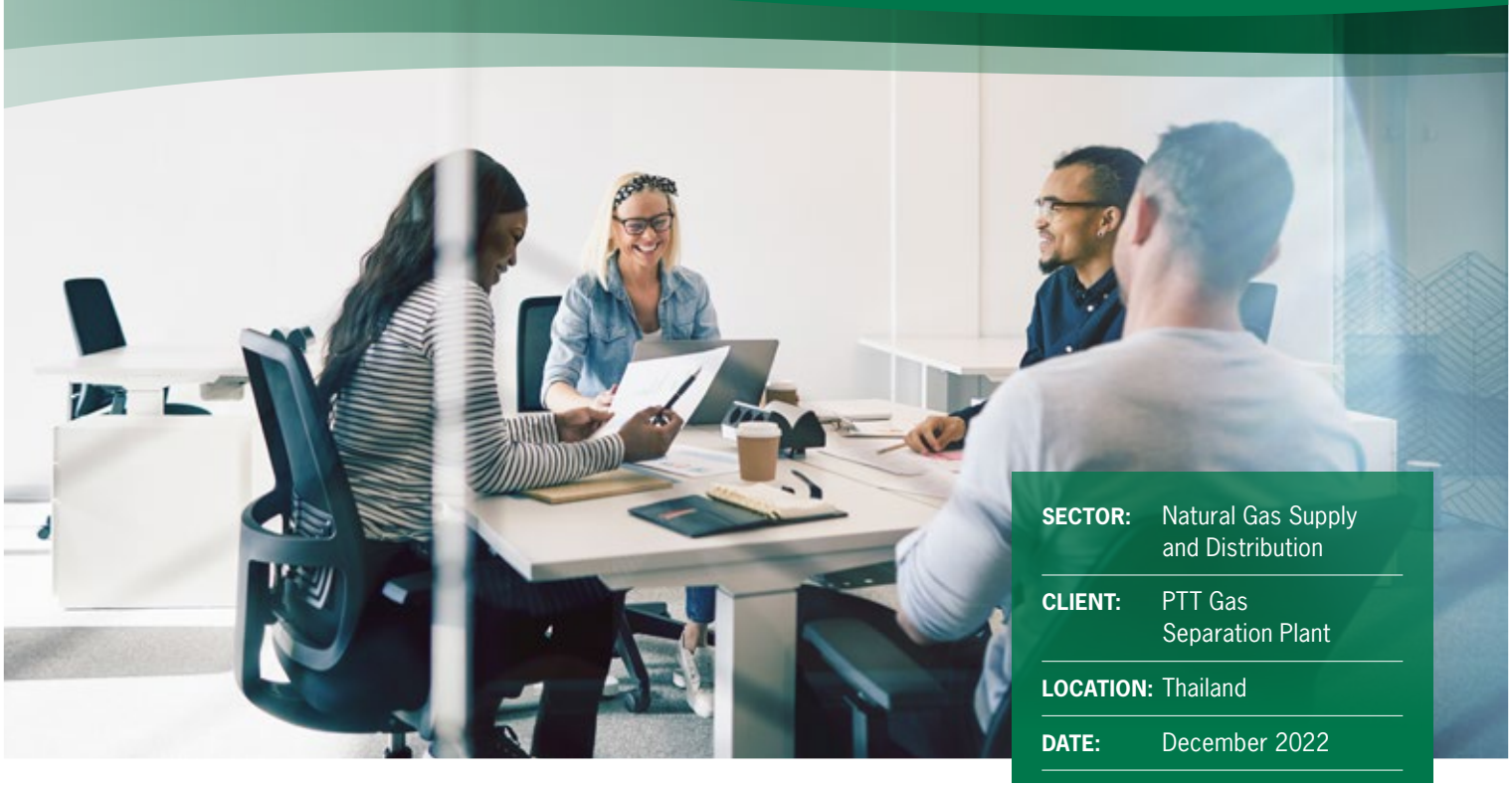


SECTOR:	Natural Gas Supply and Distribution
CLIENT:	PTT Gas Separation Plant
LOCATION:	Thailand
DATE:	December 2022

CAMCLEANER VENTILATION FOR MEETING ROOMS

LOWERING THE SPREAD OF AIRBORNE INFECTIONS

Concerns about the risk of airborne infections indoors, especially in a meeting room where a large number of people gather together for a long period of time, has prompted our customer to reduce the risk of CO-VID-19 infection in the organization by contacting Camfil Thailand to propose a ventilation system which could help to exhaust and dilute the indoor air.

THE SOLUTION

FRESH AIR SYSTEM: In accordance to the standards of the building air supply systems in Thailand, it is recommended that there should be no less than 2 ACH in the fresh air system.

