Case study
Air filtration at an automotive manufacturer

Leadership in Filtration

MANN+HUMMEL

Case study: automotive Delivering more than clean air

This major automotive manufacturer was experiencing issues both with the cost and performance of its air delivery system. MANN+HUMMEL were asked to help.

PROBLEM
High maintenance requirements and poor air quality.

SITE
Automotive manufacturing plant, UK

OUTCOME
On-site workload reduced by over 80% and PM2.5 concentration cut by 68%.

In a large manufacturing plant, getting the air delivery system right can have a significant impact on both the working environment and the overall operating costs of the facility.

So, a leading automotive manufacturer was rightly concerned that its filtration system was delivering unacceptable air quality and offering poor service life, with prefilters having to be changed on a monthly basis.

The manufacturer was facing increased cost, stock management and waste, all for the end result of poor air quality.

After conducting analysis of the air handling system and operating environment, MANN+HUMMEL replaced the existing G4 pleated panels and M5 pocket filters with F7 Revo II bag filters.

Moving from two stages to one immediately slashed the number of filters to be purchased, stocked, fitted and disposed of. In total, 480 filters were removed and replaced with 180 Revo II. In addition, the replacement filters were standardized to a uniform eight-pocket, 592 x 592 x 635 mm specification — further reducing stock, waste and filter movement across site.

As a result of these changes, filtration efficiency has increased from M5 to F7 meaning a fall in PM2.5 concentrations from 10.6 µg/m^3 to 3.4 µg/m^3. Monthly prefilter changes have been eliminated, with just two service visits per year now required for the single-stage Revo II. MANN+HUMMEL engineers carried out the works in a single day as opposed to the five days required by on-site personnel with the previous system.

What's more, switching to Revo II bag filters cut annual energy consumption by over 170,000 kWh, representing a saving in energy cost of over £17,000 per annum.

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