

 **SIDERPALI**
MİTAŞ GROUP

MAINTAINANCE 2024

MAINTAINANCE SERVICE FOR MOBILE CROWN AND FIXED PLATFORM LIGHTING TOWERS

With nearly 30 years of experience, **SIDERPALI MAINTAINANCE** is the division of Mitas Siderpali, and it is highly specialised in the installation and maintenance of **MOBILE CROWN AND FIXED PLATFORM LIGHTING TOWERS**.

The works of installation and maintenance of the lighting towers include also all the necessary documentation according to the Italian regulation regarding the prevention and the safeguard of the safety and health of people and things.

The service is handled by highly-qualified staff, both for mechanical and electrical interventions. Our staff is composed by experts who have mobile repair shops, fully equipped of tools and spare parts, that allow the perfect execution of the activities.

Public Administration Managers and Private Sector Companies are civilly and fully responsible for the damage provided by the plant to things and/or people. For this reason, there is the need to schedule adequate interventions, made by qualified experts, in order to reduce this risk. Very often, the maintenance activities are only made on the lighting devices (such as lamps, projectors and lighting bodies) but even if it is also necessary, it is not enough for the correct management of the lighting tower.

SIDERPALI MAINTAINANCE

with its own specialistic organization, guarantees:

- the safety of the plant
- the regular and correct functioning of the plant
- the lifetime of the product
- the reduction of the risk of accidents
- the certifications of the lighting tower

CERTIFICATIONS:

- ISO 9001
- ISO 14001
- ISO 3834-2
- EN1090-1
- EN 40-5

MAINTAINANCE SERVICES::

- "A" Ordinary annual maintainance
- "R5" Extra maintainance for implants older than 5 years
- "R10" Extra maintainance for implants older than 10 years
- "S" Controlls of the tower

* Direttiva Macchine Regulation 2006/42/CE ; Legislative Decree 17/2010, Legislative Decree n. 81/08 (Testo Unico sicurezza).

MECHANICAL MAINTAINANCE: MOBILE-CROWN LIGHTING TOWERS

FREQUENCY AND TYPOLOGY OF MAINTAINANCE

In order to guarantee the perfect functioning of the Mobile-Crown Lighting Tower and to maintain the state of safety according to the law on the matter, there is the need to respect the following maintainance program:

Annual Control "A"

It consists on the check of all the structural components of the system of the Mobile-Crown and of all the mechanical and electrical devices, with the purpose of evaluating the grade of wear and efficiency and to highlight (and then solve) the faults that could cause danger or damage to people and objects. At the moment of every annual intervention on the towers, the electrical unit is checked too (electrical unit with wheels, integrated or semi-integrated) and this is confirmed by the release of a certification.

Mechanical Extra Review after the 5th year "R5"

It is done in addition to the annual control; it consists on an accurate review of the structural components of the head system with the substitution of the most important parts that are more possible of wear, on the review of the mechanical and electrical devices, and on the evaluation of the grade of wear and efficiency in order to highlight the faults that could be the cause of danger and damage for people or things and also to propose solutions. It is made through the use of an aerial platform which facilitates the access to the mechanisms of the top. At the end of the activity it will be released a certificate of intervention for each Lighting Tower.

Mechanical Extra Review after the 10th year "R10"

In addition to the extra maintainance program (R5), there is also the need to make deeper controls, made with the adequate tools (S). Generally, this intervention of maintainance is suggested for those structures which have at least 10 years.



MECHANICAL MAINTAINANCE: FIXED-PLATFORM LIGHTING TOWERS

FREQUENCY AND TYPOLOGY OF MAINTAINANCE

In order to guarantee the constant functioning of the Lighting Tower and to maintain the state of safety according to the Regulation on the matter, there is the need to respect the following maintainance program:

Annual Control "A"

