



OZONE GENERATORS

VISION STATEMENT

// To be the Supplier of Choice for upkeep and capacity extensions for SEZ used Wet Clean tools. //

PRODUCT RANGE

- Chucks
- Bernoulli Gripper
- Eco Gripper
- Process Chambers
- Elevating Units
- Bearing Units
- PCB Repairs
- Flip Modules
- Chuck Brakes
- Single/Double sided end effector
- Loadports
- SEZ/LAM Spare Parts
- Used tool trading and turn key refurbishment
- ...

TABLE OF CONTENT

1. Overview



2. MKS Ozone Generators Information



3. Overall Process - scope of work



4. Testing Process



Overview

- We provide Ozone Generators repair and overhaul services.
- Our benefits include:
 - same specifications as OEM
 - fast lead time
 - affordable prices
- Brands : MKS (Astek/InUSA) and many others.
- Do check with us for your inquiries.

MKS OZONE



**AX8200
Ozone
Generator**

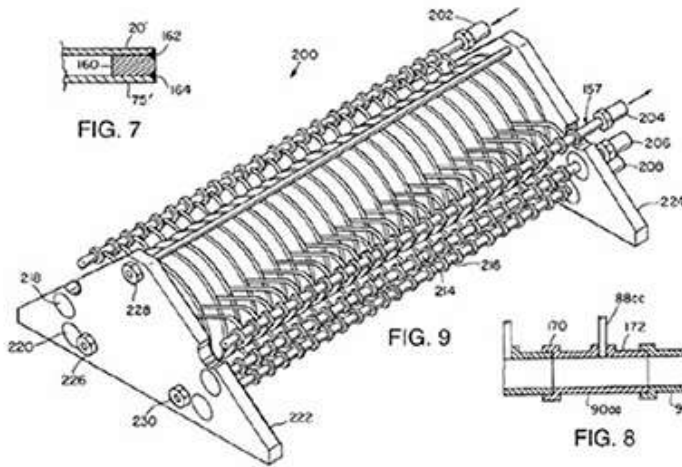


**Cell assemble
for ozone
