

**DELTA T ONLINE DESCALER PUMPING PROCEDURES**  
**FOR USE WITH ALL SIZE MARINE HEAT EXCHANGERS with**  
**TITANIUM PLATES**

1. SHUT INLET & OUTLET VALVES TO HEX
2. DRAIN OPERATING PRODUCT FROM HEX
3. FLUSH WITH FRESH WATER (IF NECESSARY)
4. HOOK PUMP SYSTEM TO HEX. INLET TO BOTTOM, RETURN FROM TOP
5. FILL HEADER TANK WITH A DILUTION RATE OF **50/50** ONLINE DESCALER / POTABLE WATER
6. START PUMP & REFILL HEADER TANK. CONTINUE UNTIL RETURN TO TANK IS COMPLETED & CONTINUOUS CIRCULATION IS ACHIEVED
7. SLIGHTLY RESTRICT RETURN WITH BALL VALVE ON TANK RETURN. "SQUEEZE OUT" GASSES TO ENSURE HEX IS COMPLETELY FULL
8. CIRCULATE 4-6HOURS
9. TEST PRODUCT AT REGULAR INTERVALS WITH SHELL GRIT OR LIME IN SMALL CUP. "LIVE" PRODUCT WILL FIZZ
10. IF PRODUCT IS "DEAD" AFTER 4 HOURS, DRAIN A PORTION OF SOLUTION FROM THE SYSTEM & ADD REPLACE WITH RAW ONLINE DESCALER
11. 3.79 LITRES OF DELTA T ONLINE WILL REACT WITH APPROX. 1 KILO OF SCALE. PRODUCT WILL THEN BE SPENT.
12. WHEN COMPLETE, DRAIN DOWN HEX AND FLUSH WITH WATER. SPENT PRODUCT WILL REQUIRE NEUTRALISATION WITH SODIUM BICARBONATE TO ACHIEVE A pH of 6 – 8 AND CAN BE DISPOSED OF VIA LOCAL REGULATIONS

**NB IT IS RECOMMENDED THAT DESCALING PROCEDURES ARE CONDUCTED WITH DELTA T PURPOSE BUILT PUMP SKIDS CONNECTED DIRECTLY TO THE HEAT EXCHANGER.**