



GROUND-BREAKING CEREMONY FOR OGURA CLUTCH CHANGXING

Changxing, China

This month, a ground-breaking ceremony for the new assembly plant of Ogura Clutch Changxing was held. The new plant is being built in a lot right next to the current plant. The total floor space is being increased from 71,472 square feet to 115,475 square feet.

Production capability for automotive air conditioning clutches will be expanded from the current 300,000 clutches per year to two million clutches per year. Employment will increase from 150 to 300. The plant will also handle manufacturing of industrial clutches for elevators and industrial robots to meet the increased demand of the Chinese domestic market.●



Artist rendering of the existing plant and new plant expansion

AUTOMOTIVE AC CLUTCH PRODUCTION REACHES 400 MILLION

Kiryu, Japan

Since Ogura began automotive air conditioning clutch production in 1963, the cumulative total quantity produced has steadily grown. From 100 million in 1995, 200 million in 2002, 300 million in 2008, and this year, it reached 400 million clutches.



Ogura automotive air conditioning clutches

In the last 50 years, Ogura has expanded its production to many countries outside of Japan. Without support from its global customer base, Ogura could not have achieved this milestone. With automotive air conditioning clutches as a keystone product, Ogura is committed to keep producing high quality products for customers in industries all over the world.●

ISO14001 RENEWED

Kiryu, Japan

Last quarter, a renewal audit was completed by Mr. Yamashita and Mr. Kozuka of Lloyd's Register Quality Assurance. The audit was conducted by using a sample basis. From that sampling, there were no major or minor non-conformances found.

The auditors noted 21 positive findings and 11 minor incidences. Ogura was given some suggestions for improvements, which included execution plans (must thoroughly execute a Plan-Do-Check-Act cycle). Also, when establishing goals and targets for environmental policies, it is important to use 4M (man, machine, material, method).●



ISO14001 audit

Ogura Sales Rep Profile

Zach Boyne, JT Chapman Co.

Hi, my name is Zach Boyne. I am proud to be one of the new members of JT Chapman representing Ogura. I have spent the past eight months doing inside sales in Dallas, Texas for JT Chapman and recently accepted an offer to go into outside sales covering Colorado, New Mexico, Salt Lake City, Wyoming and Eastern Montana.

I grew up in the suburbs of Denver where I developed my love for all things Denver sports. After high school, I honed my customer service skills serving and bartending in the Denver fine dining scene. A few years later, I decided to pursue my education in Dallas. During my senior year at the University of North Texas, I accepted the inside sales job at JT Chapman. Shortly after, an opportunity to return home and sell while traveling the Midwest arose with JT Chapman.

In my free time, I enjoy spending time with my family and friends, hiking, camping, fishing, skiing, really anything in the mountains.●



Zach Boyne

OGURA'S INTERNATIONAL QC COMPETITION

Kiryu, Japan

At the end of last quarter, Ogura held its 2016 Quality Circle World Competition. In order to qualify, quality circles from all worldwide Ogura manufacturing locations must have come up with an improvement to an existing process that reduces cost, time or waste. This year, four teams from outside of Japan (Ogura Corporation (USA), Ogura Clutch Dongguan (China), Ogura Clutch Thailand, Ogura Clutch Changxing (China) qualified for the competition as well as two teams from Japan. All teams presented their ideas, implementation steps and final results to a board of manufacturing and senior executives from Ogura. Many Ogura employees from the manufacturing plants in Japan (approximately 350) were also present to view the competition and possibly gain ideas for their own departments. It was a great opportunity for quality control and manufacturing personnel to exchange ideas and share stories.●



2016 Quality Circle Competition

OGURA INDUSTRIAL JOINS OPEI

Somerset, NJ

Effective last month, Ogura Industrial Corp. has become an active member with OPEI (Outdoor Power Equipment Institute). "OPEI is committed to advancing the outdoor power equipment industry in the areas of public safety, environmental responsibility, business development, and advocacy. Through OPEI, member companies work together to address a wide range of issues – technical, safety, public affairs/relations and market statistics - strengthening the industry overall and helping each member company individually."●



Application Story

A Clean Highway is a Safe Highway

In the US, most of the road surfaces are asphalt or concrete and are very smooth, however, in some parts of the world, roads are constructed differently. They use bricks or stone blocks and in Japan, they are starting to use an asphalt that is made up of a larger aggregate. The larger crushed stones make the surface more porous by increasing the space between stones which helps to drain water off the surface to prevent puddling, making the road safer. This is especially important in more mountainous regions because this type of road also helps to control runoff. The larger aggregate and spacing also helps to absorb sound reducing road noise. Thanks to these advantages, this type of road surface is becoming increasingly popular in Japan, but along with these advantages, come some challenges.

Because the road surface is more porous, sand and dirt can clog the space between the stones, so to keep the road operating effectively, maintenance is required.

The road can be cleaned by a staff of workers using pressure washers, but this is time consuming and care must be taken to control flying debris.

To help clean these roads more effectively, a new machine has been created. This machine is a self-contained unit that both cleans and cleans up after itself.

Underneath the vehicle, in the front, is a long rectangular pad. In the front of that pad, a series of high pressure nozzles create a jet spray of water and tiny air bubbles to loosen the packed dirt. In the back of the pad, a vacuum sucks up the loose sand, dirt and water and holds it in the storage tank section of the vehicle. The final process is a lighter pressure wash to clean any remaining dirt off the surface.

To create the high pressure for the initial and final cleaning, high pressure piston pumps are used. Since the high pressure piston pump only needs to run when the machine is cleaning, an Ogura MMC clutch is used to turn the pumps on and off. The same holds true for the vacuum pump. When the vacuum pump is required to suction up the water and the loose dirt, the Ogura MMC clutch is engaged. When the vehicle is in transit mode, all pumps and vacuum are disengaged.

The MMC clutch for both the pump and the blower work the same way. When the 12v coil is energized, an electromagnetic field is created and the armature is pulled against the rotor. The MMC is a double flux design which means that there are two magnetic loops created in the rotor which helps to boost the torque versus a single flux design. The armature is connected to the input hub via a bi-directional spring which in turn is connected to a universal joint shaft. The bidirectional spring is important because there can be some reversing loads, so the bidirectional spring prevents any chance of spring breakage.

Ogura is proud to help keep the roads of Japan clean. Besides this application, MMC clutches are used in the fishing and agricultural industries, pumps and other construction machines.●



High pressure road cleaner



Ogura MMC clutch



Ogura booth at the 2016 fair