



Ogura production continues to automate

For 2003 Ogura's production goal is less set up time with less labor while at the same time maintaining zero defects. To accomplish this, Ogura production has purchased additional machine tools that have a faster and greater flexibility in tool changeover.

The inspection software has also been upgraded on many of the automated inspection operations. In the old manufacturing processes when a part was being produced on the assembly line, the inspection software also had to be changed at the same time a tooling changeover was made. Since the tooling change has become more flexible and faster, the software also had to become more flexible. The new software now instantly recognizes (the software has the ability to learn) the part and the appropriate measurements for flatness, run out and other measurements can be taken.



Software upgrade helps inspection machines to recognize a variety of different production rotors



Subcomponents from suppliers go right to the production line without repacking

Another change that has helped improve production efficiency is coming from Ogura's suppliers. In the past when the supplier's material was received into Ogura's production, it had to be taken out of the supplier's packaging and loaded onto Ogura's automated assembly lines. Changes have been made so that the material now comes in from the supplier in boxes that go right onto Ogura's automated assembly line. Robots can quickly recognize the components and the container, when empty, is returned to the supplier for reuse. This change has



Automation improvements help production to control cost and increase quality

resulted in both a labor and time savings for production.

To help eliminate the chance of having a rejected part in final assembly, more automated reject stations have been added to various manufacturing processes. This means that all subcomponents are checked 100% as they go through various manufacturing stages. If after parts finish a particular process the automated inspection machine detects a part out of tolerance, the part is automatically rejected before it moves to the next station. This helps production to isolate and eliminate potential problems very early in the production process.

ISO/TS16949 at hand

The mobile products manufacturing plants within the Ogura Group of Companies are currently undergoing the process for certification to the new ISO Standard TS16949. This new standard combines QS9000 requirements of US automotive manufacturers with the requirements of many of the European manufacturers.

Progress in meeting this new standard is moving along very well and it is expected that the certification will be complete by May of this year.

ISO/TS16949



OIC EMPLOYEE PROFILE

Anthony Leone Customer support rep

Hello, my name is Anthony Leone. I have recently joined Ogura Industrial as a Customer Support representative. In addition to assisting customers and processing orders, I will be involved in technical support and warranty claims.



Anthony Leone

Prior to coming to Ogura, I was an Electrical Specialist for Motion Industries. Some of my other work experience has included designing and building the controls used in tubing manufacture, and field service for induction heating equipment. I received my electronics training in the Air Force, where I was a flight simulator technician. I have worked on and "flown" the C-141 transport in New Jersey, and F-111F while stationed in England. I also worked on Boeing 747, 727, and 737 flight simulators as a civilian.

I am originally from New York City, but have lived in New Jersey since 1984. I am very proud of my children. My daughter Nicole has a degree in Graphic Design and is going for her Masters. She plans on becoming a teacher. My son Anthony Jr. graduated college last year with a degree in International Business and Asian studies. He is fluent in Japanese, and currently lives in Matsudo City, Japan, and works in Tokyo.

I enjoy working here at Ogura, and look forward to helping our customers and reps in the future.

ISO 9001: 2000 achieved

All mobile products manufacturing operations have achieved the new ISO 9001: 2000 certification. This new certification was achieved in the last quarter of 2002. Copies of the new certificates are available for any customers who wish to have them.



ISO-9001: 2000 Certificate

Ogura production achieves 200 million mark for automotive A/C clutches

In the last quarter of last year Ogura reached production of its 200 millionth automotive air-conditioning clutch.

Air conditioning clutch production was started within Ogura in 1963. In 1995, Ogura reached its 100 millionth air-conditioning clutch. (That took 32 years.)

In 2002, Ogura reached the 200 millionth mark. (That took only 7 years.) The growth of this product within Ogura shows both the increased worldwide demand for automotive air-conditioning clutches and Ogura's worldwide dominance in high-volume automotive clutch production.



