4/15/2024

inifinity-gas-capacitor-turbine-utilizing-swing-adsorption-co2-by-infinity-turbine

608-238-6001 [TEL]

greg@infinityturbine.com [Email]

Infinity Turbine LLC

Inifinity Gas Capacitor Turbine utilizing swing adsorption CO2

This webpage QR code

Structured Data

<script type= "application/ld+json">
{"@context":"http://schema.org",
"@graph":[
{
"@type" : "Organization",
"@id" : "https://infinityturbine.com/#organization",
"name" : "Infinity Turbine LLC",
"url" : "https://infinityturbine.com",
"sameAs":
["https://www.youtube.com/channel/UCsobpvy0xqc13uvhA71Cv4w",
"https://x.com/InfinityTurbine",
"https://www.instagram.com/infinityturbine/"],
"telephone" : "608-238-6001",
"email" : "greg@infinityturbine.com",
"logo" : "https://infinityturbine.com/logo.png"
},
{
"@type":"WebSite",
"@id":"https://infinityturbine.com",
"url":"https://infinityturbine.com",
"name":"Inifinity Gas Capacitor Turbine utilizing swing adsorption CO2",
"description":"Swing adsorption gas capacitor turbine. Supercapacitor which uses CO2 swing adsorption SSA for electrochemical carbon dioxide capture."
}
,{
"@type":"NewsArticle",
"mainEntityOfPage":{
"@type":"WebPage",
"@id":"https://infinityturbine.com/inifinity-gas-capacitor-turbine-utilizing-swing-adsorption-co2-by-infinity-turbine.html"},
"headline":"Inifinity Gas Capacitor Turbine utilizing swing adsorption CO2",
"image":"https://infinityturbine.com/images/",
"datePublished":"2024-04-15T08:00:00+08:00",
"dateModified":"2024-04-15T09:20:00+08:00",
"author":{
"@type":"Organization",
"name":"Infinity Turbine LLC",
"url":"https://infinityturbine.com"
},
"publisher":{
"@type":"Organization",
"name":"Infinity Turbine LLC",
"logo":{
"@type":"ImageObject",
"url":"https://infinityturbine.com/logo.png"
}}}

]}</script>

Swing adsorption gas capacitor turbine. Supercapacitor which uses CO2 swing adsorption SSA for electrochemical carbon dioxide capture.

PDF Version of the webpage (first pages)

https://infinityturbine.com/inifinity-gas-capacitor-turbine-utilizing-swing-adsorption-co2-by-infinity-turbine.html

Swing Adsorption Gas Capacitor Turbine

Another innovation from Infinity Turbine is the CO2 gas capacitor turbine (or gas flow battery).

With a closed loop hybrid of the Brayton Cycle within the Organic Rankine Cycle, Infinity discovered the production of high voltage DC static charges when expanding pressurized CO2 over a hybrid plastic. The speed of the turbine regulates the flow, which in turn, will regulate the storage or production of power. The working fluid (CO2) has a low temperature boiling point which allows it to work with a cavitation compression system, or low grade waste heat to go supercritical.

Enter the CO2 Supercapacitor: This new field was recently published by Nanoscale in 2022: Supercapacitive swing adsorption (SSA) is a recently discovered electrochemically driven CO2 capture technology that promises significant efficiency improvements over traditional methods. (see link below)

The new research confirms that this technology can be used in many applications, including harvesting CO2 from the atmosphere, as well as energy storage devices from remote power generators, off-grid applications, and peak-shaving for demand power periods within the grid.

Power generation or storage can be achieved by solid state static whips or by rotating discs from the turbine (direct drive or free-spooling).

4/15/2024

How it works with lab scale Supercapacitors

From Nanoscale:

Supercapacitive swing adsorption (SSA) is a form of electro- chemical swing CO_2 capture based on charging supercapacitors.13 One electrode of the supercapacitor is exposed to a CO_2-containing gas and the other is completely soaked in electrolyte. When the supercapacitor is charged, CO_2 is selectively adsorbed from the gas (and released with discharging). The effect has primarily been studied with activated carbon electrodes and aqueous sodium chloride electrolyte, an affordable and environmentally-friendly model system.

4/15/2024