



**McLarens Young  
Saudi Co. Ltd.**  
GLOBAL CLAIMS SERVICES

شركة مكلرنز يونج السعودية المحدودة

مركز جمجوم، برج ٣، الدور الخامس مكتب ١٩  
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## TO WHOM IT MAY CONCERN

### Re : AWTS Inc.

We hereby confirm that in February 2011 we employed AWTS Inc. of USA as an independent consultant to carry out a detailed investigation into an incident of damage that occurred during the commissioning of a newly constructed Desalination Plant in the Kingdom of Saudi Arabia.

The Plant in question has a design capacity of 212,000m<sup>3</sup>/day produced using the Reverse Osmosis (RO) process. The system consists of seawater intake structure, seawater intake screens, gravity sand filters, 10-micron pre-RO cartridge filter, seawater RO cartridge filter, Seawater RO Trains, Brackish water RO Trains, chemical feed systems, an on-site chlorine generation system, process pumps, instruments, controls, water storage tanks and auxiliary equipment.

The Plant has a total of sixteen RO Trains, each comprising a First Pass of 193 hollow-fine fiber, Cellulose Tri Acetate type membrane elements; and a Second Pass with 75 spiral wound, thin-film composite, Polyamide type membrane elements in two stages.

Mr. Ken Pandya, principal of AWTS Inc. personally carried out the investigation which involved on-site inspections, multiple fact-finding meetings with the contractor and a review of extensive operating data.

Mr. Pandya has over 38 years experience in the water purification industry and we found him to be extremely knowledgeable about all facets of the desalination and RO processes including mechanical equipment & systems, instrumentation, RO systems & membrane design and Plant operation. He interacted professionally with personnel from the contractor and the Plant owners.

The investigation was carried out in a systematic and thorough manner and Mr. Pandya was very diligent and conscientious in his approach to the work. Using his extensive experience as well as Industry contacts, he was able to provide us with a detailed report analyzing the scenario which gave rise to the damage incident.

Based on our experience we can recommend the services of AWTS Inc.

**McLarens Young Saudi Co. Ltd.**

**Graeme Seaton** BE (Civil), ACII, FCILA