generation**

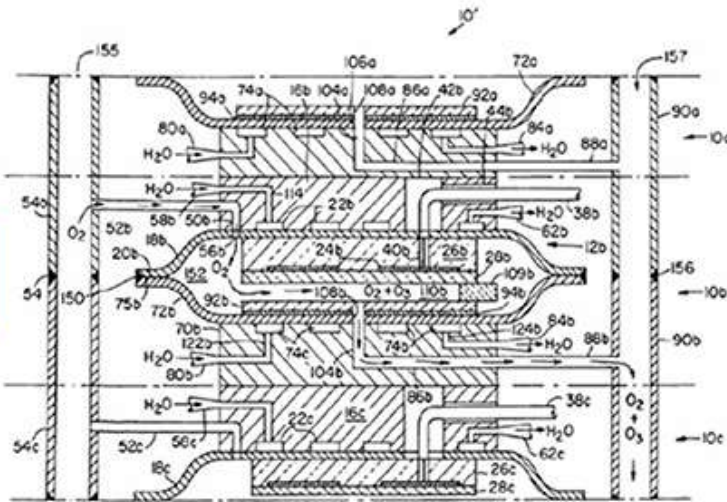


**AX8407:
Two cells
per unit**

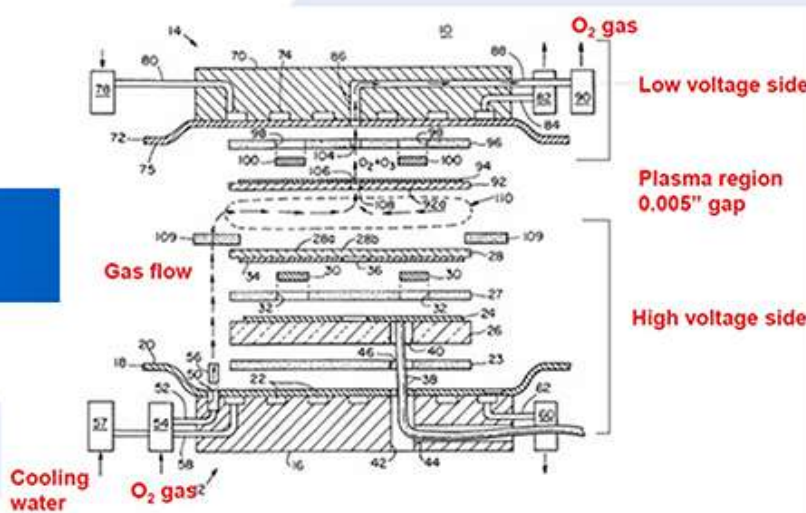
MKS OZONE



Configuration of the ozone cell



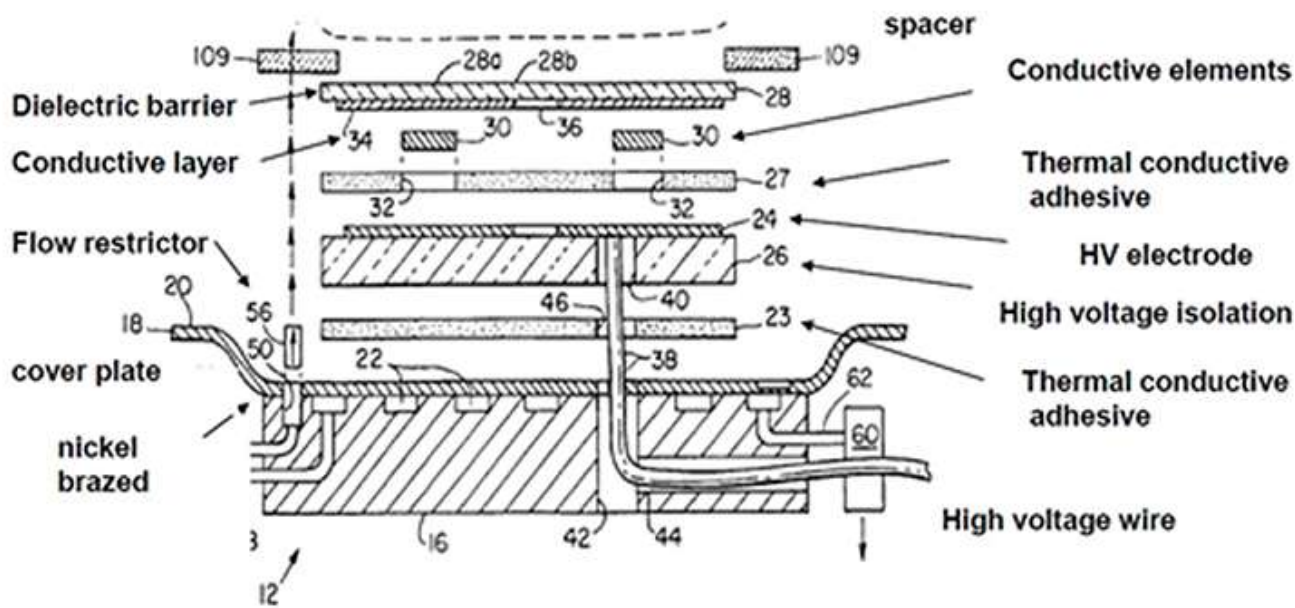
The structure of Astex Ozone cells



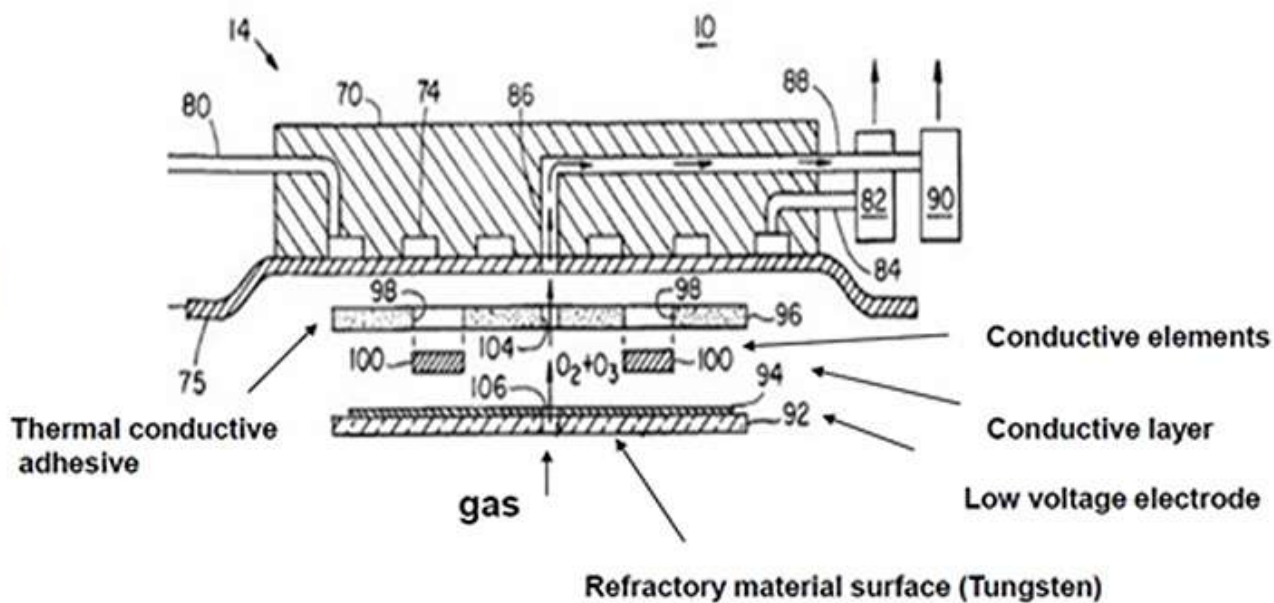
Schematics of the plasma cell

MKS OZONE

High Voltage unit

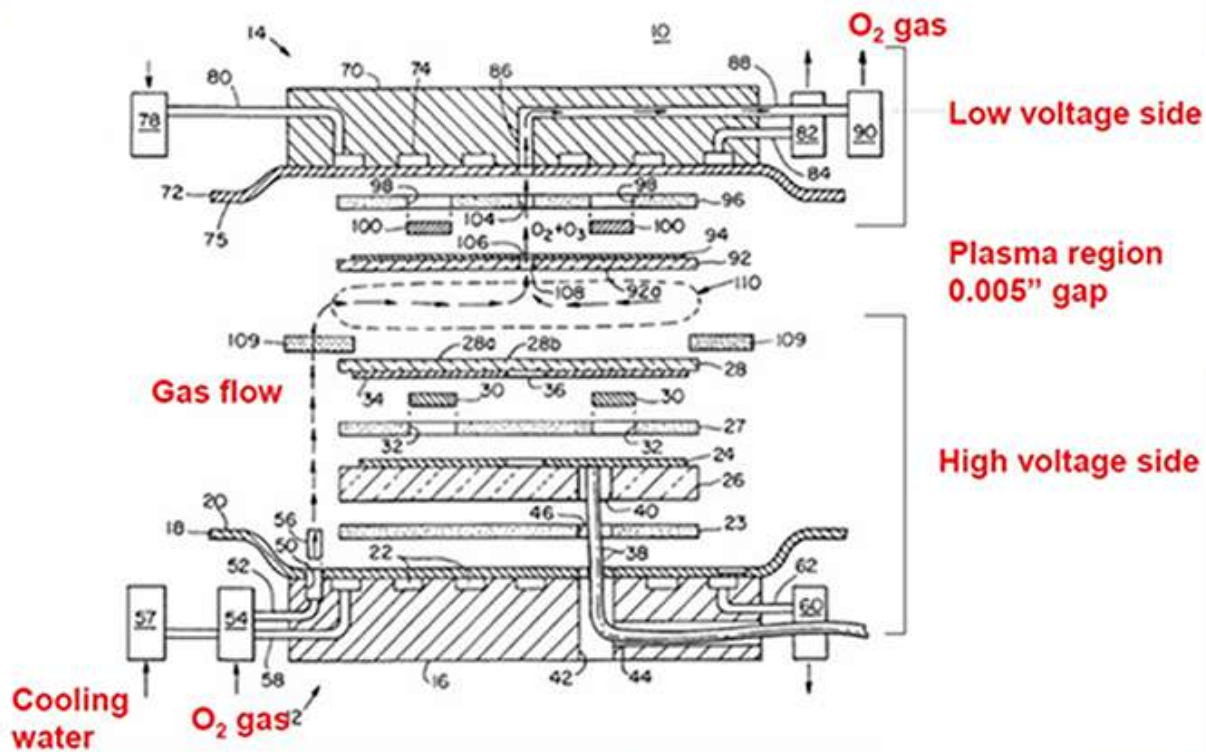


Low Voltage unit

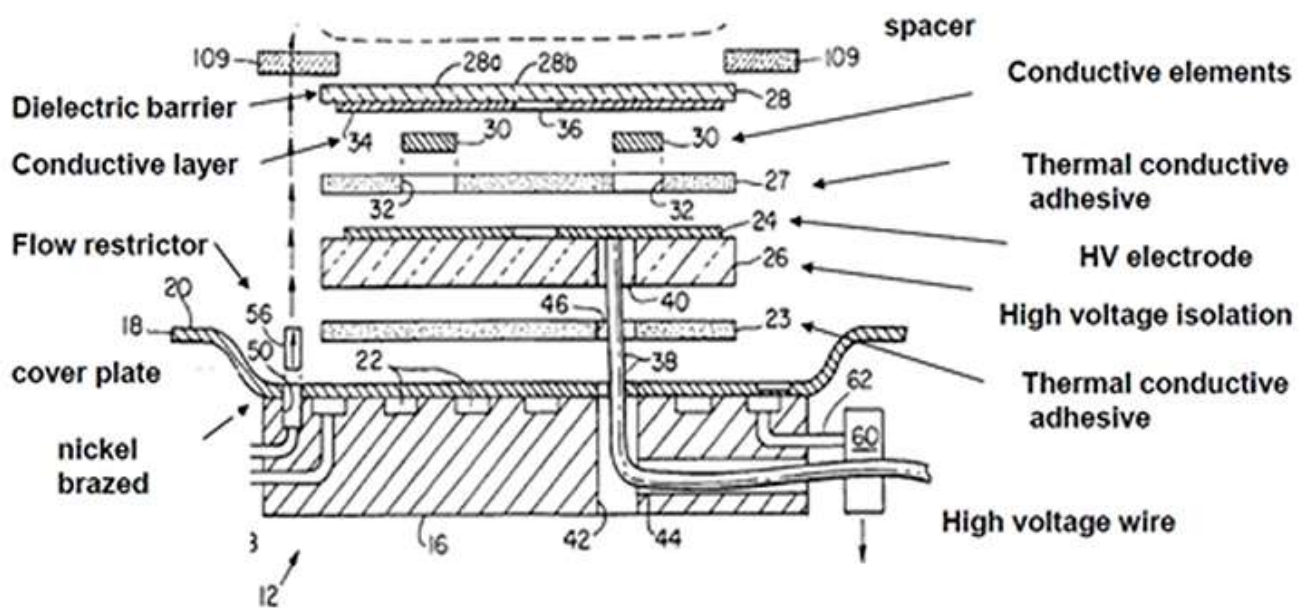


MKS OZONE

Schematics of the plasma cell



High Voltage unit



AX8200 Series Ozone Generator

Technical Specifications

| Item | Specification |
|---|--|
| Ozone Concentration at 0.5% Nitrogen Doping | <ul style="list-style-type: none">AX8200 & AX8200A: 12% by weight or better @ 6 slmAX8200D: 8% by weight or better @ 15 slm |
| Recommended Flow Range | <ul style="list-style-type: none">AX8200 & AX8200A: 2-6 slmAX8200D 2-15 slm |
| Oxygen Purity | Grade 6 or better with less than 1 part per million water, hydrocarbons and halocarbons |
| Nitrogen Purity | Grade 5 or better |
| Ozone Outlet Pressure | Optimal pressure range: 25-35 psi Minimum pressure: 20 psi Maximum pressure: 45 psi |
| Dry Air Purge Requirements | Recommended flow: 2 cfm |
| Water | Maximum pressure: 60 psig Maximum temperature: 20°C Recommended flow: 0.75 gallon per minute @ 20 psig Minimum flow: 0.6 gallon per minute Filter requirement: 20 microns Deionization required |
| AC Power | 208-240 volts AC \pm 10%, single phase, 50/60 Hz, 20 ampere service |
| Ambient Temperature Range | 5 to 40°C |
| Dimensions | <ul style="list-style-type: none">AX8200A: 11-inches high by 19-inches wide by 17.44 inches longAX8200 & AX8200D: 10.5-inches high by 19-inches wide by 17.44 inches long |
| Weight | 75 pounds |
| Control Interface | Front panel and remote controls |