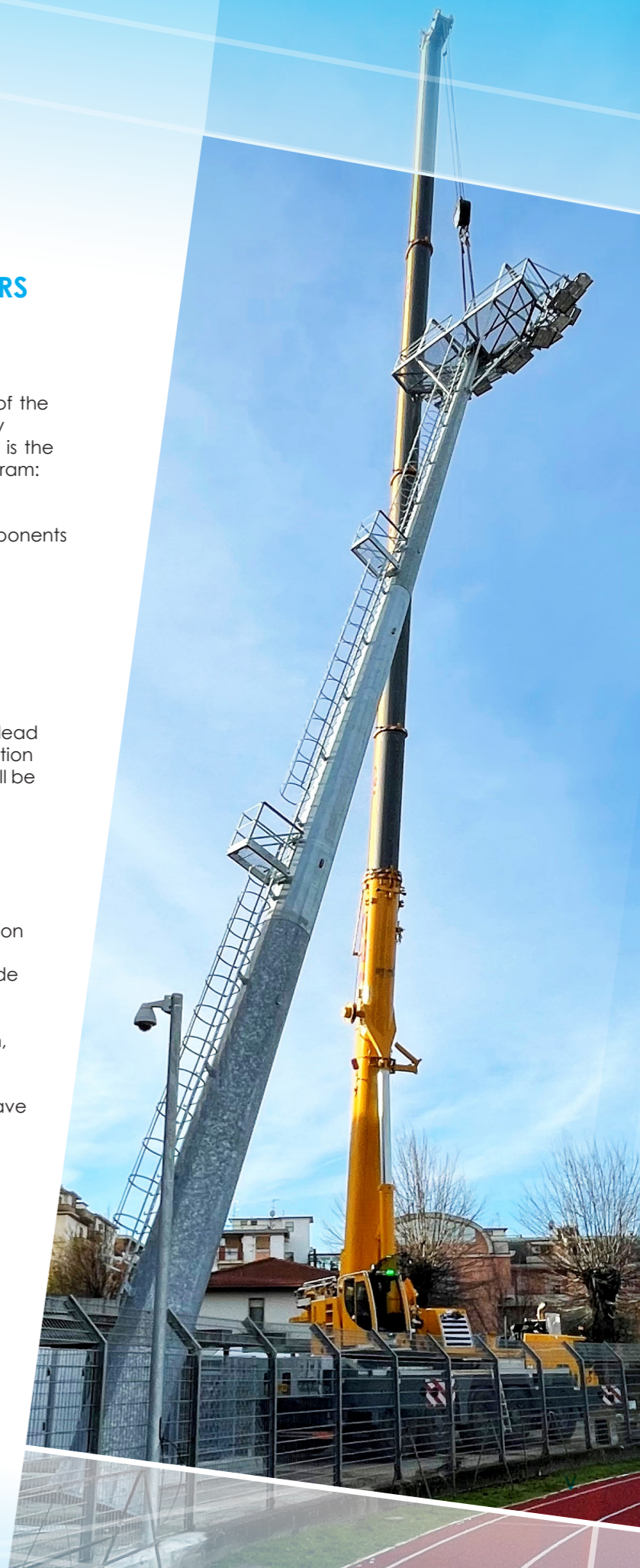
It consists on the verification of the following components of the fixed-platform lighting-tower:

- Climbing ladder and its attaches to the stem
- Rest steps and its attaches to the stem
- Head platform and its attaches to the stem
- Attaches of the projectors to the platform
- Electrical wires
- Grounding wires
- Ignition of the projectors

Moreover, any faults or malfunctionings that could lead to danger are detected and resolved. In combination with every annual maintainance of the towers, it will be released a document with information about the controls done.

Functional Control "S"

It consists on the control of the plant in order to detect the stability and the safety of the installation itself (stem, flanges, reinforcements for the doors, foundation bolts, nuts, etc). These controls are made through machines which are able to detect the state of wear of the materials (integrity of the galvanized coating and of the layers of the stem, of the flanges, of the reinforcements, etc.). For every installation that is checked, it will be released a document attesting the controls that have been done.





MAINTAINANCE SERVICES

“A” Ordinary Maintenance of the lighting tower - Annual Control All the advantages of an annual control in order to maintain the perfect and safe status of the installation.

“R5 Extra Maintenance of the lighting tower
Intervention of extra maintainance, necessary when the installation has not been checked for several years. This kind of intervention makes it possible for the lighting tower to be safe and efficient as it was.

“R10” Extra Maintenance of the lighting tower
Intervention of extra maintainance R5 with the functional control “S”, suggested for those towers which have been installed more than 10 years ago.

“S” Extra Maintenance of the lighting tower - Functional Control
It guarantees the necessary safety of the installation of the lighting tower.

MOBILE CROWN (CM) OR FIXED PLATFORM (FP) LIGHTING TOWER

| | A | S | R5 | R10 |
|--|---|---|----|-----|
| Control of the most important mechanical and electrical components of the mobile crown system (CM) | • | | • | • |
| Lubrification of the moving mechanisms (CM) | • | | • | • |
| Evaluation of the state of wear and efficiency of all the mechanical and electrical components of the mobile crown system (CM) | • | | • | • |
| Release of the document attesting the intervention on each tower | • | | • | • |
| Control of the electrical moving unit: wheeled, semi-wheeled, semi-integrated or integrated (CM) | • | | • | • |
| Release of the document attesting the intervention on the electrical control unit: wheeled, semi-wheeled, semi-integrated or integrated (CM) | • | | • | • |
| Complete revision of the components of the head (CM) | | | • | • |
| Substitution of the principal components subjected to wear (CM) | | | • | • |
| Basket for the maintainance of the head (Cestello) (CM) | | | • | • |
| Release of the certificate of static suitability of the installation | | • | | • |
| Control on the clamping of the nuts and bolts of the stairs (FP) | • | | | |
| Control on the clamping of the platform of projectors maintainance (FP) | • | | | |
| Control on the clamping and connection brackets of the projectors (FP) | • | | | |
| Control on the elctrical and grounding wires with the release of the certificate attesting the control done (FP) | • | | | |
| Control of the efficiency of the lift system: stair steps, stair ribs and trap doors (FP) | • | | | |
| Check of the welding of the bottom flanges with magnetical method (if applicable) | | • | | • |
| Control of the thickness of the steel of the stem on the bottom part with ultra-sound method | | • | | • |
| Control of the thickness of the zync of the stem on the bottom part with ultra-sound method | | • | | • |
| Check of the conditions of the foundation bolts and of the base flanges (if applicable) | | • | | • |
| Check of the welding on the base reinforcements (doors) with magnetic method (if applicable) | | • | | • |
| Check of the presence of rust and water at the bottom of the tower | | • | | • |

EXTRA SERVICES

Technical inspection

In case of doubts about the type of maintainance to do, or just as a request, SIDERPALI Maintainance is available to send a Technical Expert to the site of the installation, in order to verify the degree of wear of the lighting tower object to the maintainance. The goal of this inspection is to give the customer a personalised and detailed report on the concrete situation of the installation and on the activities necessary to reestablish a state of safety.

