consequence of irregular maintenance of the facilities is faulty equipment. Equipment that has not been repaired or inspected is much more likely to break down, and no plant in any industry can function fully with broken machinery. Faulty equipment always leads to loss of production. If it depends on a constant flow of production, as in a factory, then the broken equipment shuts down the line. At a refuelling station, for example, a faulty pump or a faulty valve will immediately lower production, leaving customers dissatisfied and looking for answers.

The amount of lost production varies with the piece of equipment that is broken, but you can easily find yourself facing tens of thousands of euros a day in lost productivity because something vital has not been maintained and in turn has not worked. Even relatively insignificant parts can cause breakage.

Maintenance should work to maintain the full functioning of the system and therefore only the adoption of an approach that



is ideal for the company, in order to be aligned with its particularities, mission and vision, will ensure greater adherence and fulfillment of expectations related to maintenance. Maintenance actions must be strategically planned in order to ensure the correct operation of the equipment and to obtain the highest possible availability of the equipment, i.e., sustaining the system without diverting the objective of increasing revenues (profitability).

Modern maintenance is not restricted to corrective action alone, but is fundamentally linked to the management of industrial assets, ensuring availability and reliability at a reduced cost and, therefore, directly impacting the company's operating results.

To determine a strategic management of optimal maintenance is to study and deepen the variables related to the production process and management characteristics of the most diverse companies, and therefore it is not a trivial task.

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PREVENTIVE MAINTENANCE

As the name suggests, preventive maintenance prevents the appearance of failures in assets and equipment. This maintenance is done systematically, that is, the equipment is inspected even if it has not shown any signs of failure. In this way, any failure of the equipment is avoided as much as possible to ensure the proper functioning and safety of the assets.

Drawing up preventive maintenance plans for equipment and installations means preventing breakdowns and reducing the probability of failures in equipment that is crucial to the productivity of companies.

This maintenance strategy is programmed using maintenance plans. This allows the responsible department to control operations and know, a priori, which parts or resources are necessary to guarantee a certain preventive operation.

In addition, preventive maintenance ensures the reliability of the equipment. All operations are performed at previously defined intervals that do not impact the company's performance.



Main ///

CORRECTIVE MAINTENANCE


Corrective maintenance consists of a set of technical tasks, aimed at correcting faults in equipment that prove to be in need of repair or replacement. This type of maintenance corrects errors in equipment that are dependent on intervention to return to its initial function.

These maintenance practices are not dependent on maintenance plans and, as a consequence, the possibility of no spare parts in stock is high. Also, you may not find any maintenance technicians available to solve the problem at the moment, as the failures are total unforeseen.

Although, in some cases, corrective maintenance is unavoidable, it ultimately has a greater financial impact on businesses, as it often means that equipment is unavailable for a long time. The fact is that a significant percentage of these failures can be avoided if preventive maintenance plans are implemented.

However, the corrective maintenance model will always be necessary and can be applied to equipment with low levels of criticality, whose failures do not interfere with the company's productivity.

THE MAINTENANCE CARRIED OUT BY PRF



In order to improve the safety and durability of infrastructures, PRF provides Preventive and Corrective Maintenance services for Gas Distribution Networks, LPG Storage Plants, Regasification Plants, Industrial Units, Gas Regulation and Metering Stations and Gas Refuelling Stations.

In order to obtain maximum efficiency in our maintenance activities, at PRF, we develop the following activities:

- Preventive and corrective maintenance of installations and equipment;
- System operation and local or remote monitoring;
- 24/7 technical assistance;
- Programmed interventions, guaranteeing the functionality of the various systems;
- Permanent stock of spare parts and consumables that allow a quick resolution of any malfunction.



Main ///

ONLINE PLATFORM WEBCOP

webCOP
CONTROL OPERATIONAL PLATFORM
PRF SOLUTIONS



PRF has developed a remote operation and supervision system, which is vital for the functionality of the infrastructures. The WebCOP online platform has an extensive set of advanced tools to facilitate the remote monitoring and control of devices at all regasification stations or refuelling stations (LNG, CNG and Hydrogen).

Remote monitoring of equipment allows immediate responses to any problem detected in the equipment. The notification system is configured so that the maintenance team is instantly informed, through SMS or E-mail alarms, of problems requiring immediate attention.



Remote control and management with cloud based – accessible worldwide through internet connection;



Runs through Android, Windows and IOS;



Stocks and Logistics Control and Management;



Alarms sent by SMS or E-mail;



Read process variables and send commands;



Easy user interface.

