

Our markets



Energy



Industry



Maritime

Why Discom?



Less noise



Clean air



Less use of resources

Relieve our customers



By developing longstanding relationships



Sustainable footprint



We always aim for 100% result

Wear and tear of exhaust systems a hidden problem

Usage eliminates the effect of silencers

Many people do not realise it, but exhaust systems and silencers are subject to wear and tear. Systems that once respectfully met all regulations exceed all standards over time. This is harmful to the environment and hearing, health and employee comfort, but nowadays also more and more cause for complaints from the environment.

The world is getting smaller and smaller. Where in the past, from a historic perspective, only the city centre was located on the water, municipalities and project developers are now increasingly embracing locations alongside the waterways. And let's be honest, that is not without reason. Living near water, with a view of the activity on the water, is, of course, fantastic!

'They smell awful'

All that extra activity around the waterline also creates new challenges. After all, where people live and work together, discussion inevitably arises. 'It's nice to see all those ships on the water, but they do make a lot of noise.' Or: 'They smell awful.' The holy grail in this context - full electrification of shipping - is still a long way off. In practice it appears that, just like road transport, the range of electric ship engines is limited and there are quite a few other practical disadvantages. So for the time being, the 'familiar' diesel or gas engine on the water is 'here to stay'.

European directive

Exhaust systems for inland navigation must comply with noise emission standards as described in the Directive of the European Parliament and the European Council. 'The noise produced by a vessel in operation, and in particular the engine air intake and exhaust noises, shall be attenuated by using appropriate means. The noise generated by a vessel in operation shall not exceed 75 dB(A) at a lateral distance of 25 m from the ship's side. Apart from transshipment operations, the noise generated by a stationary vessel shall not exceed 65 dB(A) at a lateral distance of 25 m from the ship's side.'



Vibrations and pulsations

These are fairly clear rules that every newly built ship or vessel in operation must comply with. This is also tested, after which the ship is released after approval. How the condition and performance of the exhaust system subsequently develop is often unclear. In all cases, exhaust systems are configured for a specific engine. Furthermore, they are subjected to many different forces, which are different for each engine. These forces could include vibrations caused by sound, pulsations from the construction or thermal expansion. As a result, the system will obviously wear out over the years. The construction will deteriorate and the attenuation properties will decrease. Very slowly, and virtually unnoticed, noise levels are rising above the European limits. More importantly, however, the comfort and sound comfort on board for owners and staff will be lost. In a densely populated country like the Netherlands, the environment is often the first to raise the alarm.



More information



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10 to 15 years

As a guideline, exhaust and silencer systems can last for about 10 to 15 years with the right configuration, good-quality materials and sufficient maintenance. However, it is important that the load is not too inconsistent. Compare it to the use of a car. If you often drive short distances and stop and start regularly, the system will be subjected to substantial load changes and pollution. As a result, the wear and tear will be much faster than with constant use and good constant (high) temperatures.

Exhaust pipe noise test

Like all other systems with rotating parts, exhaust system maintenance is also essential in the shipping industry. Are all the gaskets in good working order? Is there still sufficient insulation? Are all expansion joints still working, and how about the flexible suspension? In addition, it is also important that the construction itself (the (stainless) steel) remains in good condition and, obviously, that the silencer still does what it has to do.

Therefore, have your exhaust system inspected by a specialist at least once a year. An inspection of the exhaust system can include material control of gaskets, expansion joints, suspension and silencer, but also an exhaust noise test.



Re-fit? Re-silence!

A unique situation is created when a ship is refitted with a new engine. The silencer has often been installed on the ship for as long as the engine and is almost always configured to that specific engine. A change of engine can then cause an acoustic load on the exhaust system whereby a silencer that works on one engine does not work on another.

When repowering a ship, it is therefore important to have the exhaust system inspected by a specialist. In addition to the parts of a regular inspection, it is important to have a counter pressure calculation made prior to installing a new engine.

Contact an installation specialist and use high-quality materials. In the end, you get what you pay for. And... it concerns your own health and comfort!

What applies to exhaust systems in the maritime sector certainly also applies to exhaust systems in other sectors, such as for locomotives, power stations and construction machinery, etc.

Therefore, have your exhaust system inspected by a specialist at least once a year.

