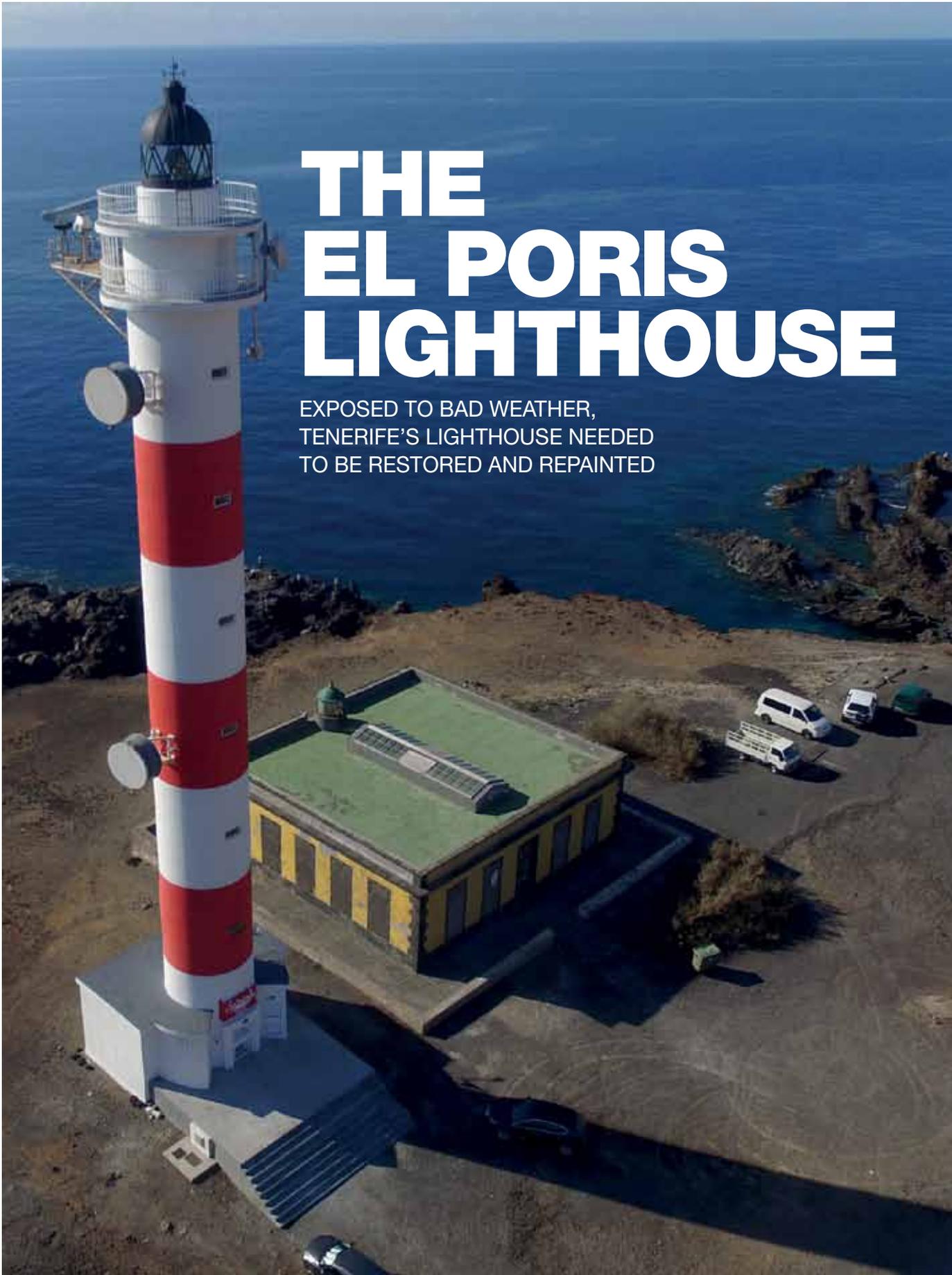


THE EL PORIS LIGHTHOUSE

EXPOSED TO BAD WEATHER,
TENERIFE'S LIGHTHOUSE NEEDED
TO BE RESTORED AND REPAINTED



Situated between the cities of Abades and Poris de Abona, on the south-east coast of Tenerife in the Canary Islands, the El Poris lighthouse falls under the administration of the Autoridad Portuaria de Tenerife.