ONGOING MAINTENANCE CONTRACTS

MOZAMBIQUE

In Mozambique PRF has a maintenance contract with the company ENH-KOGAS that covers preventive maintenance, corrective maintenance and emergency maintenance. The 10 employees allocated to the contract guarantee an emergency picket available 24 hours a day, 365 days a year and guarantee assistance to 81.8km of natural gas distribution network and 31 natural gas reduction and measurement stations, covering the Maputo and Marracuene areas.



PORTUGAL

In Portugal, PRF has different maintenance contracts with the company GALP for LNG and CNG refuelling stations and regasification plants throughout the country. These contracts cover a 24/7 Helpdesk service, corrective and preventive maintenance.

FRANCE

In France, PRF has recently signed an assistance and maintenance contract with

PRIMAGAZ, covering a 24/7 Helpdesk service, remote support and corrective maintenance, for LNG and CNG refuelling stations at various locations in the country.

SPAIN

In this country we have maintenance and assistance contracts with GALP and MOLGÁS for several LNG and CNG refuelling stations and for regasification plants.

Testimonial ///

ERIC RAMOS



With the start-up of each new installation, and across all the equipment that makes it up, a process of continuous wear begins that must be managed, always in order to prolong and maximize its performance. All equipment has an associated lifetime; therefore, its correct maintenance is the only way to ensure that it performs its work correctly and safely for as many hours as possible.

All PRF installations have to maintain their profitability, sustainability, operability and safety. Maintenance is the most important tool to guarantee this.

Correct and well-managed maintenance is crucial to guarantee the continuity of the working conditions of the installations, and consequently, the quality of the service provided to the customer. Despite the continuous investment, all the maintenance actions to be performed during the useful life of an equipment, and in a well-managed and correctly defined period of time, will guarantee the profitability, sustainability and longevity of the installation.

Good management in the application of preventive maintenance actions always reduces the appearance of corrective maintenance, this is a fact that has no argument!

"Maintenance is the most important tool to ensure the operability and safety of an installation".

Eric Ramos
Maintenance Business Unit Manager

Highlight ///

VISIT OF HIS EXCELLENCY THE SECRETARY OF STATE DR. JOÃO GALAMBA



On 21 August 2020, PRF received a visit from His Excellency the Deputy Secretary of State for Energy, Dr. João Galamba, who considered the company *"a good example of how Portuguese companies are creating jobs and contributing to the growth of the Portuguese economy and to the development of technologies applicable to the gas sector and, in particular, to hydrogen"*.

The delegation, which was also made up by Eng. Jerónimo Cunha (Advisor to the Secretary of State) and Dr. Rui Ferreira de Almeida (Expert Technician in the Secretary of State's Office), was given a presentation on the mission, structure and operation of PRF, which was followed by a working meeting on the company's vision and strategic investments, the main constraints faced in the current context and the challenges inherent in the sector, as well as the potential that the recently presented "Hydrogen Strategy", represents to Portugal and Europe, which will not only continue the company's strong presence on the European market, but will even boost it. The delegation's visit represented for PRF the recognition for the activity developed, as well as a stimulus regarding the future and the implementation of its projects.

