



STAINLESS STEEL REINFORCING BARS

APPLICATIONS



It can be used everywhere, but it is useful especially when the environment is aggressive



SEA AND SALT

Rodinox® can be used where there is a possible contact with chlorides or salt



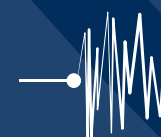
LOW TEMPERATURE

No risk of brittle structures even where the climate is rigid, for example in high mountains



HIGH TEMPERATURE

Rodinox® shows a very high-temperature resistance, perfect in case of fires



SEISMIC ZONES

Rodinox® can be used in seismic areas thanks to its high plasticity and fatigue limit



LOW MAGNETISM

Rodinox® is suitable for use when very low magnetic permeability is required (hospitals, airports...)



LONG LIFE TIME

The Life Cycle Cost of the structures is greatly reduced thanks to its durability

Rodacciai

STAINLESS STEEL REINFORCING BARS

Rodacciai

Thanks to the **60 years experience** in steel working process, Rodacciai can offer to its own customers a very distinctive mixture of services and features, which make of it, a privileged interlocutor for all what concerns the steel world.

Spread all over the world, with 5 productive sites and 28 commercial branches, its structure allows Rodacciai to be by its customers side in every production phase starting from the choice of the material to final product and farther to the maintenance: skilled Rodacciai technicians are available for following the yards step by step, wherever they are.

Experience, know-how and assistance are not the only features which make the distinction between Rodacciai and its competitors: **unique in the world for production range**, Rodacciai assures its customers a **production flexibility** all but incomparable thanks to the number and quality of equipments owned, all this turning into **punctual and fast deliveries**.

Besides being the wireworker owning the largest number of drawing machines set up all over the world, Rodacciai can boast a **complete control from beginning to end of production** of stainless steel, which is produced in the Spanish production site Olarra Aceros Inoxidables, then rolled and drawn in Spain or in Italy and worldwide directly distributed from Rodacciai.

Not only excellence of production but also a steady **attention to environment** because Rodacciai is convinced that industry reasons have to compare with nature ones.

An engagement which brought to obtain the important **Certification ISO 14001** which attests not only the effort towards the environment protection, but also the effort towards a continuous improvement.









STAINLESS STEEL REINFORCING BARS

Rodinox® is a complete range of reinforcing products for concrete, in bars and coils, **available in all the most important stainless steel types** and it is **the solution when the environment is aggressive**. In these situations the usual carbon steel reinforcing bars may corrode, with destructive results on the structure. Actually, stainless steel reinforcing bars are resistant to corrosion, a real problem for carbon steel bars, that can be accelerated by chemical processes such as carbonation due to atmospheric attacks or infiltration of chlorides into the concrete.

The use of Rodinox® enhance durability on the concret structures, **making possible to calculate the duration of the reinforcement for all the life of the artifact**: moreover, designing with Rodinox® does not require special modification of the criteria comparing to the usual carbon rebar. Rodinox® can be processed in the same way as carbon steel bars, with the only caution of avoid contamination of stainless surface by using clean machines.







APPLICATIONS OF RODINOX BARS

Rodinox® is the solution for reinforcing bars when environmental aggression is a priority and a special durability of the structure is needed. It can be used in structures coupled with carbon steel rebar without altering its performances: that is why a good design should provide stainless steel reinforcing bars only in appropriate positions.



SALT



MARINE ENVIRONMENT AND SALT

Structures exposed to marine environment are at risk: above all, the stainless steel reinforcing bars must be used on the parts close to the surface when the structure is alternatively wet and dry.

The concrete cover can be reduced in comparison with the usual cover, necessary when chlorides are present in the environment.









SALT

LOW TEMPERATURE HIGH MOUNTAINS AND DE-ICING SALT

Rodinox® bars can be used in high mountains roads and constructions, because low-temperature toughness eliminates the risk of brittle structures even when the climate is rigid. For the same reason, its use is recommended for cryogenic applications.

