

# NCDMB HEADQUARTER OFFICE COMPLEX

(NIGERIA CONTENT TOWER)







# BRIEF DESCRIPTION

NCDMB Office Complex consists of 16 floors Office Building, Multi – floor Car Park and a two floor Conference Building. This Office Complex is ultra-modern and eco-friendly. Lambert Electromec is employing the latest building principles and state-of-the-art Electrical and Mechanical installations, in Bayelsa - Nigeria.





## PROJECT INFORMATION

- 16 storey office building
- 2 storey conference hall building
- 4 storey multi-level car park
- Total Area: 67,500 m<sup>2</sup>
- Occupied Area: 40,000m<sup>2</sup>
- User Capacity: 1600
- Conference hall capacity: 1000
- Car park capacity: 1000







## SCOPE OF WORK



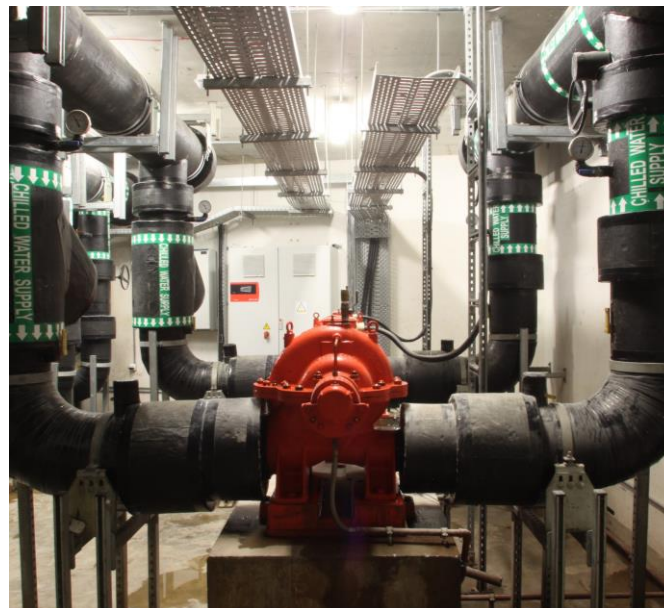
### MECHANICAL SYETEMS

- HVAC
- Plumbing
- Sprinkler
- FM 200
- Water Treatment
- Sewage Treatment



### ELECTRICAL SYSTEMS

- Generator
- HV/LV
- ELV





## MECHANICAL SYSTEMS



- **Main Chilled Water** system including chillers, pumps & FCUs
- **Drainage** system including sanitary fixtures and sewage treatment pumps.
- **Rain Water** system including gutters and rain water submersible pumps – Pluvia roof drainage system
- **Variable Air Diffusion** system
- **Fire Fighting Sprinkler** system including jokey pump, Diesel pump, fire hose cabinets, and wet risers landing valves
- **NOVEC**
- **Water Supply** system with variable speed pumps and pressure reducing stations
- **Extraction Fans**
- **Pressurization Fans** linked to fire alarm system
- **Boreholes Water Treatment** plant





# ELECTRICAL SYSTEMS

- **Earthing & Lightning** system
- **MV & LV** switchgears
- **Lighting** system – Modular Florescent /LED Light, Light Control System (SENSA LINK/DAL)
- **Total 9 nos. 11/0.415kv, 1 no. 33/11kv Transformers**
- **Bus Ducts** distribution system
- **Fire alarm & voice evacuation** addressable system
- **Emergency Lighting** addressable system – 1850 units





## TELECOM/LOW CURRENT/SECURITY

- **Access Control, Intrusion** systems including door plungers, badge readers, safety break glasses, tripods, turnstiles, PMR's and barriers.
- **BMS** to monitor and control all M&E systems – above 2,000 points
- **Integration Fire Alarm, Access Control & CCTV**
- **CCTV** system - fixed and rotating cameras (90° & 180°)
- **VDI** with copper cables, fiber optic cables, telecom cabinets & racks
- **Tier 4 Data Centers**
- **Parking Management System**
- **UPS**
- **Scanners**
- **Metal Detectors**



## ADDED VALUE SYSTEMS

### VAD System

- Self-Controlled Diffuser with Thermostats and other Control Accessories for each diffuser
- Cooling Comfort Optimized
- Cost Saving on chilled water pipes, insulations, cables, FCUs

### Fire Fighting

- All components are UL (Under Writer Laboratories) listed
- Black steel pipes
- Novec system
- Fire Damper on each crossing for fire rated shaft

### Bus Bars and Easy Bars

- Substitute for power cables and cable trays
- Shorter Installation Time
- More secure and efficient
- Less space needed
- More ergonomic & flexible for workplace design
- Improved aesthetics
- MBD size reduction





## ADDED VALUE SYSTEMS

### Parking Management System

- Pinpoints available parking spaces
- More efficient use of parking resources
- Stops congestion
- Real-time Level wise vehicle counting and parking status
- Constitutes the Access Control (Barrier control, Loops, Automatic gates) and Security system

### BMS

- Monitoring, Controlling and Optimizing HVAC, Power systems, Lighting, Access Control, CCTV, Fire Alarm, Lifts, Plumbing
- Better Comfort, Safety, Efficiency
- Monitoring critical loads power continuity



# TELECOMMUNICATION SYSTEMS

## Structure Cabling Method

- Entrance Facility at GF receives the external fiber optic cable
- Vertical Distribution – Backbone – distributes the fiber and copper cables to each technical room (GDR) from 1<sup>st</sup> to 16<sup>th</sup> floor
- Horizontal Distribution connects the GDRs to the User Outlets
- 20 years warranty on data cabling

## Design

- Main Telecom room in 10th floor – receives fiber, coaxial and copper cables
- 1 Data Center
- Technical Room (GDR) in each floor

## Horizontal Cabling

- 4000 points of Copper
- 2650 points of Fiber
- 15 min per fiber termination





# EQUIPMENT FIGURES

ITEM DESCRIPTION	QTY	UNIT	UNIT CAPACITY	BRAND	TOTAL CAPACITY
CHILLERS ON ROOF - For Telecom rooms only	6	Nos	1203 kw	Daikin	7218kw
FRESH AIR HANDLING UNITS AT ROOF (Heat Recovery System)	25	Nos	57.7 – 156.6kw	Carrier	2441kw
UPS AT GROUND FLOOR FOR COMMON USAGE	2	Nos	300 KVA....	Socomec	600 KVA
UPS FOR OTHER LOADS	3	Nos	20 KVA	Schneider	20 KVA
MDB PANEL	4	Nos	5000A 3200A 1600A 1600A	Schneider	8000 A
TRANSFORMERS	12	Nos	2 nos 1600KVA 11/0.415KV 1 no. 200KVA – 11/0.415KV 2 nos. 100KVA – 11/0.415KV 6 nos. 1500KVA – step up 0.415/11	Schneider	7500 KVA
FIRE ALARM CONTROL PANEL AT GROUND FLOOR	1	Nos	10 LOOPS	Apollo	10 LOOPS
EMERGENCY LIGHT CONTROL PANEL AT GROUND FLOOR	1	Nos	48 LOOPS	TM Technologies	48 LOOPS
GENERATORS	6	Nos	1275 KVA	SDMO	5000 KVA



## OTHER FIGURES

- Peak Staff (foremen, technicians, labors) : **270**
- Expats : **13**
- Engineers on site : **8**
- Project Man Hour : **960, 000 hours**
- Cat 7 total length : **30,000m**
- CCTV Cameras : **141**
- FCUs : **475**







**Lambert**  
electromec<sup>Ltd.</sup>