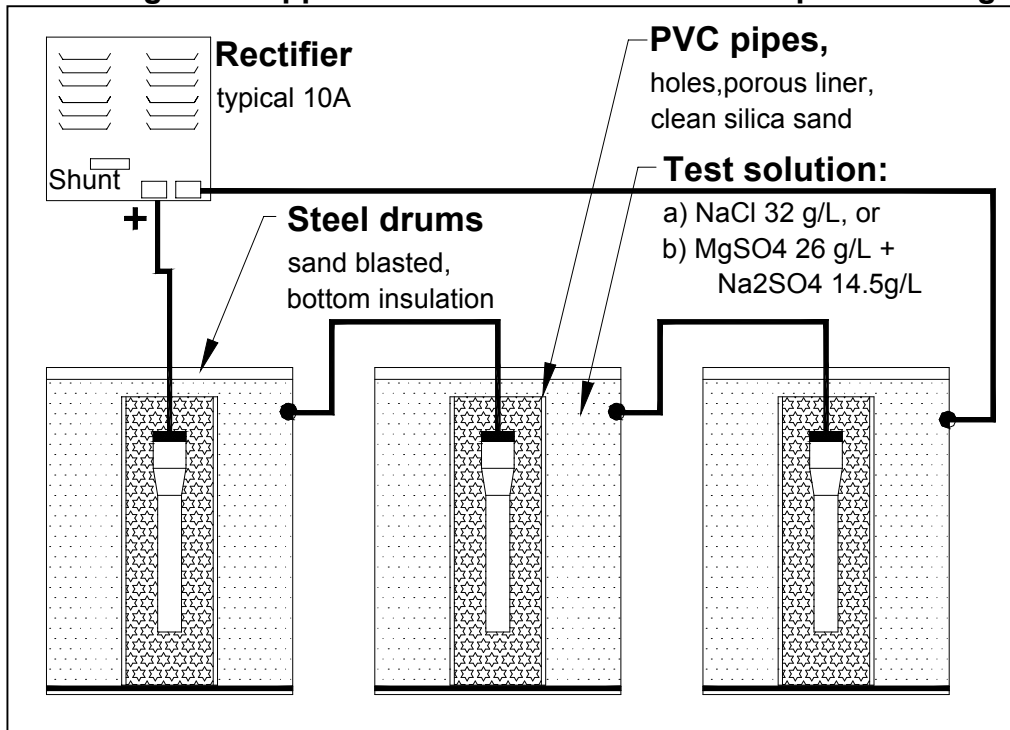


**Figure 1: Apparatus for Accelerated Consumption Testing**


This approach to Accelerated Testing was used by Jakobs and Hewes in the 1970's and 1980's to evaluate and compare anode consumption rates (ampere years of protection per unit of mass consumed) <sup>(L12, L18A, L18B)</sup>. Accelerated Consumption Testing may also be used to relate consumption rate to:

- Alloy Composition
- Electrolyte Composition
- Current Density
- Sealing and Encapsulation

Accelerated Consumption Rate Tests can be carried out in the field, as well as in the laboratory.

For example, In 1994 and 1995 Anotec tested chill cast stick and chill cast tubular anodes in brackish tidal water under silting conditions at relatively high current discharge densities, with the following results: <sup>(L40)</sup>

**Table 1: 120day Salt Water Test Results (1994)**

Specimen Code	S1	S2	S3	S4	T1	T2	T3
Amps per Square Foot	5	4.3	3.6	3.5	3.5	3.7	3.9
Grams per Amp Year, Stick	568	501	491	386			
Grams per Amp Year, Tube					470	360	443
Consumption: Pounds per Amp Year	1.25	1.10	1.08	0.85	1.04	0.79	0.98

For more examples, refer to [Anode Life, Utilization & Consumption](#).

Anodes that perform very well in highly corrosive environments within impressed cathodic protection groundbeds, may not necessarily withstand the rigors of transportation and handling. But a simple, reliable test can be used to compare the relative [Impact Resistance](#) of HSCI anodes.