Damage or Upgrade

Makes part of the scheduled maintainance also the free substitution of the components which are more possible of wear and that are part of the Siderpali Maintainance Package. If there is the need to substitute other parts because of damage or there is a need to update the offer, it will be on line with the market.

Consulting Services

For cases different from those mentioned until now, or just as a request, Siderpali Maintainance is willing to send a Technical Expert on site in order to share information about the functioning of the lighting tower or, eventually, to train local human resources on the principal rules about use and maintainance of the lighting tower. Time and costs of these operations must be discussed with the Siderpali customer service.

SIDERPALI MAINTAINANCE has a map of all the lighting towers installed on the national and international territory.

LIGHTING ELEMENTS

The Siderpali Maintainance offer always includes the maintainance of the lighting elements, which consists of:

- External cleaning of the glass
- Visual Inspection of the electrical connections
- Visual Inspection of the fixing system of the projectors
- Report that signals any possible faults

It is possible to combine the maintainance offer proposed here with specific interventions with the aim to substitute the old projectors with **new LED projectors**, and with the following services:

- Inspection on site
- lighting calculation according to UNI
- Before- and after-sale services
- Guarantee on the products



Technical Control on the lighting towers:

It consists of technical controls, done to detect the stability and safety of the main structure (stem, flanges, door reinforcements, foundation bolts, bolts and nuts, etc).

The controls are conducted with instruments that are able to detect the state of wear of the materials and of the output (integrity of the galvanized cover and of the stem in steel, of the flanges, of the reinforcements, etc.). At the end, it will be released a document attesting the works done on every structure.

Once that the tower is back to a state of full efficiency, it is suggested to schedule a series of mechanical ordinary annual maintainance controls and an extraordinary mechanical revision with a technical control every five years.

N.B. the maintainance of the mobile crown tower is possible only with the use of a lift-system. For every tower the customer is given instructions about the use and maintainance of the tower that can be consulted in any time.

Requirements of the people responsible of the maintainance.

The owner of the lighting tower has the duty of guaranteeing the perfect functioning and the state of safety and correct maintainance of the lighting installation according to the law, art. 26 Legislative Decree n. 81/08; he has the duty of verifying that the maintainance service company has all the technical and professional abilities, both on the electrical and mechanical maintainance of the mobile crown- and fixed platform- lighting tower, and that is able to follow the rules on the matter. Another important requirement that testifies a high quality standard of maintainance is the ownership of ISO 9001 certification and the respect of its norms. When the owner of the installation chooses a maintainance company which has all the criteria mentioned before, has a double advantage for the owner:

- it will reduce at maximum the risk of a bad maintainance, caused by unprofessional workers;
 - in case of accidents, it will demonstrate that the owner made the effort to avoid any risk of accident, using all the tools at his disposal, by calling a highly specialised company of the maintainance sector.
- This last aspect will work as a protection in case of accident.

Responsibility of the administrators of Private Entities or Private Societies.

The civil law (art. 2050-2051-2053 of the civil regulation) makes several hypothesis about the case of dangerous events due to dangerous activities (such as the use of electric energy), the collapse of installations fixed to the ground, also temporary, and the lack of the right of custody. In case of accident it is necessary to prove to have done a correct maintainance, using all the necessary precautions to avoid the risk of accident. According to the penal law, there are two cases which relate to the prevention of accidents and the preservation of the installation. In particular, there is a law that states that the owner of the lighting installation has to use all the tools at his disposal to maintain the installation in a safe and good state of maintainance; he also has the duty to do periodical works of maintainance on the electrical and mechanical components. Only in this way the owner will be able to demonstrate to have done the maintainance of the installation with diligence. In fact, in case of accident caused by a bad maintainance service, the owner could be indicated as the person responsible of the event according to the penal law, art. 589 and 590 C.R. Moreover, the mobile crown-lighting towers have a mechanism of leverage for the movement of the mobile crown and for this reason they have to follow the Legislative Decree 17/2010 (Direttiva Macchine) which establishes the obligation of tagging each tower and attesting the respect of the CE rules. This Decree establishes the prohibition of the use of the installation in case of risk of accident, even in the possession of a declaration of conformity. Finally, the Legislative Decree n. 81/08 establishes the duties of the employer for what concerns the removal of any faults in the installations, the correct use of the installation and an adequate maintainance that guarantees a state of safety.



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