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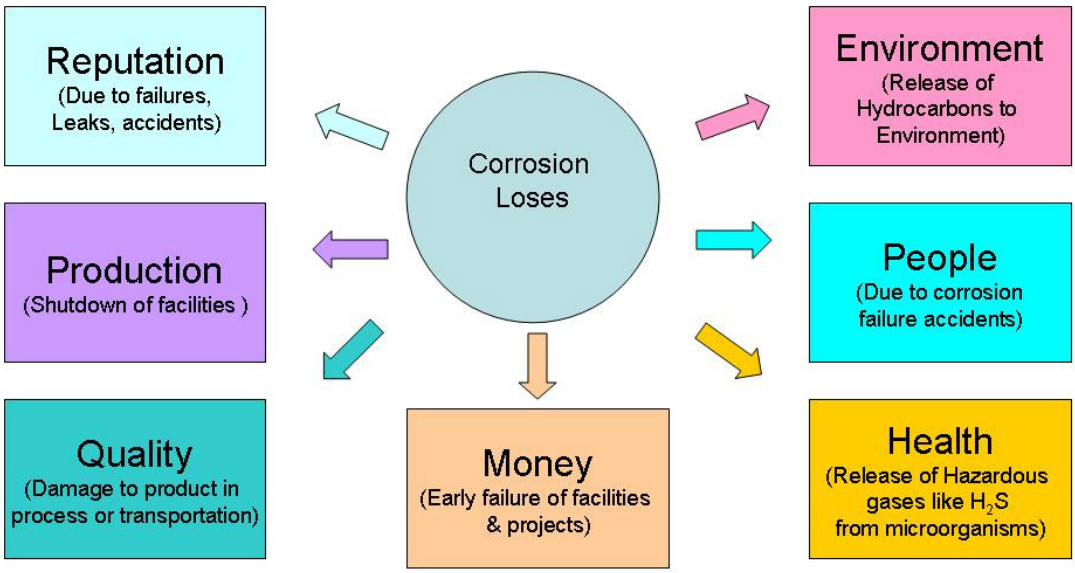
Corrosion Control - Loss Prevention

By
L.N.Murthy.Tata

In many countries still corrosion loses are more and more. Especially this is having more impact on the developing countries. A considerable percentage of GDP is going as corrosion loses. Many projects are facing corrosion failure before their life period, which will put the need for some more money and hamper to do other projects.

Corrosion Loses



Normally many industries thinking loss prevention is noting but preventing fire hazards, which are having high potential to cause heavy loses to many industries like petroleum, petrochemicals, chemicals etc.. They will invest more and more on fire

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prevention by providing facilities with the help of latest technology and fire brigade. Normally this loss can be reduced to minimum by providing awareness among work groups, because human errors are causing major fire accidents. Although this is highly appreciable, but this not the only one to prevent complete loss.

Now a days many countries are thinking about disaster management to reduce loses causing by natural calamities. This calamities are not in our control, but a step taking in controlling these loses is high appreciable.

A few countries and a few people are thinking more and more about the corrosion loses, which is causing indirect lose to the country. We can control these loses to as minimum as possible. But the initiation from many countries is very less. Corrosion scientists, Engineers, Chemists need to explain more and more to the government about the need to prevent corrosion loses for the national interest.

CORCON 2005 conducted by NACE –India section. This conference is opened by Mr. T.R.Balu, Honorable Minister, India. He has given a message to all Corrosion Scientists, Engineer & Technologists. He asked them to reduce corrosion loses, which can make India to do more and more projects.

Corrosion is a major degradation process by which the components and structures in industry and infrastructures fail prematurely and cause significant economic losses. Corrosion of assets and protection of the environment are very important issues which affect country. All metals corrode over time when exposed to moisture and in a tropical country; the intensity of corrosion is very high at some places. The metals are subjected to corrosion due to high humidity, exhaust emissions, sunlight, bird droppings, seasonal temperature variations, industrial chemicals, etc. Steel is most commonly and widely used metal in structures, machineries, plants and industrial installations, railways, shipping, atomic reactors, bridges, off-shore industry, etc. Even in developed countries the loss due to corrosion is quite high to the extent of 3% to 4% of GDP. In India also, an estimated loss of Rs.36,000 crores (US $ 8 billion) occurs every year due to corrosion.