AX8200 characteristics

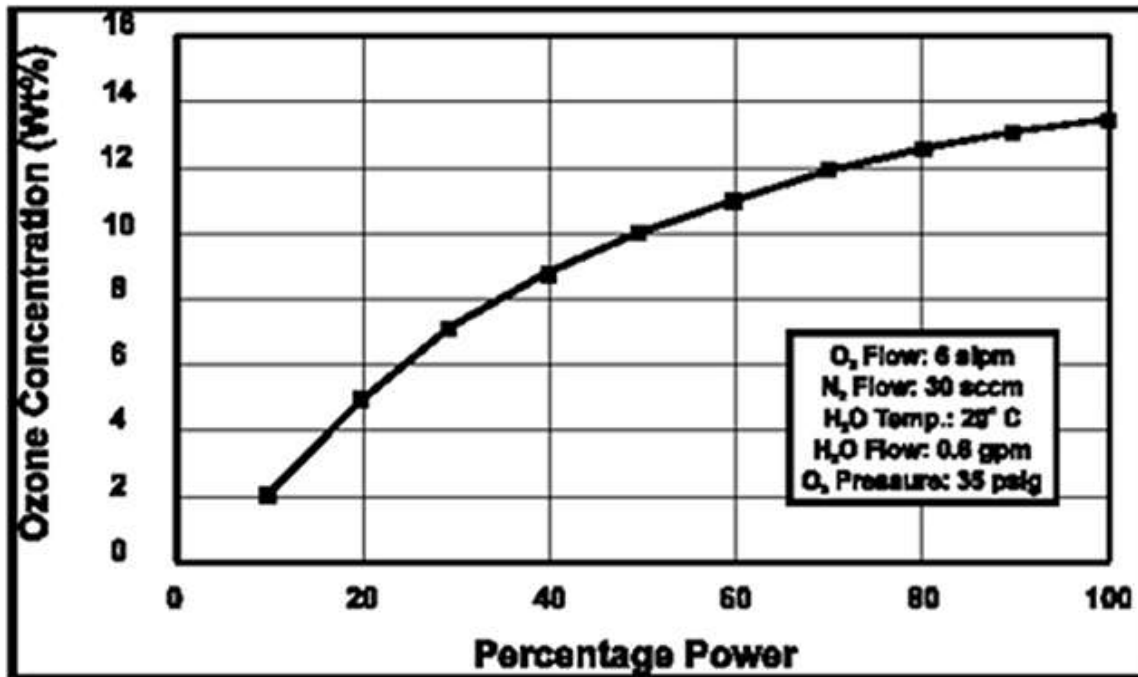
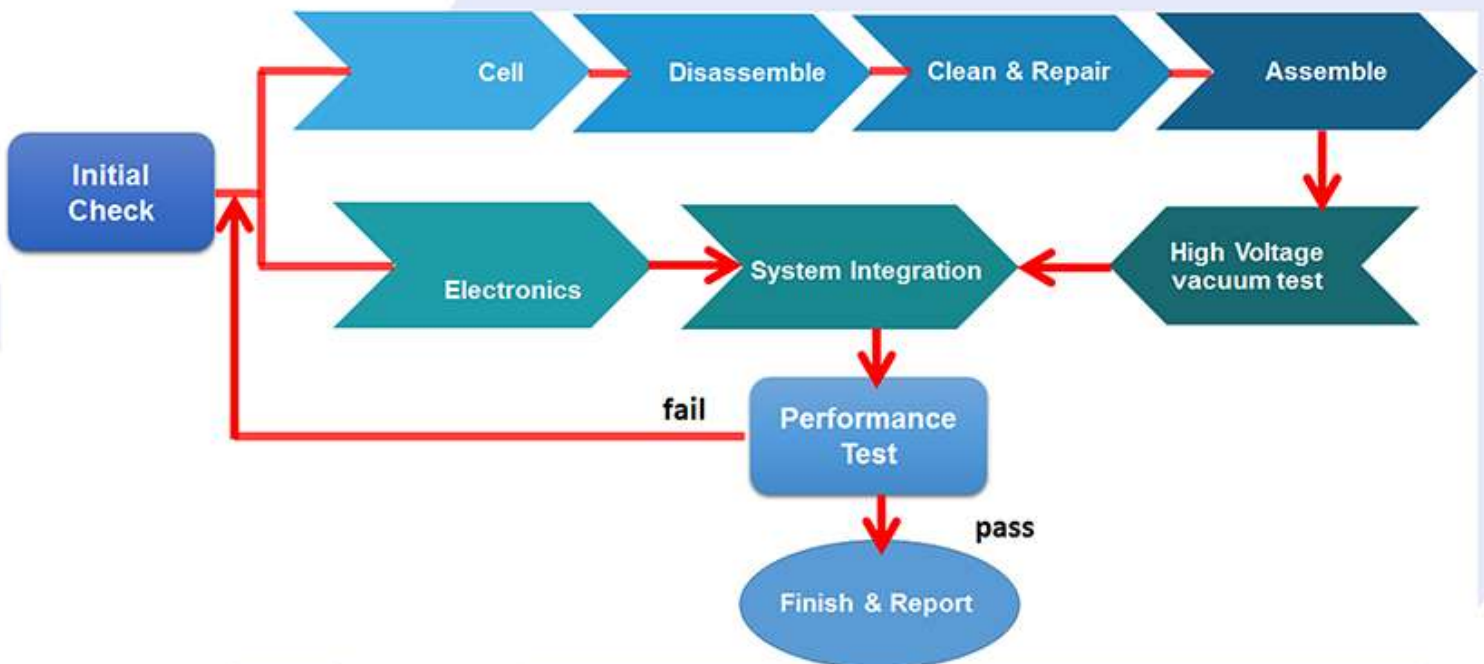


Figure. Ozone Concentration