



CASE STUDY

**HEALTH AND SAFETY
AT WORK**



Baltimore Aircoil

THE CHALLENGE

The production activities of equipment such as cooling towers, condensers and cooling installations in aid of air conditioning systems require a lot of metalworking and welding. Baltimore Aircoil concluded for itself that the extraction of welding fumes and hazardous gases in the production halls could be improved.

Therefore they decided to contact a specialist, to provide all welding workplaces in the production and assembling process with effective welding fume extraction systems. Thus guaranteeing the health and safety of its employees. First an inventory was made of all existing welding fume extraction systems. Next, Plymovent came with an offer. This proposition was discussed in depth with the employees on the work floor. "Obviously, they make use of it day in day out and know what to look for", says Straetmans. After this, every 't' was crossed and every 'i' dotted, and Plymovent's proposal was adjusted and approved.

Baltimore Aircoil Company is one of the AMSTED Industries; each year approximately 3,000 units leave the BAC European manufacturing plant (Heist-op-den-Berg) which employ some 500 people. AMSTED Industries has the world's most extensive line of factory-assembled and field-erected cooling towers, evaporative condensers, closed-circuit fluid coolers and thermal storage systems.



» An additional problem was that besides welding fumes, also the warmth in the building was being extracted. «

QUOTE BY Mr. S. Straetmans, Production Engineer Baltimore Aircoil.

TESTIMONIAL

"Of course, we already used welding fume extraction systems that indeed extracted part of the polluted air, yet not all of it. An additional problem was, that a major part of the warmth in the building was being extracted. So, we had to turn on the heaters. This is what we wanted to change."

A year later: "The signals we receive from the work floor are positive. Our employees are very pleased that the welding fumes are now really being extracted and that they can perform their welding activities without problems. The self-cleaning filters are practically maintenance-free, making this solution much more economic."

THE SOLUTION

Until recently, the welding fumes of the process of raw materials were extracted through source extraction. The previous arms were difficult to position. Moreover, the entire system was hard to maintain. Plymovent has rearranged the workplace and provided it with a 'fully controlled' source extraction system including 10 UltraFlex extraction arms. The control box and frequency controller ensure a constant extraction. Through an efficient fan and recirculation of valuable warm air the use of energy is minimised. Maintenance is kept to a minimum, thanks to the self-cleaning filtration unit.

Another production line creates containers. The previous extraction arms could not always cover the required space. A general filtration system offers more possibilities, which is why Plymovent installed a U-shaped push-pull system on that location. Welding fumes rise and are directly extracted through the pull grids into the ductwork. When using a general filtration system, welders need to be aware to use personal protection, such as an overpressure helmet.

Besides the systems mentioned above, Baltimore Aircoil also purchased a downdraft table, DraftMax. The DraftMax is a workbench and an extraction/filtration system in one, ideal for small assembly work.



MAIN BENEFITS

- **Enthusiastic employees;**
they actually see the difference compared to the previous welding fume extraction system.
- **Practically maintenance-free;**
thanks to the self-cleaning filtration units SCS.
- **Cost-efficient;**
thanks to recirculation of warm air.
- **Excellent after-sales service** of Plymovent.

SYSTEM FACTS

Plymovent products

Multiple arm system

- 10 x UltraFlex-4 extraction arm
- 2 x SCS self-cleaning filtration unit
- 2 x SIF-1200 fan

Downdraft table

- DraftMax

Stationary unit

- SFD

Push-pull system

- SCS self-cleaning filtration unit
- SIF-1200 fan

Year of installation

Multiple arm system

- 2008
- 2011 (expansion 2 arms)

Downdraft table

- 2008

Stationary unit

- 2008

Push-pull system

- 2009

BE-04



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