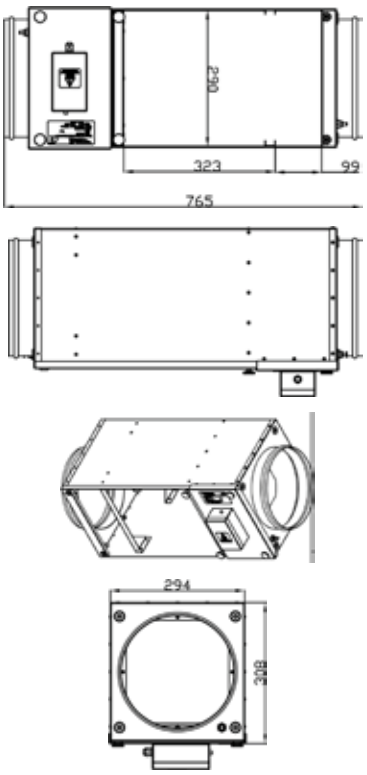
(2 ACH will not affect the operation or heat load of the air conditioner that was calculated in the first place, which normally calculates the cooling load within the normal building in Thailand. Without allowance for exhausting, it is calculated at 750-850 BTU per square meter.)

RECIRCULATED AIR: There is no specific standard for how many ACHs are required to recirculate indoor air in the event of the Covid-19 outbreak. Therefore, Camfil Thailand chose to follow Thailand Ministry of Health's guidelines (MOH) of the minimum 6 ACH for field hospitals to apply to this project. The customer agreed with Camfil's proposal to base the design on the MOH's guidelines for field hospitals.

THE RESULT

Camfil started the project by understanding the layout of all the meeting rooms required to retrofit with Camfil's ventilation system in order to design the required ACH for each meeting room. Fresh Air intake by using CC200 with 2-stage filtrations helped bring in clean Fresh Air intake by using CC200 with 2-stage filtrations help bring in clean air and dilute CO2 level within the meeting room. Recirculated Air of 6 ACHs is achieved by using CC410 installed above the ceiling with air grille flushed with ceiling for aesthetics and noise reason.

3D DRAFT CC200

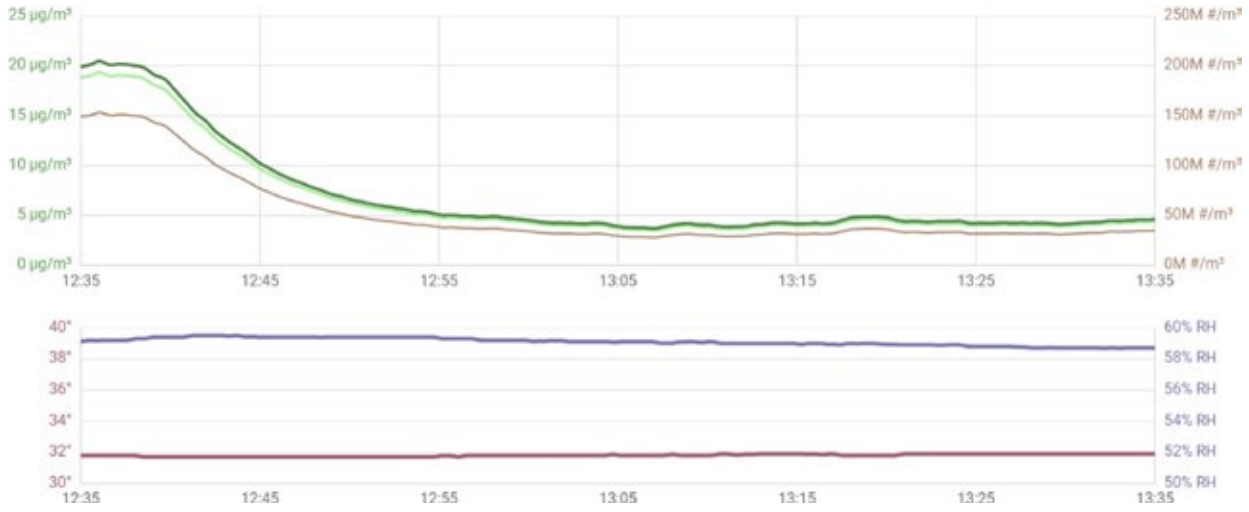


an air and dilute CO_2 level within the meeting room. Recirculated Air of 6 ACHs is achieved by using CC410 installed above the ceiling with air grille flushed with ceiling for aesthetics and noise reason.

TO DEMONSTRATE OUR DESIGN, WE INSTALLED TWO AIR IMAGE SENSORS IN TWO MEETING ROOMS AS A PROOF OF OUR DESIGN CONCEPT.

REAL TIME OF PARTICLE BY AIR IMAGE SENSOR (1)

In Meeting room(1) before turning on our camcleaners, the average dust concentration level was about 25 µg/m³. After the Fresh air and Recirculated unit was activated, after 10-15 minutes, the dust concentration level was reduced to only 2-3 µg/m³.



REAL TIME OF PARTICLE BY AIR IMAGE SENSOR (2)

In Meeting room (2) before turning on our camcleaners, the average dust concentration level was about 20 µg/m³. After the Fresh Air and Recirculated system was activated, after 20-30 minutes, the dust value was reduced to 5 µg/m³.

The customer is satisfied with the result as we have openly demonstrated the before and after with the customer's maintenance team. The next project under discussion is for Camfil to install Air Image Sensors in all of their meeting rooms as part of the HR initiative to promote a Safe Working Environment.