vs Percentage of Maximum Power.

OVERHAUL PROCESS

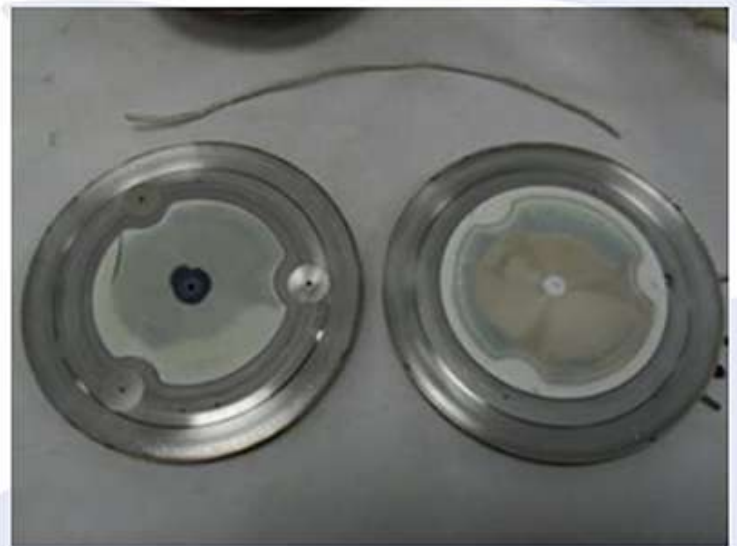
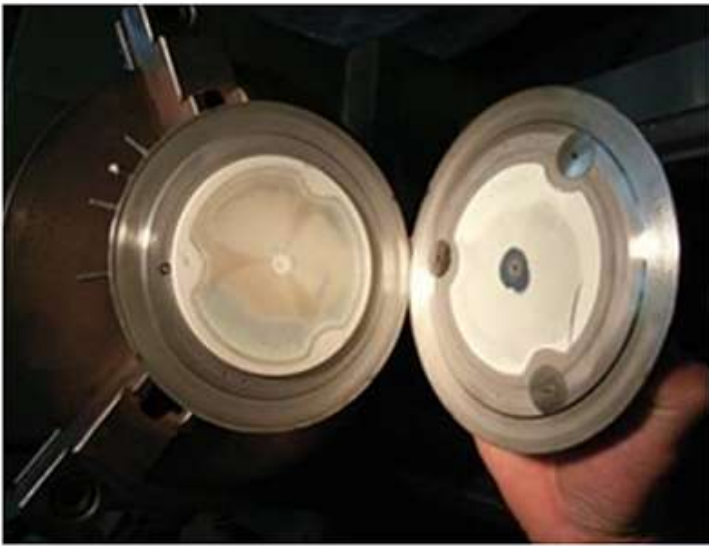


