

分/秒時之流量為 0.5 公升/秒，應十分可靠。一個由 100 支 220 公分長縮放流管對所組成蜂窩式的人工湧升器，在上述設計條件下，其湧升流量為 0.05 立方米每秒，此一結果是否能滿足漁業界的需求，尚待海洋生物專家的鑑定。

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### 參 考 文 獻

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## AN ESTIMATE OF PUMPING CAPACITY OF CONTRACTION AND EXPANSION TUBE-PAIR IN THE ARTIFICIAL UPWELLING APPARATUS

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### ABSTRACT

The laboratory experiment of the pumping ability of contraction & expansion tube-pair has been finished. However, the field tests were not successful. An indirect way is used to estimate the pumping capacity of a real C & E tube-pair. The method is reasonable and the estimated value is quite reliable. An artificial upwelling apparatus of 100 C & E tube-pairs which are 220 cm in length can pump 0.05 CMS of subsurface seawater from 140 m depth to 30 m depth in 1.5 knot current.