

MATRIX MARINE, LLC

The Official Newsletter of Matrix Marine, LLC



Pile and Corrosion Problem

by Behruz Vahdani. Managing Member

Piles are the substructure elements of the building which carry the weight of the structure above and transfer that weight from the above structure to the ground. They are also acting as lateral resisting elements in the event of an earthquake. When the buildings are built in the water (either partially or the entire building), piles are carrying the gravity loads from the super structure to the ground under the water.

Since the main portion of the piles are in the water they are subject to losing the capacity to carry the gravity loads either due to corrosions (steel piles), losing the cross section area due to fungus (wood piles) or cracks and losing portion of pile (concrete piles).

There are four zones for any piles in the water which cause the problem. From the top to bottom:

Atmospheric Zone (in the air above the water)

Splash Zone (in the air, but get wet on and off)

**HERE'S WHAT YOU
SHOULD KNOW:**

*Pile & Seawall
Corrosion*



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Seawall

A seawall is a form of defense against the rising of water in coastal communities where the sea impacts directly upon the landforms of the coast.

The purpose of construction and consistent maintenance of the seawall is to protect the life and property of it's inhabitants.

The constant dynamic action of the rise and the fall of the tide, impact of the waves and the tsunamis in the event of earthquake on the coast make the seawall an important part of every coastal community.

There are several different solutions to maintaining the integrity of these seawalls that are offered by many companies.

However at Matrix Marine , LLC with the unique patent by "Pile Medic" offer the most cost effective and quality solution for the repair of piles and seawalls.

Matrix Marine, LLC can evaluate the structural condition of your coastal property caused by the sea free of charge.

CA (949) 364-4448

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Tidal Zone (between the high and low tide)

Submerged Zone (in the water, all the time)

The most serious problems are caused in both the Splash and Tidal zones.

Corrosion protection of underwater piles is essential for any kind of piles in the above cases.

The use of Fiber Reinforced Polymer (FRP) is a one of the most cost effective methods to solve the pile problems. FRP has been used for variations of engineering and construction deficiencies such as but not limited to increasing life span of aging infrastructures, seismic retrofitting, inadequate design loading due to change of use of the building, etc.

As the FRP is applied in any types of piles, it will protect the spread of corrosion to other piles