The background is a technical drawing or blueprint in shades of blue. It features several large, stylized gear outlines of varying sizes. The gears are interconnected, with some overlapping others. The drawing includes various geometric shapes, lines, and circles, typical of a mechanical or engineering plan. Some faint numbers and symbols are visible, such as '127', '140', '160', '135', '210', '270', and '10'. The overall aesthetic is clean and industrial.

**OVERHAUL PROCESS -
SCOPE OF WORK**

Disassemble unit cell

a) Electrodes are coated with the particles produced in discharges.

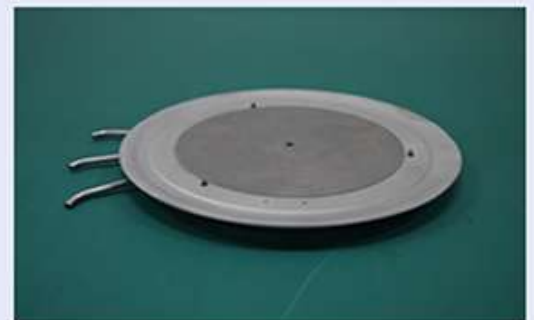


b) Individual cells are disassembled and thoroughly cleaned.

Before



After

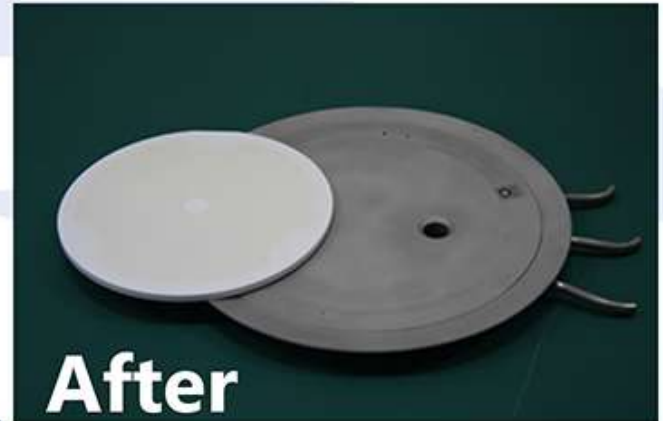


=



OVERHAUL PROCESS - SCOPE OF WORK

c) The cell ceramic electrodes are replaced with new ones.

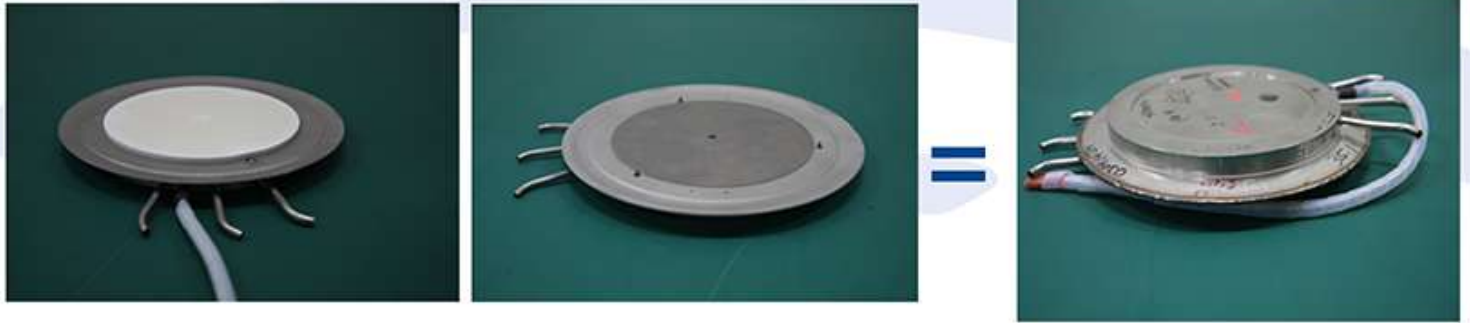


d) The cell metallic electrodes are replaced with new ones.