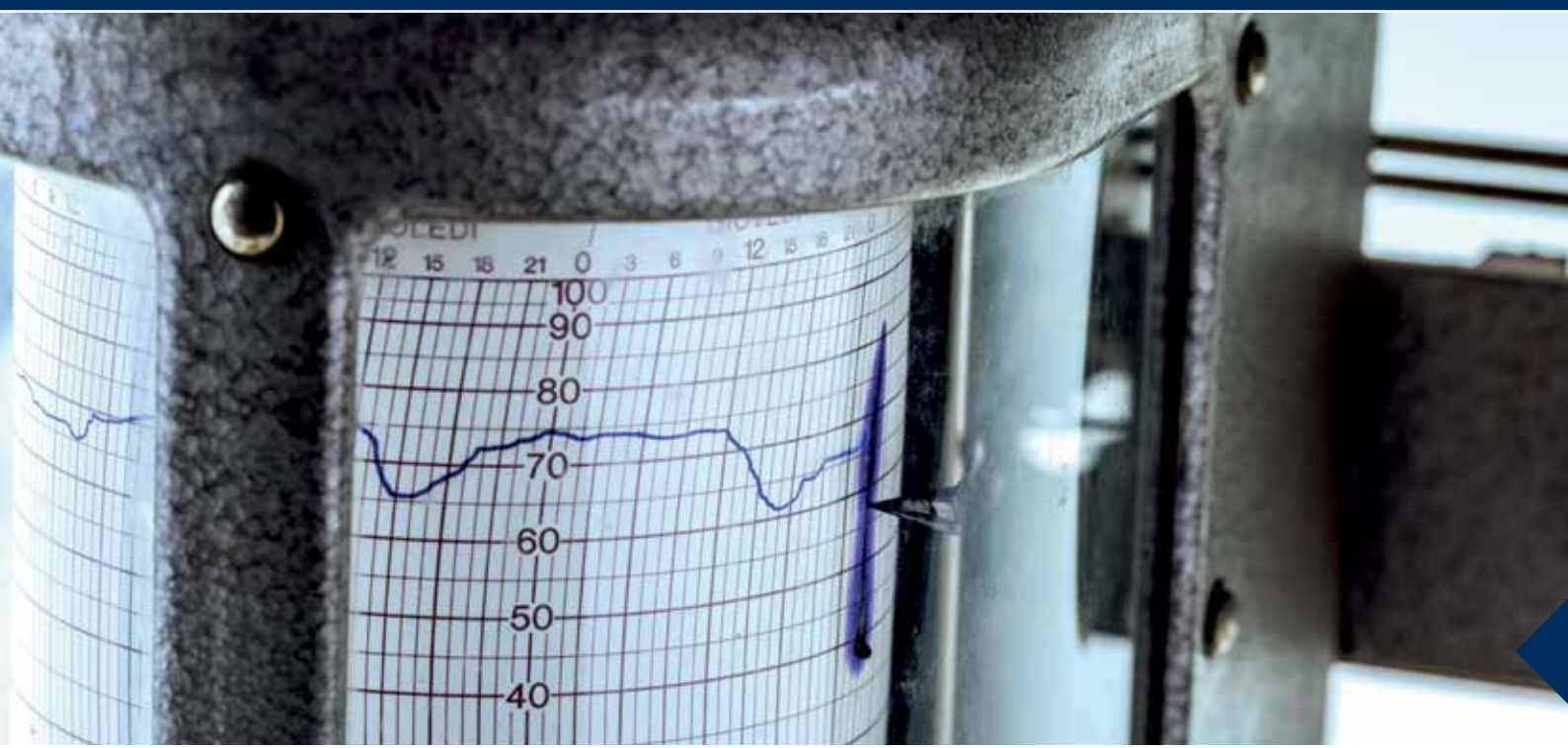
Rodinox® is resistant to salt, so it can be applied also where de-icing salt must be used.





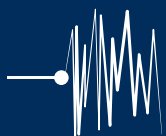
LOW MAGNETIC PERMEABILITY

Rodinox® is suitable for use when very low magnetic permeability is required: for example it can be provided in structures where special electronic equipment are located, but also in other particular situations such as the operating rooms of the hospitals, where there are magnetic resonance equipment or the control towers of the airports.



HIGH TEMPERATURE RESISTANCE

Rodinox® is not only resistant to low and very low temperatures: it shows a very good behaviour also at high and very high temperatures. A feature that makes it suitable for a long resistance also in case of fire, giving the time for limiting the damage to the buildings and making them safer for people.



SEISMIC ZONES

Thanks to its high plasticity and fatigue limit, all Rodinox® stainless steel reinforcing bars last longer than the common steel rebar, showing also a lower brittleness: for these reasons its use is recommended in seismic areas, to reduce the risk of collapse of buildings and skyscrapers in case of earthquakes.





LIFE CYCLE COST: DURABILITY THROUGH YEARS

The Life Cycle Cost of structures and buildings can be greatly reduced by using stainless steel reinforcing bars in appropriate positions, such as the ones close to the outer part of the buildings or in contact with water or salt and leaving the carbon steel rebars for the parts where the risk of chloride contamination tends to zero, such as the inner parts.

