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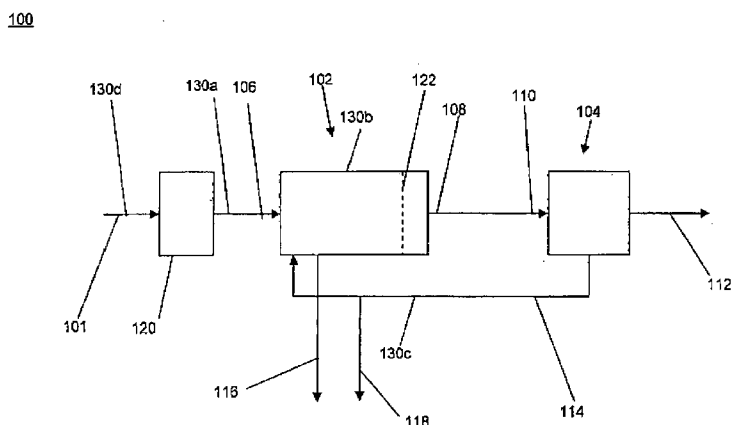


FIG. 1

(57) Abstract: A system and process for treating an industrial wastewater stream is provided using a membrane biological reactor in which granular activated carbon material is introduced into an aeration portion and maintained upstream of a membrane operating system. The size of the granules of activated carbon is selected so that they can be screened or otherwise readily separated from the mixed liquor stream before the mixed liquor enters the membrane operating system tank(s) containing the submerged membranes, thereby preventing abrasion of the membrane by the carbon granules. The aeration portion includes a waste discharge port whereby a portion of spent granular activated carbon can be removed when the effluent concentration of chemical oxygen demand compounds approaches limits typically set by governmental agencies, and replaced by addition of fresh or regenerated granular activated carbon having greater adsorbent capacity.