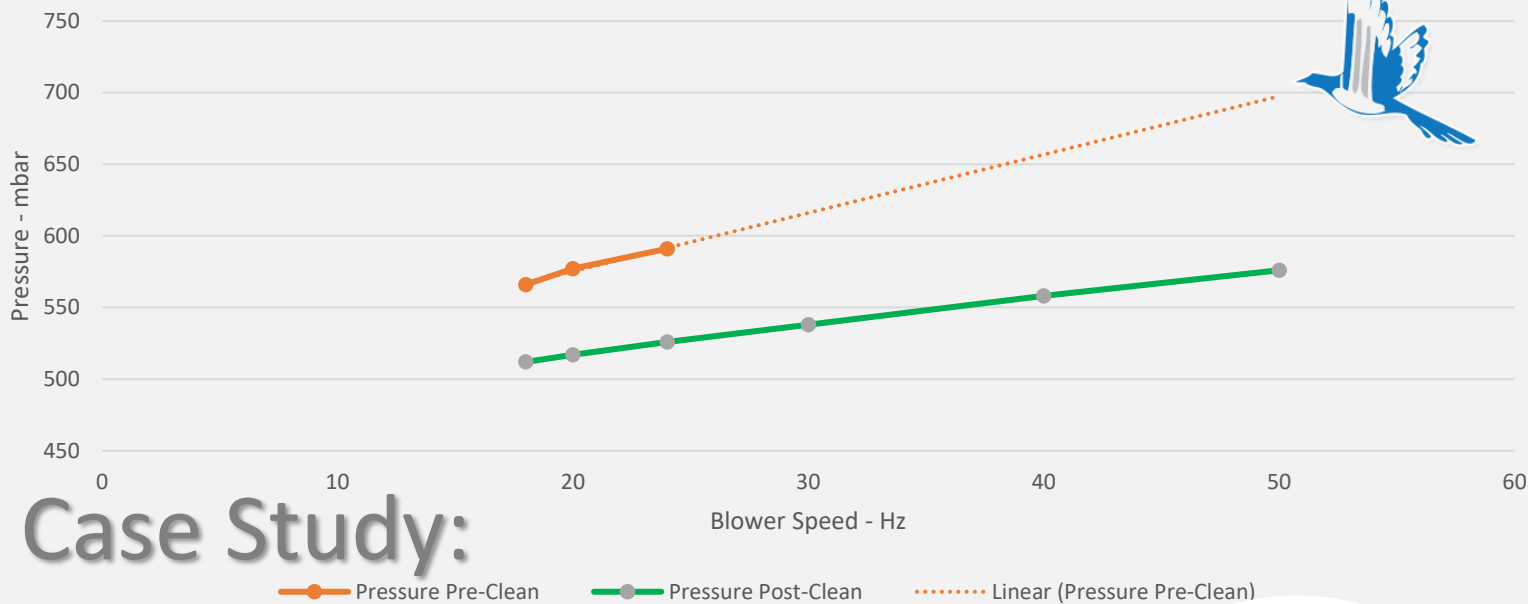


Effect of Acid Cleaning on System Pressure



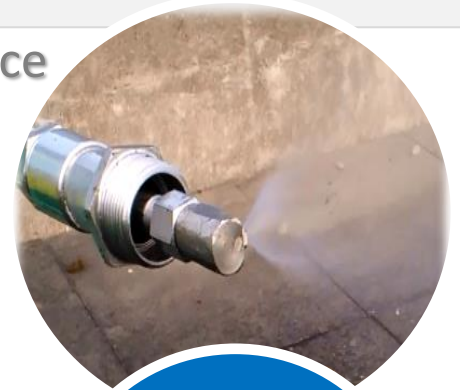
Case Study:

Acid Clean on FBDA plant to improve performance

In Q1 2018 Air Technology were engaged by a customer as part of their ongoing acid cleaning scheme, to use their proprietary diffuCLEAR acid cleaning method upon the aeration lanes at a sewerage treatment works in the east of England. The works consists of an inlet works, primary settlement, secondary treatment with 40% of the load going to biofilters and 60% going to an Activated Sludge Plant, followed by final settlement. The ASP's aerated cells use Fine Bubble Diffused Aeration to deliver oxygen and they were severely fouled to the extent of impairing treatment and the site was unable to reach its DO setpoint. This was resulting in the site being very close to failing and facing intervention from the Environment Agency.

To perform the acid clean Air Technology used formic acid which is then atomised within the pipework and carried by the air to the diffusers. This acid clings to the inside of the pipework and diffuser heads and dissolves any build-up of minerals or organic material that may be blocking the air from entering the effluent efficiently. This is the preferred process as the air supply does not need to be turned off, the lanes do not need to be drained and the disruption to the sites running is minimal.

Once distribution of the acid was complete it was noted that there had been a pressure drop of 100mbar at maximum blower speed and the site was now able to achieve the DO setpoint on the majority of the lane. The quality of the Final Effluent has been improved as a result and Ammonia spike incidents have been reduced. The reduction of pressure also gives the added bonus of extending the life span of the diffusers and reducing maintenance down time.



50%

Increase in
Airflow

100mbar

Pressure
Drop

