

PCB Series

PCB Dechlorination System

Polychlorinated Biphenyls (PCBs), first synthesized in the 1880s, were widely used in transformers and capacitors due to their fire resistance, stability, insulating properties, and low volatility. Known as Askarel, they were later found to be toxic, leading to a production ban in North America in 1977. Their high stability makes disposal difficult, despite most of the approximately 650,000 tonnes produced having been accounted for.



Many countries have a maximum allowable limit of 50 PPM for equipment to be classified as 'non-PCB'. It is possible to recover low level PCB contaminated oil and restore it to use by essentially reversing the process that created the PCB originally. By means of a chemical reaction, using a Group 1 alkali metal such as potassium or sodium, it is possible to strip the chlorine atom (hence the term 'dechlorination').

Such a process reduces the level of PCBs in

oil to below the detectable limit for current instrumentation and, if combined with a posttreatment operation, allows the oil to be restored to an 'as new' condition permitting them to be reused as genuinely non-PCB oils.

The Redragon PCB Dechlorination System has been demonstrated both to the US and Australian Environmental Protection Agencies to remove PCB from concentrations in excess of



2000 PPM to less than 1 PPM in a single pass through the system. Oil recovery rates are typically in excess of 99% and when combined with a TORS transformer oil regeneration system, the oil produced is as good as a virgin, non-pcb transformer oil

Available in manual, semi-automatic, or fully automatic configurations, with optional remote PLC/SCADA monitoring for optimized system performance and asset management.



Sample system specification

- Volt: 220V, 380V, 460V, 575V (50/60 Hz)
- Max. PCB contamination: 5000 ppm
- Batch capacity: 600 US gal (2000 L)
- Vertical disk-stack centrifuge for rapid post-treatment
- Suitable for energized transformers
- skid-mount or semi-trailer mounted
- Consumables required:-
 - Nitrogen gas
 - Activated carbon
 - Water
 - Sodium dispersion
 - Particulate filter

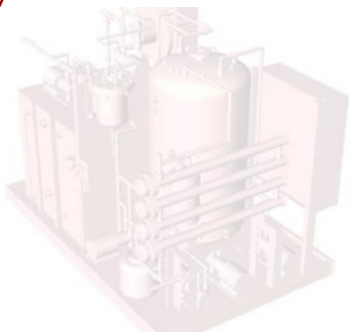
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Polychlorinated biphenyls (PCBs) are halogenated aromatic hydrocarbons with a biphenyl structure and one or more chlorine atoms attached. Of the 209 possible congeners, about 130 have been used commercially. PCBs are virtually insoluble in water and highly resistant to thermal and biological degradation, making them persistent environmental contaminants.

For more information or to request a quotation, please contact Redragon

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