Waterways and ports also play a vital role in moving people and commerce, and the problem of corrosion is typically found on piers and docks, bulk-heads and retaining walls, mooring structures and navigational aids. There is no formal tracking of corrosion costs for these structures as of now. There is a need for holistic study on corrosion pertaining to the waterways and ports. Corrosion is also a major problem in shipping industry, particularly due to highly corrosive seawater and associated macro and microorganisms in the sea. The cost of corrosion in the shipping industry is very high; and, maintenance, repairs and corrosion-related downtime costs may amount to about 50% of these costs. There are many offshore sub-sea pipeline failures that are being caused by corrosion and are being reported frequently.

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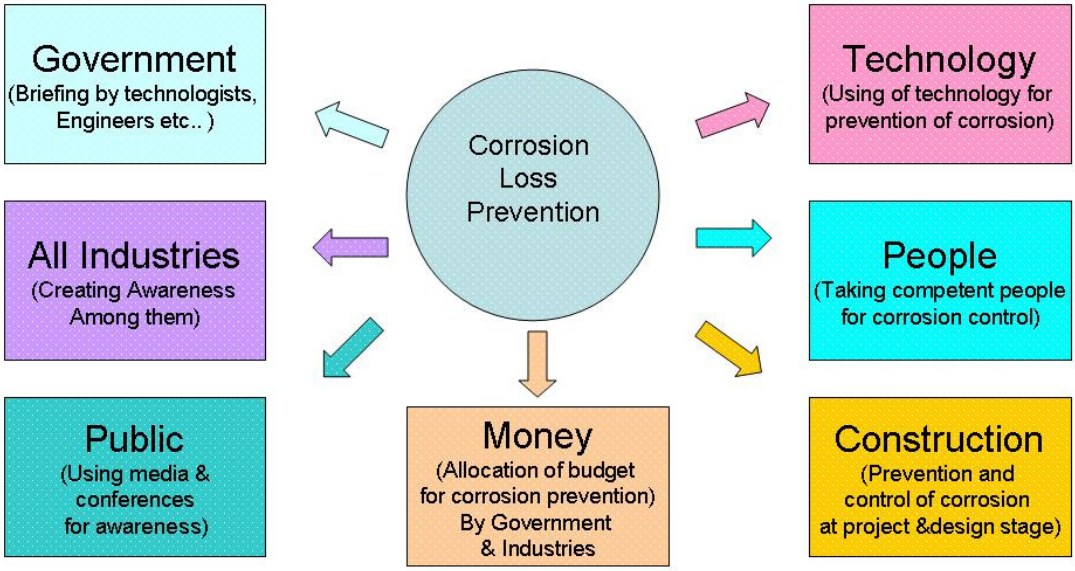
Corrosion Lose Prevention



If this corrosion cannot be eliminated completely, industries can ensure the prevention at the design stage. While this has become a reality in some industries such as nuclear power, refineries, space, railways, shipping and defense, most medium and small-scale industries do not take up corrosion issues seriously or are simply not aware of them.

The fact that there is no laboratory to assist a consumer on corrosion-based issues has not helped the cause of corrosion reduction either. While savings achieved by energy audit have been realized by many industries, even at the medium and small-scale industry level, such awareness towards corrosion has been found wanting. Indian Railways is indeed planning to use stainless steel or some other material that reduces corrosion for railway tracks. This has been compelling as nearly 3000 km area of railway tracks has been found to be affected by corrosion in India.

What is very surprising is the fact that the automobile industry, which produces products that are equally vulnerable to corrosion, has till date in India not shown interest in this area.

Central to this is the gross lack of awareness in corrosion related loss by most industries and the financial loss therein. Ironically, expertise and knowledge on corrosion related issues are high in India, but restricted to certain pockets or industries. But what is

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indeed sad is that this knowledge that certain industries have is not being shared with others

So there is a need for every corrosion scientist, engineer and chemist to increase awareness among all industries and the government to reduce the heavy for protecting the nation from heavy economic loses for the interest or nation.

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About the Author:

I am having **Master of Science** (Applied Chemistry), **Master of Business Administration** (Operations), Diploma in Software Technology, Diploma in Industrial Safety Management, Post Graduate Diploma in Environment & Sustainable Management & **Corrosion Technologist** (9486) from NACE International, USA. I am a member (206180-00) of NACE International for the last 3 years.

I am having nearly 6.5 years experience in oil & gas internal corrosion monitoring and management.

I am an **Oil & Gas Internal Corrosion Consultant** in **India**