

## THE WORLD LEADER IN CLEAN AIR SOLUTIONS

Data centre of global investment bank improves corrosion containment by four times with switch to AAF International system

### CASE STUDY - COMMERCIAL

#### **Customer Profile**

Global data centre and office of American investment bank in Mumbai

#### **Current Situation:**

Once a dumping ground due to land scarcity in Mumbai, the suburb of Malad is now a global commercial hub that represents a less expensive alternative to urban Mumbai. Due to its origins, the outdoor air is laden with gases emitted during the gradual degradation of organic material underground. In particular, acidic gases such as hydrogen sulfide, sulfur oxides, and nitrogen oxides combine with high humidity to pose a serious threat in the form of corrosion.

Because the data centre control rooms contain switches and circuits made primarily of copper, which is especially susceptible to corrosion, the customer reports frequent failure of electronic components. Such failures can lead to seriously negative events, such as data loss and downtime. The existing building ventilation system had a provision for gas-phase filtration system for air intake.

However, the design of this current system proved inadequate to mitigate the corrosion of electronic components. The customer approached the AAF International team to study the current indoor and outdoor environment and propose the optimal solution for this situation.

#### **Solution Offered:**

After an intensive analysis of site conditions and evaluation of the present system, the team observed air bypass in the media cassettes and insufficient media bed depth. These shortcomings did not allow enough contact time for effective adsorption. At AAF International's recommendation, the customer replaced the existing air intake system with PRU (Pressurization Unit) units with a 2-pass system, one with SAAFCarb MA and a second as SAAFOxidant. The team set the SAAF air purification system to pressurization mode.



## Data centre of global investment bank improves corrosion containment



### **Result:**

To demonstrate the efficiency of our units, the team sampled corrosion levels before and after the PRU unit. Given the high corrosion rate, AAF International also proposed biweekly remaining life analysis and monthly reactivity monitoring. The lab results demonstrate that the air filtration system reduced the copper corrosion rate from 20,000+ A/month outside to 4,147 A/month inside, as compared to the previous system's reduction to 18,277 A/month inside. The efficacy of the AAF International solution was 80% effective as opposed to the ~20% effectiveness of the previous system.



AAF India Pvt Ltd, 117&118, Bommasandra-Jigani Link Road, Anekal Tq,  
Bangalore -560 105 | marketing@aafindia.net | +91 80 27839903

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