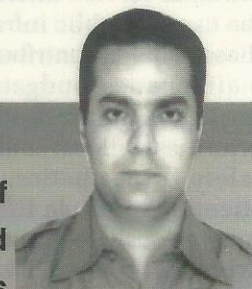


Zinc in construction & galvanizing

Zinc as a metal is one of the most abundant resources available in the earth's crust making it a convenient input in all its applications. Zinc, like all metals, is a natural component of the earth's crust and an inherent part of our environment. Zinc is present not only in rock and soil, but also in air, water and the biosphere - plants, animals and humans. Zinc is constantly being transported by nature, by a process called natural cycling. Rain, snow, ice, sun and wind erode zinc-containing rocks and soil. Wind and water carry minute amounts of zinc to lakes, rivers and the sea, where it collects as sediment or is transported further. Natural phenomena such as volcanic eruptions, forest fires, dust storms and sea spray all contribute to the continuous cycling of zinc through nature. During the course of evolution, all living organisms have adapted to the zinc in their environment and used it for specific metabolic processes. The amount of zinc present in the natural environment varies from place to place and from season to season. For example, the amount of zinc in the earth's crust ranges between 10 and 300 milligrams per kilogram, and zinc in rivers varies from less than 10 micrograms per litre to over 200 micrograms.

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The most important application of zinc, both in terms of volume and economic benefit to society is galvanizing. Galvanizing stands as one of the most environmentally friendly & cost effective treatments to steel. Construction is one area where huge quantum of steel is consumed. It is therefore, imperative for longevity and maintenance free life of structures, buildings, bridges, etc. to be protected by appropriate corrosion resistant treatment.

Properties & characteristics of zinc

- Zinc can be recycled indefinitely - without loss of its physical or chemical properties
- Reactivity with iron
- Corrosion resistance
- Electrochemical
- Ductile & malleable
- Amphoteric with wide range of resistance from Ph 6 to Ph 12.5
- Barrier and cathodic protection for 40 - 85 years without maintenance, depending upon environment
- Metallurgical bond strength > 3600 psi (25 MPa)
- Complete coverage and coating integrity inside

tubular sections and in hard-to-reach places

- Uniform edge / corner coating thickness
- Abrasion resistance

Steel is one of the most widely used materials on the planet and thanks to zinc, steel's durability can be prolonged. By protecting steel from corrosion, zinc performs an invaluable service. It helps to save natural resources by significantly prolonging the life of steel goods and capital investments, such as homes, cars, buildings, bridges, port facilities, power lines water distribution, telecommunications and transport.

Corrosion is a significant drain on the economy and is estimated

