



Tech Tip # 108

Saline Pool Water Chemistry Recommendations

Keywords: SALINE POOL, BONDING, POOL WATER, CORROSION, COATING, CHEMICALS

Introduction

This technical note will not provide details or recommendations on the merits of using a salt water chlorine generator vs. using chlorine addition as the treatment method for a swimming pool. Instead, this note will provide the requirements of the installing mechanical contractor responsible for a dehumidifier installed in an indoor pool using salt or saline as the raw material for chemical feed.

Impact on Dehumidifier

Desert Aire recommends the use of a fully coated evaporator and condenser coil in a dehumidifier installed in any indoor pool facility. This is to protect the metals from corrosion due to the release of chloramines that will condense on the coils as the dehumidifier recirculates the air.

If the dehumidifier **is not** equipped with a pool water condenser to return recovered energy back to the pool water, then there is no additional start-up responsibility of the installing contract than one that is installed in a traditional chemical feed system pool.

If the system includes a pool water condenser, then there is the possibility of the creation of a ground loop that can create galvanic corrosion of the metal components of the condenser. The salt in the water can conduct low level electrical current that causes this galvanic reaction if the separate components are not on the same earth ground connection. This corrosion can occur within weeks of the system being installed. The installing contractor must coordinate with the pool system installation contractor or the electrical contractor the following items:

- Establish a single earth ground loop for all of the equipment that comes in contact with the pool water
- Positive verification that an earth ground is established
- The dehumidifier can be specified to have the water condenser's inlet and outlet connection wired back to the electrical box to connect to the common earth ground. Or this can be accomplished in the field by the installing contractors.

Tech Note # 108

Warranty

Desert Aire will not warranty any galvanic failures due to the use in a salt water or saline pool system. It is the responsibility of the installing contractors or owner to insure proper grounding has occurred.