

IAQ & Air Conditioning

Environment & Health

Environment & Health ?

Source Control

- Banning smoking or providing a separated ventilated space for smokers
- Using and storing paints, solvents, pesticides adhesives in closed containers in well ventilated areas.
- Using these pollutant sources in periods of low or no occupancy.
- Allowing time for new building materials to gas off before occupancy.
- Fixing any water leaks
- Replacing water stained ceiling tiles or carpets and drying and other damp areas
- Control of humidity to safe level so that mold, fungus and algae formation are prevented.
- Regular maintenance of HVAC Systems including cleaning filters, cooling coil, ducting, cooling tower, etc.,
- Providing efficient filtration in the HVAC System for keeping outdoor pollutants out.
- Exhausts air from rest rooms, copy rooms and printing facilities directly to be vented outside.

Ventilation & Health

- Ventilation for Health ?
- Ventilation for Comfort ?
- Ventilation for Health ?

Ventilation & Health

- ASHRAE Std. 62 - 1973 -
“for the preservation of the Occupant’s health, safety and well being.”
Cocky & confident.
- ASHRAE Std. 62 - 1981 -
“to specify indoor air quality and minimum ventilation rates which will be acceptable to human occupants and will not impair health”
Cautious
- ASHRAE Std. 62 - 1989 -
“to specify minimum ventilation and indoor air quality that will minimize the potential for adverse health affects”.
In a bind

Planning achieving & Maintaining IAQ

- New and renovated buildings to be designed with strict adherence to complex heating and air conditioning system design procedures.
- Failure to perform routine maintenance operations, like changing air filters, becomes a building code violation.
- Businesses are required to retain all inspection and service records for the life of heating and air conditioning systems.
- Every business must designate a “responsible party” to manage indoor air quality - a person, department or contractor who must be trained in indoor air quality principles and regulations.
- Acceptable indoor air quality cannot be achieved in the presence of environmental tobacco smoke, regardless of the ventilation and filtration systems installed (a major problem for restaurants and bars).

ASHRAE & IAQ

- ASHRAE the International Organization
- Leader in Promotion of IAQ Awareness
- Provides solutions
- IAQs Bible - ASHRAE Std. 62

IAQ in India

- ASHRAE Indian Chapters take the lead
- 1995 - Seminar & Workshop in Bangalore
- 1996 - Presentation at Seminar in Ahmedabad
- 1999 - Seminar in New Delhi
- 1999 - Seminar at Chennai
- 2000 - Presentation at Seminar in Bangalore.
- 2000 - Seminar in Bangalore

Ventilation & Health

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- Air Conditioning Engineers not qualified for tackling the problem.
- But others are even less so
- Multi-disciplinary effort is what is required.

- Who is to bell the cat ?
- Rescue from only Air Conditioning Industry
- ASHRAEs' Commitment
- Industry's Commitment

What the Industry should do ?

- Build equipment for good IAQ.
 - Select equipment for good IAQ.
 - Evolve & Design systems for good IAQ.
 - Implementation is the key
 - * Install, Operate & maintain plants to achieve good IAQ.
 - Promote awareness
 - Work with other government bodies & agencies in the fields.
 - * Environmental Agencies.
 - * Pollution Control Bodies
 - Try & get IAQ requirements into Standards.
 - Try & get implementation of such standards mandatory.
- è Continue Studies research in this field
- è Do Not give up.

User Demand

- Software Buildings
- Hotels
- Offices
- Health Care Facilities
 - * Operation Theatres
 - * Post operative care wards
 - * ICUs