



Type WI Water injector

Application

The TIO Waterinjector type WI is applicable for the exhaust systems of engines which are used for maritime use like generator sets and propulsion motors on ships.

Design

The TIO Waterinjector is a relative short 'straight in- straight out' element, to be installed in the hot exhaustsystem. The waterinjector has a third, radial tangential connection for the water connection. The waterinjector creates a col 'waterspray' that will cool down the exhaust gasses and the piping system.

Advantages

The cooled exhaust system has a relative low backpressure and, in most cases, will not need an external thermal isolation. A water injection also reduces the (direct) emission of soot and odor and gives a positive contribution to the total noise reduction.

Temperature reduction

The temperature reduction is depending on the final execution of the waterinjector, and also depending on the project parameters like gas velocity, water temperature and water-flow. A cooled exhaust temperature $< 60^{\circ}\text{C}$ is almost always realizable.

Gas velocity

The maximal exhaust gas velocity is depending on the noise requirements en de back pressure. Recommended is an exhaust gas velocity between the 35 and 50 m/s.

Pressure loss

Negligible, but depending on the execution and project parameters.

Temperature

Maximum: 600°C .

Material

Standard 1.4539.

Executions in 1.4571, Duplex, etc. are possible.

Isolation

With hot processes, depending of the execution of the piping system, an external thermal isolation is recommended. After he waterinjector, depending on the final piping temperature, in most cases, an external thermal isolation is not necessary.

Preservation

The welds of the water injector will be passivized.

Mounting

The installation and mounting of the waterinjector is committed with stricked bounding rules and is specific per project. Our engineers our willing to advise you in this process.

The waterinjector can very well be combined with a (hot) pre silencer like a compact type DAD or with a (integrated) after silencer.



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