

Pre-treatment Prior To RO for Seawater Desalination

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In the early 1990'S, the Sydney Water Corporation carried out a multi-million dollar research and development program to develop process trains and refine chemical dosing and filtration parameters for four plants which together serve most of the Corporation's 3 million customers.

This was the most comprehensive pilot plant study for drinking water treatment carried out in Australia to date. Four pilot plants and one prototype plant with a 1 m² filter were used to evaluate process options for several different raw waters. Contact filtration, direct filtration and two stage filtration were all studied. Several of the major Australian Consulting Engineering companies participated, with review by overseas consultants.

James Cumming & Sons provided multiple samples of C & S Filter Coal over the 3 year program. Most of the trials used dual media with C & S Filter Coal. Mono media sand and mono media coal were occasionally compared with dual media configurations.

The recommendation from these studies was for the contact filtration process at three of the plants and direct filtration at the other, using coarse deep bed dual media filters.