

Saving Water in Asian Restaurants

Waterless Steamer

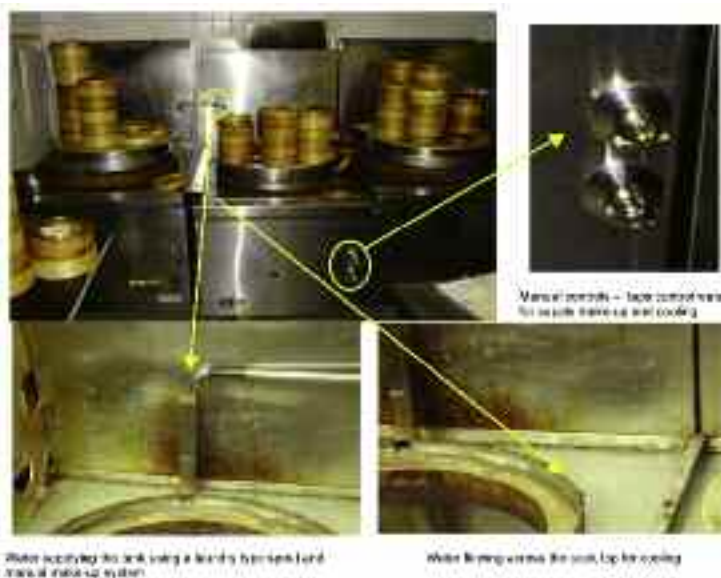
In 2006 Sydney Water funded a study to determine the potential water savings between different models of Yum Cha steamers used in Asian restaurants. The study found that the traditional steamer used approximately 3,300 litres of water per day. Water was used for cooktop cooling and food preparation (steaming) and could account for 25% of the total water used in a commercial Chinese kitchen.

A steamer that could save water and costs, the **waterless steamer**, was designed and tested. The tests showed that the **waterless steamer** reduced water usage by 2,900 litres per day when compared to the traditional model – an amazing 87% reduction. This meant the payback to replace a traditional model with a new waterless model was just over 3 years.

The **waterless steamer** differs from the traditional steamer in that it:

- does not use water for cooling the top surface – instead it uses a combination of a more targeted heat exchange process, heat exhaust path away from the body of the steamer and insulation; and
- has an automatic (demand-driven) makeup water supply to the boiler tank that uses a float valve to regulate supply.

Difference between the traditional and waterless steamer



Traditional Steamer

Cooling the top surface uses an average of 1.8 L/min or ~ 700-800 litres per day.

Excessive boiler make up water of 0.4 L/min is common. Chefs are concerned about the tank boiling dry so make up flow rate is often 6 L/min meaning excessive water is wasted.

Boiler tank must be emptied using a ladle / bucket.



Waterless Steamer

Does not require surface cooling.

Demand for boiler tank make up water is equal to the amount of water lost as steam, therefore water is not wasted.

Boiler tank is easily emptied using the valve at the base of the tank.

The Ethnic Communities Council of NSW is offering a rebate of \$2,000 each to Asian restaurants in the Central Coast of NSW to replace traditional steamers with waterless models. There are a total of 12 available rebates. This will result in significant water and costs savings for the business and reduce the payback to replace the steamer to approximately two years.

To join our project or for more information contact Helen Scott on 0425 833 892 or Elsa Cheung-Wong on 0404 231 088 or the Ethnic Communities Council of NSW on 02 9319 0288.



亞洲式餐館節省用水

省水蒸籠

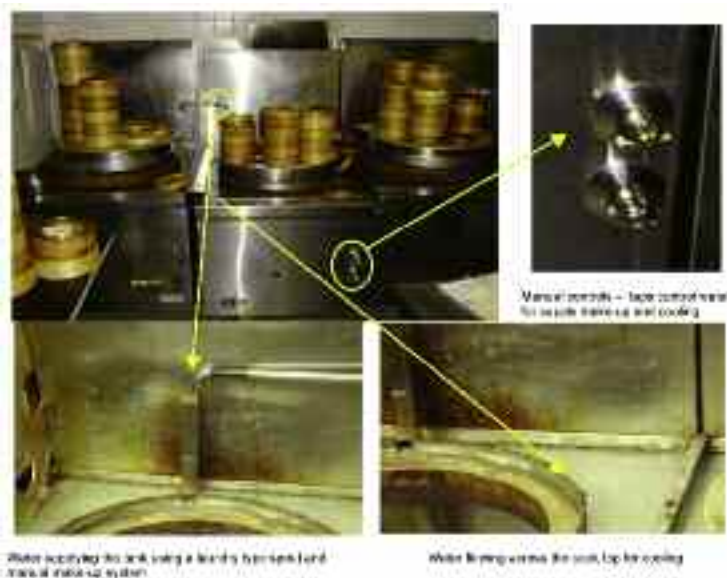
悉尼水務局在2006年，資助進行了一項研究，瞭解亞洲飲茶式餐館不同類型的蒸籠節約用水的可能性。這項研究發現，傳統的蒸籠，每天用水約3,300升，用於爐灶冷卻和食物準備（蒸）的水，可佔華人商業廚房用水總量的25%。

蒸籠可節省用水和成本，為此設計和試製出省水蒸籠。試驗表明，與傳統蒸籠相比，省水蒸籠每天減少用水2900升，驚人地減少了87%，這意味著一個全新的省水蒸籠來取代傳統蒸籠，僅需要剛剛超過3年的時間還本。

省水蒸籠與傳統蒸籠的不同之處：

- ❶ 無需用水冷卻蒸籠頂部表面，相反，採用了更有針對性的熱交換組合程序，熱氣排出的路徑無需靠蒸籠本身及其絕緣體；
- ❷ 採用了浮閥調節供水，自動供水（根據需求而自動啟動供水）到鍋爐水箱；

傳統和省水蒸籠的區別：
圖表顯示差異：



傳統蒸籠

冷卻蒸籠頂面，平均每分鐘需用1.8升或每天700至800升。

鍋爐水箱每分鐘用水0.4升是常見的。由於廚師們擔心鍋爐的水沸騰蒸乾，往往每分鐘補充6升的水，這意味著過多的水被浪費了。

鍋爐水箱必須用勺子或桶來清空。



省水蒸籠

無需冷卻蒸籠表面。

鍋爐水箱所需要的水，相等於水蒸發所損失的量，因此，水不會被浪費。

鍋爐水箱用水箱底部的閥門來清空。

這本小冊子是基於悉尼水務局提供的信息

新州少數民族社區議會在新州中部海岸，為餐館提供每個2,000元的補貼，幫助餐館用省水蒸籠取代傳統蒸籠，共有12個名額，這將為餐館節省大量的水和成本，把更換蒸籠的投資還本期減少到約兩年。

想參與我們的計劃或瞭解更多的信息，請聯繫海倫·斯科特 (Helen Scott): 0425 833 892 或張黃素賢 (Elsa Cheung-Wong): 0404 231 088, 或新州少數民族社區議會: 02 9319 0288。