OVERHAUL PROCESS - SCOPE OF WORK

e) The cell is then assembled.



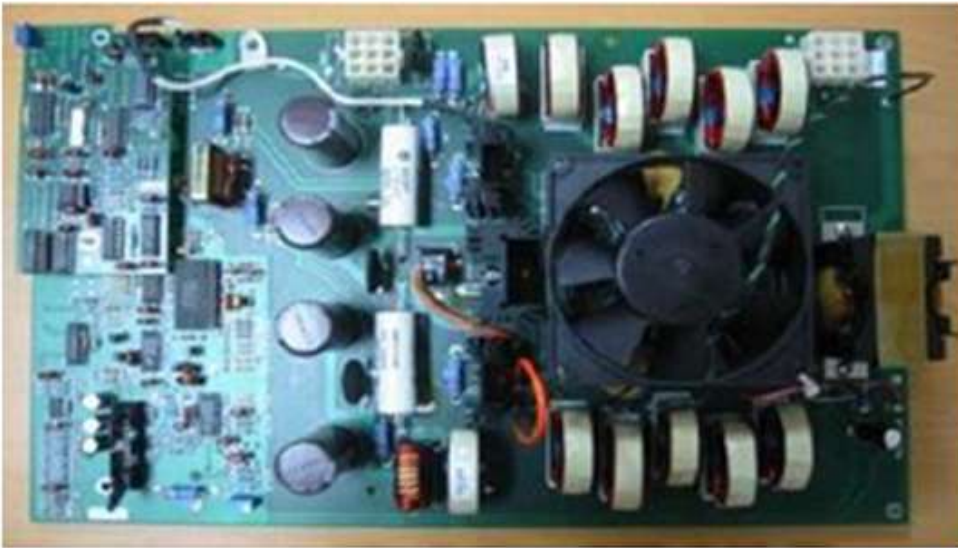
f) The individual cells are assembled as a cell set.



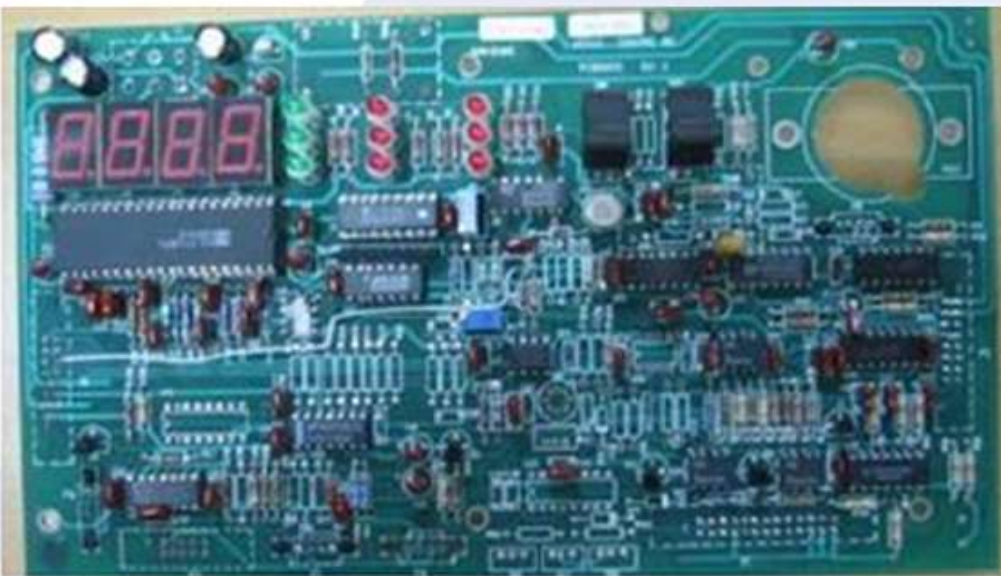
g) The cell sets are then assembled together.



The electronic boards are fully tested for reliability and components replaced if necessary.