Reference Projects ///

FUELLING STATIONS

Portugal

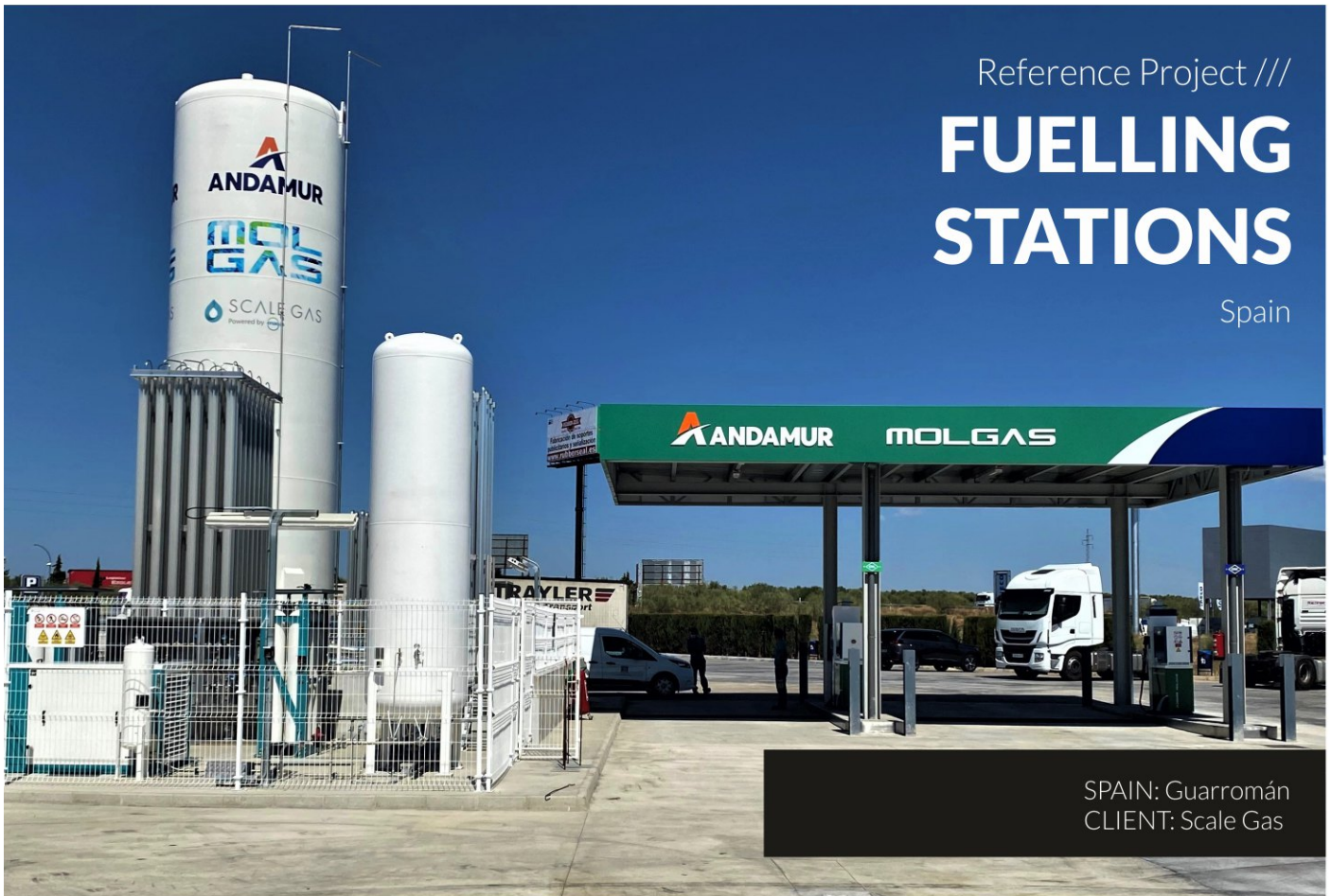


PORTUGAL: Elvas, Vilar Formoso and Maia.
CLIENT: Dourogás

Despite the pandemic, PRF met all customer requirements and ended several LNG/CNG fuelling stations within the agreed deadlines:



