

PRACTICE REPORT 48

Application examples for planners of complex construction projects



Renovation of the ventilation system for Essity



Application area for VENTAFLEX®:
Insulated air ducts replace the strongly corroded ducts
for toilet paper production due to condensate

Massive corrosion damage after only one year: VENTAFLEX® air ducts replace ramskackle system

The production of toilet paper puts air ducts of conventional construction under too much 'steam' – a good alternative is asked for!

Task

The head office of Essity in the Hessian Witzenhausen is specialized on the production of toilet paper, more precisely: stock preparation of the delivered pulp, hygiene paper production and processing. 32.000 tons of toilet paper leave the production hall cleanly packed on 8.400 euro pallets annually.

For the production of the paper great amounts of water are used and a lot of damp, slightly chemically loaded steam arises at temperatures of about 60 degrees, which is discharged by a ventilation system. One task at which the installed system failed, having been installed only a year before: due to extensive depositions of condensate the surfaces were strongly damaged and corroded after only a short time. In order not to interrupt production, a solid replacement had to be created: next to condensate-avoiding insulation, the smooth, easy-to-clean surfaces of the VENTAFLEX® air ducts were the compelling argument. Another benefit: the installation in the existing structural environment by special components was possible with a manageable application in terms of time.

VENTAFLEX® solution

1. The corrosion-resistant GRP-material as well as the smooth surface of the VENTAFLEX® air ducts avoid adhesion and are easy to clean. Moreover the chemically resistant material keeps up to contaminated air as well as industrial cleaning agents.
2. Straight ducts as well as curves with a diameter of 820 mm were installed.
3. Additionally custom made special components were produced, such as a reduction in form of a special formed y-piece and an air duct with a condensate trap and condensate drain.
4. Tested supplies of the VENTAFLEX® system, such as wall collar and roof duct were applied. Functional: the air duct was simply inserted into the affixed duct roof.

Before: corroded spiral duct



After: clean solution with air ducts made of PUR rigid foam and GRP



Advantages due to the VENTAFLEX® system

- + **Ideal thermal insulation WLS 022** reduces condensate formation
- + **Comfortable cleaning** of the smooth surface of the GRP material
- + **Particular durability** due to GRP-material
- + **Reduction of the operating costs** – up to 40 % less energy loss, up to 10 % less pressure loss and up to 99 % less leakage loss
- + **Individual adaption to the conditions** by special components
- + **Tested technology** – handling and installation are self explanatory, accordingly easy to delegate to local specialist companies

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