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Akabori Plant Improves Production

Akabori, Japan

Ogura is the largest manufacturer in the world for car air conditioning clutches. A majority of the mid and low volume production is done at the Akabori plant in Japan. With volume growing on some of these smaller volume runs, production capacity was becoming a problem. The existing rotor line was producing around 10,000 of these smaller rotors per month. An additional 5,000 pieces were being produced at other Ogura manufacturing facilities, but this was not keeping up with the demand for this clutch model.

Production engineering had a challenge of increasing production, while not increasing floor space. To accomplish this, the old single axis lathe was replaced with a new two axis lathe. Each machine also had

a new material feeder, automated inspection machine and a stacker. These new machines allow for higher productivity, while minimizing shop floor space.

Inside each machine, each axis is equipped with a turn unit which makes it easy to change either the order of machining for a part or the machine process time. This results in a faster turn over time, which helps gain productivity.

The quality control machines

that were added to each line use a robot to do the inspection but also have a set of gauges that can more quickly measure dimensions and are also easy to change over when required.

Another item that was added was a metal chip crusher, which crushed the metal shavings from machining into smaller pieces. The new gigs created for this reduces the total volume of metal shavings, reducing the frequency of disposal.

As a result of these innovations, the new machine can produce almost 17,000 pieces per month, eliminating the need for the additional production at the other plants. This also helped save money by eliminating the need for a plant to plant product transfer. Overall these changes provided a significant productivity improvement.



New 2-axis rotor line



Inspection robot



Auto-feeder



Finished rotor stacker



New chip crusher

NEW SALES REP. PROFILE

Norman G. Clark's Sales Representatives

Australia

Ogura is very pleased to announce the signing of a new Sales Representative to cover Australia and New Zealand. The company, Norman G. Clark (A/Asia) Pty Ltd., is a third generation family business founded in 1919. The company has been involved with industrial power transmission since the 1960's and has established a national distribution and representation business, which is ideally suited to Australia's vast distances.

There is a small innovative OEM market for PT products especially in the garden and commercial lawn care areas. Ogura products have many opportunities for new business in Australia and New Zealand.

Also an ever increasing repair and maintenance requirement is developing as more machinery is imported and support from the suppliers is limited. Ogura's wide product range covers both replacement of Ogura product and replacement



Left to Right: Graeme Benney, Trung Chau and Riki Tarau

of other brands. This creates many market opportunities for a local supplier.

Norman G. Clark is based in Melbourne and has eight sales staff trained in Ogura products. Regular travel by technical representatives means that the products are being presented to customers on a regular basis. At the same time experienced in-office technical personnel are available to give support to field staff.

ORC'S NEW WEBSITE AND PRODUCTS

Kiryu, Japan

ORC (Ogura Racing Clutches) continues to expand its product line. Although the metal and carbon fiber clutches for both professional drivers and street vehicles continue to be the main product, other products have been added. These are: exhaust piping "headers" for a variety of high performance vehicles, high performance coolant for high performance engines, and pressurized temperature controlled power steering reserve tanks for better handling at high speeds.

In 2008, ORC will be adding a high performance brake product line. Also in 2008 information on the site will also be available in English. For more information on Ogura racing products please visit www.ogura-racing.com.



New ORC home page

The Answer My Friend Is Blown In The Wind

As more electronics are used every day, the importance of electricity has grown significantly. Unlike the U.S., Japan has limited natural resources, so approximately 62% of the electricity is generated from oil, natural gas and coal, and 27% is generated by nuclear power. Both the rise of fuel costs and the concern over green house gases are causing many communities and individuals

If the generator senses gale or hurricane force winds . . . the Ogura brake is activated. The brake comes on and locks the generator and blades.

ual homeowners in Japan to take another look at wind power.

In parts of Japan and throughout the world where wind is consistent, wind power is becoming an attractive option. Wind generators convert the kinetic energy of the wind into rotational motion via blades. There are many blade types and sizes, each designed for a particular wind environment. In most wind generators gears are used to speed up the rotational motion which runs a generator.

The small wind generator (shown in the picture) uses neodynim magnets that can generate electricity, even at

low speeds. It can effectively produce power with wind speeds from 4.5mph to 30mph. When wind speeds start to exceed

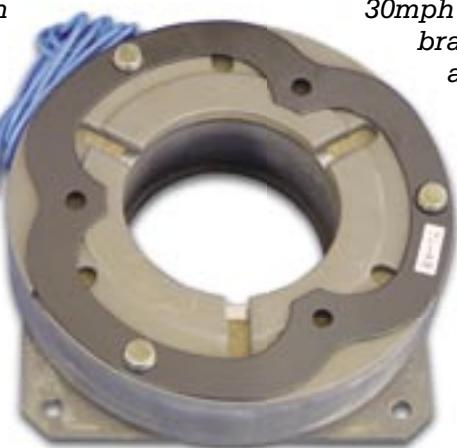
30mph a regenerative braking system is activated within the generator so that it does not go into an over-speed condition. If the generator senses gale or hurricane force winds the regenerative brake is not strong enough to prevent an over

speed condition. If this happens, the Ogura brake is activated. The brake comes on and locks the generator and blades.

The windmill uses Ogura's VBEH-5 (power on) brake,



Windmill



Ogura VBEH5

connected directly to the generator input shaft. The VBEH-5 uses a compact high torque coil and a single spring armature. When the brake is not in use there is no contact and no frictional force on the armature, so there is no additional drag and/or power consumption in normal operation.

After the storm has passed a wind sensor releases the brake and allows the generator to continue providing electricity for little

Akira so he can play his Nintendo.

The reason that a power on brake was chosen was because the windmill would only need emergency holding less than five percent of its operating life, so if a spring applied brake had been used in this application it would require power 95% of the time. The VBEH-5 power on brake receives its current to energize from a battery. As a backup to the battery a small solar panel provides charging power if there is no wind for an extended amount of time.

As an environmentally conscious company Ogura finds it rewarding to apply products to these types of applications. Over the past few years Ogura has made a number of changes within their production facilities to reduce the impact on the environment. In 2008 this will continue and updates will be posted in the newsletter.



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Happy Spring! *from the staff of*
Ogura Industrial

NEW PRODUCT RELEASE FROM OGURA

New Low Cost Spring Applied Brake

A new series of spring applied holding brake is now available from Ogura Industrial Corporation. The FNB series is available in four sizes from 9 – 71 in. lbs. The brake is designed for holding and emergency stopping. It incorporates a friction disc that is built into the pressure plate so there are no loose parts when the brake is disengaged. The brake is designed for a customer to supply their



Ogura FNB

own hub, thereby reducing the cost, but more importantly giving greater flexibility on mounting. The brake is extremely thin, which makes it ideal for robotic and servo motor applications. The single friction face helps reduce release time and because the brake uses springs as its engagement force it is unaffected by normal temperature or voltage fluctuations. All brakes are manufactured under ISO requirements and are RoHS compliant.

OGURA IN THE NEWS

Ogura Racing Products Shown at Tokyo Auto Show

Tokyo, Japan

On January 11th through the 13th, the largest exhibition in Japan for aftermarket auto products was on display at the Tokyo Auto Salon. All of the Ogura racing products were on display at the show and as in past

years, Ogura had excellent interest in the products by the show attendees. Last year a Z33 won the highest award for best modified car. Ogura contributed a number of components to this car and it was actually called the ORC Stream Z. This year Ogura assisted in equipping a Legacy car, which again won the same award.



Show visitors watch Ogura sponsored racers on overhead screens



ORC award winning car