

ABSTRACT**Membrane water treatment facility and method incorporating adsorption on an adsorbent powdered material and means for limiting the abrasion of the membranes**

Method for treating water comprising: a step for putting said water into contact with an adsorbent powdery material in a concentration of 0.1 to 5 g/L in a membrane reactor containing at least one submerged filtration membrane; a step of filtration by submerged membrane of said water containing said adsorbent powdery material in said membrane reactor, said membrane being at least partly constituted by an organic material; characterized in that it includes steps aimed at limiting the abrasion of said at least one submerged membrane by said adsorbent powdery material, said steps consisting in: putting said water containing said adsorbent powdery material into contact, in said membrane reactor, with a particulate polymer material constituted by particles in a concentration of 1 g/L to 10 g/L, said particles having an average diameter of 1 mm to 5 mm and a density of 1.05 to 1.5; and stirring said mixture constituted by water, adsorbent powdery material and particulate polymer material within said membrane reactor containing said at least one filtration membrane.

Figure 1