



STORAGE OF MINERAL OILS AND CHEMICALS



PROCESS:

Typical processes are blending, heat transfer and preventing sedimentation in storage tanks

TYPE OF PRODUCT:

Crude oils, Fuel oils, Biofuels
Bitumens, residues and waste streams
(An)organic chemicals

APPLICATIONS:

Blending of products to client specifications
Homogeneous heat transfer for bitumens or crude oils
Adding agents/additives for chemical stability

We offer a robust design with a maximum reliability, high durability and stirring efficiency

Jongia is the Dutch market leader in mixer design and manufacturing. Since 1937 we supply, install and service mixing equipment for the (petro)chemical plants and oil terminals. We combine the financial strength of an international group of companies with the flexibility and fast response of a mid-size company.

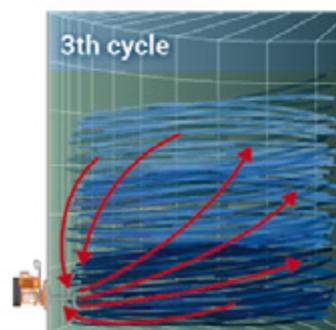
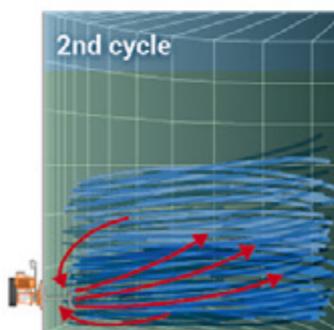
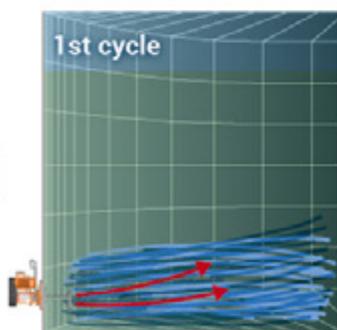
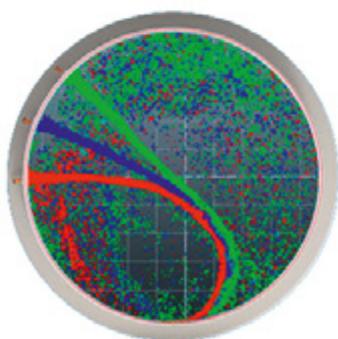
Process description

In general crude oils and related products are viscous and in static phase, often highly viscous. Common processes in tank storage are:

- Mixing of various types of crude oil and fuel oil to meet final specification.
- Avoidance of any solids or sedimentation on the tank bottom, due to separation of the products.
- Heat transfer into the tank, in case of long term storage, to prevent coagulation.

For the storage or blending of crude oil, JONGIA has designed a dedicated side entry mixer. This type of mixer is often used in large scale tank storage. In order to get a homogeneous product, **tank cycles** and **blending time** will be calculated to obtain the most effective flow in the tank. Mixer positions (axial and radial) will be calculated to create the best possible **induced flow**. Pumping capacity versus absorbed power can be checked by means of a Computational Fluid Diagram to meet the customer requirements.

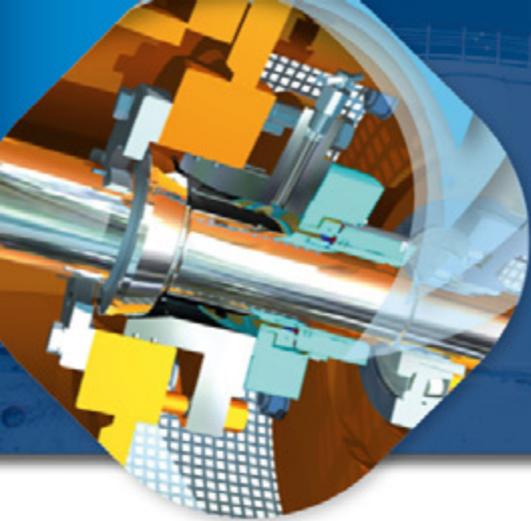
Depending on the specific case and tank dimension JONGIA can install 1 up to 5 side entry mixers. With the high efficient HIFLo propeller JONGIA has not only selected the most efficient mixing element, though also the most effective. Dedicated mixer test facilities and R&D equipment to support customers needs and questions are available in JONGIA's new and renovated production facilities in Leeuwarden. Customers can easily travel to JONGIA's facilities to do pilot scale testing.



References

Major players in the industry such as VOPAK, Odfjell, Total Refinery, Koole Terminal Minerals, Lukoil Tank storage, Shell Refinery, ExxonMobil, Nynas to name a few, use JONGIA equipment in their production facilities. Installations are up and running world-wide from as far back as the early '90.

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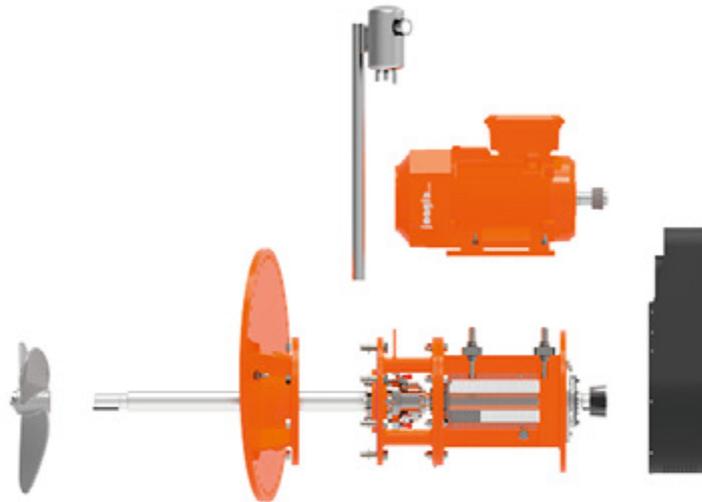


Product information

Based on proven design Jongia has developed a robust side entry mixer. Due to the open construction the seal and bearing section is clearly visible and easy accessible for maintenance. With a state-of-the-art shut off device JONGIA can meet your safety requirements when closing the mixer from the tank.

The JONGIA shut-off device is unique for this type of side entry mixer and when activated, there is no radial/axial displacement of the shaft. JONGIA has designed the conical seat in such a way that this is pulled on to the conical ring. In this a way the shaft (including bearings and seal) remains in its position, whilst closing the conical seat. Once the shut off device is engaged, the seal can easily be exchanged from the fixed shaft. Due to the open construction of the mixer the shut off device is easy accessible and only 1 wrench is needed to close it within 2 minutes.

Heavy duty (double row) ball bearings and a dedicated mechanical seal, designed for mixer duties results in a design life cycle of 20



Watch the animation on YouTube



years and are based to a minimum on OPEX cost. No casted parts are used, which results in the highest strength of the materials. Due to the compact design, no slings are needed to support the mixers at the tank.

Although we have a modular design, every mixer will be engineered, dedicated to the process. JONGIA is certified to manufacture the mixers suitable for ATEX Zone 2 and even up to zone 1.



Process consultancy & testing

In synergy with you, our client, we envision the most efficient solution for your mixing application. Mixing techniques are put to the test in our in-house laboratory by our processing experts or on site with our rental test units.

Engineering, manufacturing & quality

Our engineering team is dedicated to designing robust and reliable, leading edge mixing equipment. The equipment is manufactured by skilled craftsmen on state of the art machinery. Every step is controlled by international quality standards.

Installation & global service

Installation, supervision and commissioning are performed by experienced field engineers. Rely on Jongia's 24/7 global service to assist you.

Jongia N.V.

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