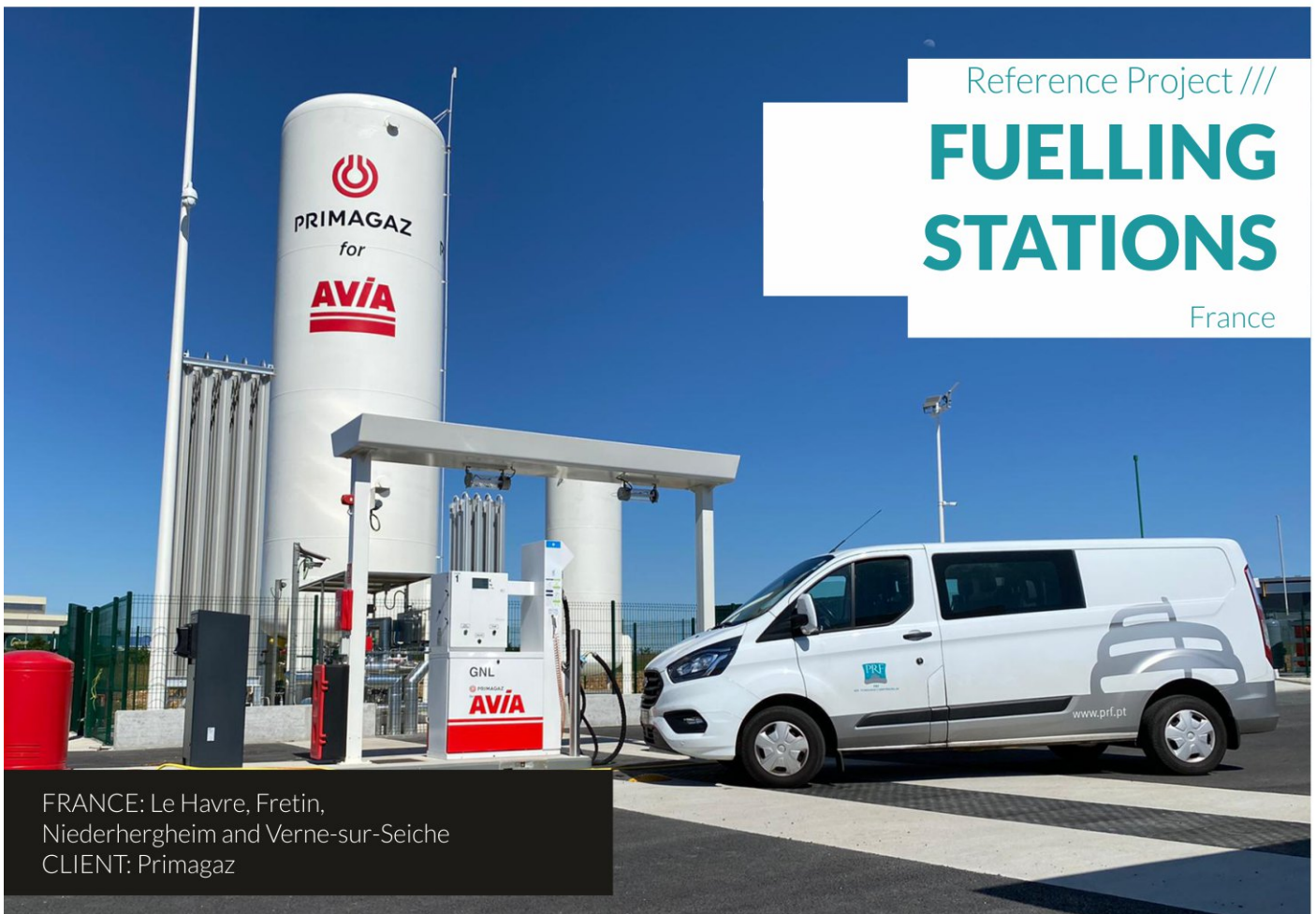
PORTUGAL: Lisboa
CLIENT: Carris



Reference Project ///

FUELLING STATIONS

Spain

SPAIN: Guarromán
CLIENT: Scale Gas

Reference Project ///

FUELLING STATIONS

France

FRANCE: Le Havre, Fretin,
Niederhergheim and Verne-sur-Seiche
CLIENT: Primagaz

Sponsorship ///

GREEN GAS

2020



Last September, the **Green Gas Mobility Online Summit** took place, the first congress on sustainable online mobility that integrated a conference room and a virtual fair, which allowed networking among participants and reduced the carbon footprint, in relation to previous editions.

A key event at which the highest representatives of the natural and renewable gas sector met to discuss the energy and climate challenges facing the road and maritime transport sector.

During the 3-day event, organized by GASNAM and sponsored by PRF, the benefits

of using carbon neutral gases such as bio-methane, synthetic gas or hydrogen for mobility were analyzed. These gases can be used in their pure state or mixed with conventional gas to reduce the carbon content in the mixture, without the need to change vehicles or fuel logistics infrastructure. The transition from a fossil world to a largely carbon neutral environment can start today with immediate emission reductions.

The event sought to respond to the challenges facing transport today with more than 50 conferences, B2B meetings, and a large virtual exhibition.

Congress ///

WORLD HYDROGEN CONGRESS

2020



The World Hydrogen Congress is an annual meeting for all stakeholders along the hydrogen production and distribution value chain. The 2020 World Hydrogen Congress took place in September through an online platform, with a remarkable range of participants, where innovative and emerging strategies for the growth and sustainability of the hydrogen industry were discussed.

Highlight ///

MOVE WITH US TOWARDS A GREENER FUTURE

PRF, as a reference company in the area of combustible gases, has always put a lot of emphasis on renewable gases and the opportunities that exist in the Biogas/Biomethane market, and as a natural consequence hydrogen has appeared.

Since 2018, when we created the Hydrogen Business Unit, we have been gaining skills in the hydrogen area, taking advantage of all the valences we have been developing in the natural gas area for almost 30 years.

Following the developments made in this area, we present a new image as a commitment to our focus on this new business unit.



Move with us **Towards a Greener Future**



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