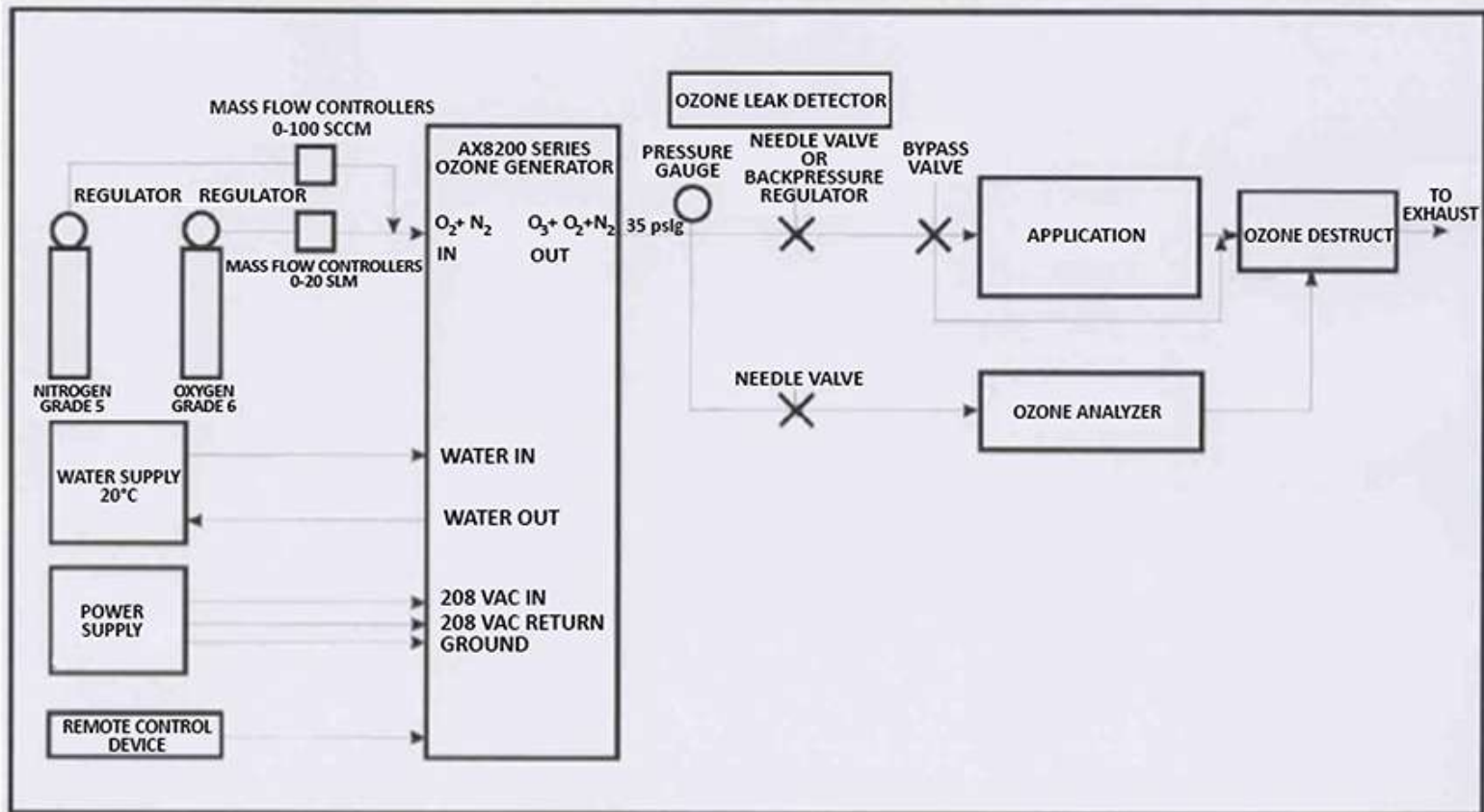
Powerboard



Interface

TESTING PROCESS

Schematics of the test system of ozone generator.



TESTING PROCESS



Test system of ozone generator.

142.2g/m³ = 12.087 wt% well agrees with the standard results shown below.



AX8200 ozone generator performance test.

TESTING PROCESS

Ozone monitor specifications.

| | |
|-------------------------|--|
| MEASURING PRINCIPLE: | UV 253,7 nm - Photometer |
| RANGE: | 000.1 - 199.9 g O ₃ / m ³ (SI-Unit) |
| ACCURACY: | <1 % of scale end |
| SIZE (mm): | H 72 X W 144 X D 230 |
| RESPONSE TIME: | < 1 s |
| OUTPUT: | 0/4 - 20 mA, linear |
| DISPLAY RESOLUTION: | 0.1 g O ₃ / m ³ |
| EXTINCTION COEFFICIENT: | 3024 dm ³ /cm mol (DIN 19627) |
| FLOW RATE: | 30 l/h |
| NOISE: | 0,1 % |
| GAS CONNECTOR: | 4,3 / 3 mm PTFE / SS |
| GAS PRESSURE: | max 2.5 bar abs. (36 psia) |
| OPTICS: | Ozone free quartz UV lamp, Interference filter 254 nm, High quality UV-mirror |
| SUPPLY VOLTAGE: | Internal 110 / 240 VAC, 50/60 Hz |
| WEIGHT: | 1.7 kg |
| ACCESSORY: | Panel chips |
| PROTECTION CLASS: | IP 65, NEMA 12 |
| CERTIFIED: | EC 17025, CEN / TR14740, DKD |
| APPROVED: | CE |





FOR SALES ENQUIRIES PLEASE CONTACT :

NAME: TORSTEN SEIFRIED
TELEPHONE: +65 90261590
EMAIL: torsten@ptwsingapore.com

PTW Asia Pte. Ltd. · 10 Ubi Crescent, #05-22 Ubi Tech Park Singapore 408564