

SPARGER

Spargers are devices used for the continuous injection of gas bubbles into liquids. They have many applications in different areas such as: bio reactors, bubble columns, fluidized beds, fixed beds, column flotations, aeration, direct steamers. Important process and design parameters when selecting a sparger are minimum possible pressure drop and maximum gas flow rate across the sparger, minimum bubble size, uniformity in gas distribution, and no weep condition



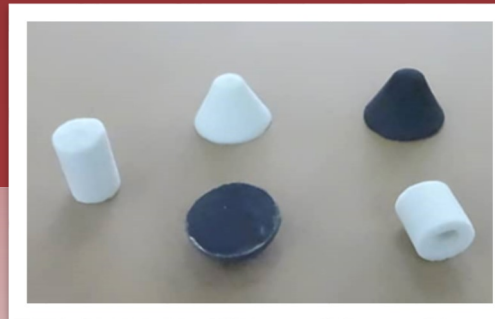
GREENBMG SPARGERS

Considering this, GREENBMG fabricated spargers that are capable of producing bubbles with minimum size, pressure drop, non-uniformity and weeping condition. Bubble size has a significant effect on the mass transfer. By reducing the produced bubbles size, the interface area between liquids and gas increases. The main drawback of the existing commercial spargers is cost and pressure drop.

Our spargers, which are produced through a cost-effective method, called pressure-less method, for the first time in the world, not only are able to produce bubbles less than 0.1 mm but they also have minimum pressure drop and high gas flow rates. Both of these parameters reduce the costs of operation.

DIFFERENT SHAPES

Different shapes of produced spargers by pressure-less method.

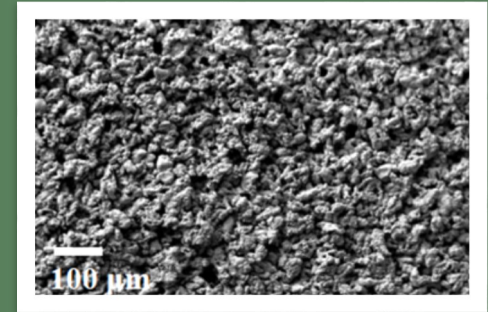


Our process is very flexible and any shape from disc to cone or pipe is possible.

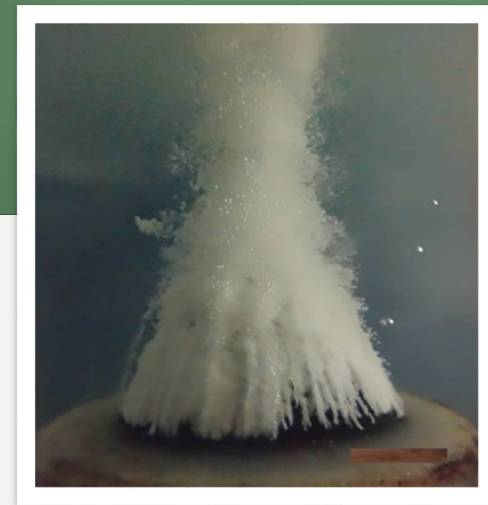
Microscopic image

SEM of fabricated spargers by pressure-less method: magnification

100µm and $dp = 4\mu m$



PRODUCED BUBBLES FROM THE SPARGER



Our spargers are made of glass which is durable, of mechanical strength, corrosion resistant, and sanitary. GREENBMG composite copper oxide-glass spargers are suitable for non-polar liquids as well.