The previous lighthouse at Punta de Abona was inaugurated in 1902 to help ships navigate the route between Santa Cruz de Tenerife and the ports of the western Canaries. Over the years the lighthouse fell into disrepair and was finally abandoned in the 1970's when a new lighthouse tower was built. The need for a lighthouse in this area had been underlined a few years before, following the sinking of a ship between Punta de Abona and Punta de la Rasca. Also, the beacon on the old lighthouse was only 6.5 metres above the ground. It was decided, therefore, to build a new lighthouse with a beacon set at a higher level.

The new lighthouse, which sits right next to the old one, was inaugurated in August 1978: a cylindrical tower in concrete characterised by its red and white horizontal stripes with an automatic beacon set at 39 metres above the ground. Two years ago, after realising the extent of the damage due to its constant exposure to atmospheric agents and the level of corrosion caused by the marine aerosol, the port authorities decided to restore the lighthouse.

The first step was to remove all the damaged and deteriorated concrete from the surface of the tower with power tools until the steel reinforcement was exposed. It was recommended to passivate the reinforcement with two coats of MAPEFER 1K protective cementitious mortar.

Once the MAPEFER 1K was dry, the surface of the tower was restored with the



thixotropic mortar MAPEGROUT T40, which is easy to apply in thick layers on vertical surfaces without using formwork, mixed with MAPECURE SRA 25 (this product has now been replaced in Spain with MAPECURE SRA). On some of the smaller areas, on the other hand, PLANITOP SMOOTH & REPAIR fibre-reinforced, thixotropic cementitious mortar was applied.

The entire surface was then treated with MALECH micronized acrylic resin-based primer in water dispersion. This product was used to even out the absorbency of the substrate and as an adhesion promoter for the paint to be applied afterwards. For the final painting cycle, Mapei Technical Services recommended applying SILEXCOLOR PRIMER and, once it was completely dry, it was then finished off with SILEXCOLOR PAINT, a silicate-based coating product permeable to vapour which is available in a wide range of colours.

FACING PAGE. A view of the lighthouse upon completion of the work: its white finish was created by applying SILEXCOLOR PRIMER followed by SILEXCOLOR PAINT.

ON THIS PAGE, ABOVE. The lighthouse as it was before work started, forty years after its inauguration.

BELOW, LEFT. The first stage of the intervention was to remove all the damaged and deteriorated concrete and to clean the steel reinforcement.

CENTRE. The steel reinforcement was passivated with MAPEFER 1K.

RIGHT. The surface of the lighthouse was restored with MAPEGROUT T40 and PLANITOP SMOOTH & REPAIR.



TECHNICAL DATA

El Poris Lighthouse, Tenerife, Canary Islands (Spain)

Year of Construction: 1978

Year of Intervention: 2016

Intervention by Mapei: supplying products for reinforcing rods, for concrete repair and for coloured finishes

Project: Intemac

Client: Autoridad Portuaria de Tenerife

Contractor: Área Construcción

Mapei Distributor: A. Feliciano S.A. (Afelsa)

Mapei Coordinators: Antonio Montoro, Manuel Angel López (Mapei Spain SA)

MAPEI PRODUCTS

Repair of concrete: Mapefer 1K, Mapegrout T40, Mapecure SRA 25, Planitop Smooth&Repair

Protection and finish: Malech, Silexcolor Primer, Silexcolor Paint

For further information on products see www.mapei.es and www.mapei.com

IN THE SPOTLIGHT

MAPEGROUT T40

Medium strength (40 MPa), shrinkage compensated, fibre-reinforced, thixotropic mortar. Used for the repair of degraded vertical or horizontal concrete surfaces with mortar possessing medium mechanical performance characteristics.

MAPEGROUT T40 is a premixed powdered mortar composed of cement, graded aggregates and special additives. When mixed with water MAPEGROUT T40 forms an easy to apply mortar that can be applied without slumping even in substantial thicknesses on vertical surfaces without formwork.