In this way the difference in the initial investment may increase

only 3 percent, but it will considerably reduce the cost of maintenance and repairs. There is an increasing demand for artifacts that have to last longer, even hundreds of years, requiring a very low maintenance: the only possible approach to these kind of requests is the use of Rodinox®, so that the costs due to the maintenance of reinforcing bars is practically eliminated since the beginning.

A 30 YEARS OLD BRIDGE
MADE WITH ONLY CARBON STEEL

A 60 YEARS OLD BRIDGE
MADE WITH INOX STEEL



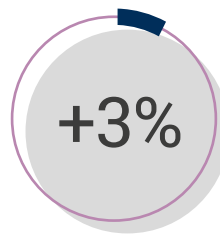
PROGRESO BRIDGE - MEXICO

INITIAL COST

20% RODINOX® + 80% CARBON STEEL



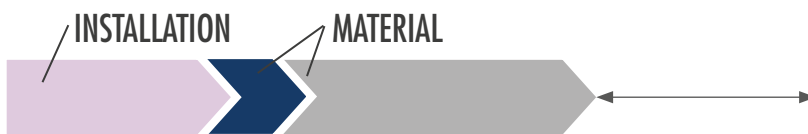
100% CARBON STEEL



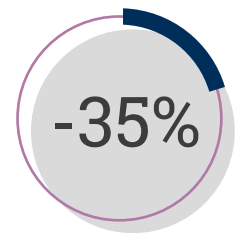
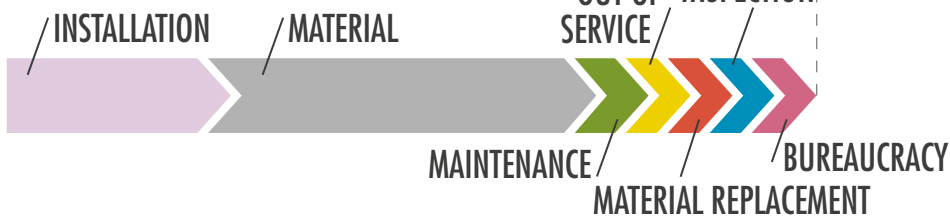
AVERAGE INCREASE OF THE
CONSTRUCTION'S COST
BY USING RODINOX
INSTEAD OF CARBON STEEL

90 YEARS COST OF THE ARTIFACT (BRIDGE)

20% RODINOX® + 80% CARBON STEEL



100% CARBON STEEL



REDUCTION OF
THE COST OF THE
ARTIFACT IN 90
YEARS USING
RODINOX

LIFE OF SERVICE

RODINOX®



CARBON STEEL



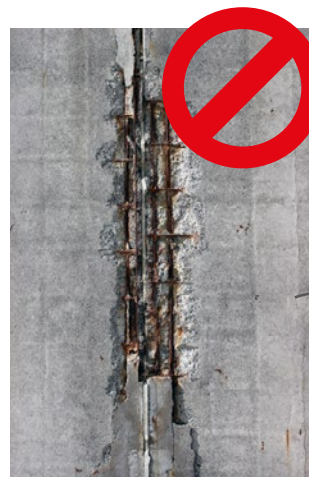
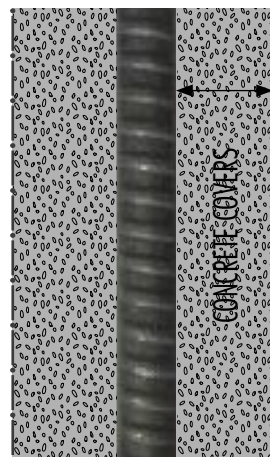
INCREASES
THE LIFE OF SERVICE,
I.E. THE YEARS WITHIN
THE EXTRAORDINARY
MAINTENANCE
IS NOT REQUIRED

CONCRETE REDUCTION THANKS TO RODINOX®

RODINOX®



CARBON STEEL



IT ALLOWS
THE REDUCTION
OF 50%
CONCRETE COVERS

WITHOUT RODINOX®









Rodacciai is a modern company, which pays attention to product quality, production processes, certification and the environment.

Rodinox conforms to the well-known **British Standard BS 6744+A2:2009**, widely used in the construction sites all over the world and to the **Italian Ministry Decree** for buildings. In addition, on request, it may conform also to **other national and international standards**, so it can be used in various Countries.



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