High volume automotive A/C clutches

New dedicated Elevator Test Lab built

With the increased need for elevators and escalators worldwide, engineering has built a test lab specifically for testing elevator brakes. This new lab has the ability to test six brakes at a time running on a two-ton mini



New elevator test lab

elevator. (The elevator travels approximately 12 feet.)

Although small in travel, the ability to load this mini elevator with up to two tons will help Ogura engineering design the best possible brake for various customers' requirements.

APPLICATION STORY

Oil well that ends well

We have all seen these Iron Icons of the American oil and gas fields bobbing their massive heads up and down like huge thirsty Trojan horses at a watering hole. In locations all across our fruited plains you see these machines churn away, day after day, night after night pumping oil and natural gas from the earth. But how do they begin their pumping actions? What keeps them going? What has Ogura to do with this process?

In the typical pump system, an electric motor drives a gearbox that moves a lever. The lever pushes and pulls a polishing rod up and down. The polishing rod is attached to a sucker rod, which is attached to a pump. This system forces the pump up and down, creating a suction that draws oil and natural gas up through the well.

Back when electricity was inexpensive, these machines used large (15-30 HP and more) electric motors. The pumps would continue to run until the gas or oil was drained from the well. The pump would then stop allowing the gas or oil to seep back into the well.

Because of the high-speed engagement, they needed a clutch that could handle the high energy (heat) dissipation in tough outdoor environments . . . The Ogura high torque, general purpose clutches offered these features and more.



High torque, general purpose clutch with pulley

Today there is a push for lower cost fuel extraction technology. Electricity is at an all time high and these big electric motors are expensive! In addition, some wells can have over 100 starts per day. This is a significant expense of motor inrush current. A forward thinking Ogura customer in this business knew there had to be a better way.

It seemed simple: When these pumps are pulling natural gas from the ground, why pay for electricity to pump it? They developed a natural gas engine start system that can run on the same gas they are pulling for the ground! It is almost like free power!

The technical issue: The natural gas engine has more torque at higher RPM's. The pumping loads however can be highest at start up (lower rpms) and would stall the new natural gas engines. Here is where the electric Ogura clutch comes in.

With our high torque, general purpose clutches the user can start the engine remotely, without any load on the engine shaft. Once the engine has warmed up and is accelerated to optimum torque and speed, they engage the Ogura clutch and begin the pumping cycle. The clutch slips a little while the



Pumpjack with natural gas engine

load is accelerated. The combined result is no engine stall.

Because of the high-speed engagement, they needed a clutch that could handle the high energy (heat) dissipation in tough outdoor environments. Torques in excess of 200 Ft Lbs were needed. The Ogura high torque, general purpose clutches offered these features and more. This clutch offers a built in double "A" groove pulley, perfect for the loads and one less part (the pulley) to inventory and assemble.

So our customer's new natural gas systems are very cost efficient for the well operator and are selling like hotcakes. This customer sees a big potential for these new systems that basically run off of the stuff under our feet! Ogura is "well" suited to help in our customer's big plans for the future. Oil well, another application story in the can.



OGURA INDUSTRIAL CORPORATION

P.O. Box 5790, 400 Cottontail Lane, Somerset, NJ 08875-5790
Tel: 732-271-7361 • Fax: 732-271-7580
E-mail: ogura.nj@ogura-clutch.com
Web Site: www.ogura-clutch.com



Happy Spring



from the staff of

Ogura Industrial

OGURA IN THE NEWS

How to Catch Torque

In the fourth quarter of last year, **Design News** published an editorial showing how an Ogura magnetic particle brake is used to simulate line pull in a fishing arcade game.

In the game, the player is required to reel in fish of varying sizes, starting with the smallest and gradually growing in size. To simulate the line pull, an Ogura magnetic particle brake (model OPB5) is used.

On the screen a player sees a fish both in the water and jumping out of the water. Since the player has to feel the change in the line pull when the fish jumps out of the water, the brake needs to respond extremely quickly. The Ogura magnetic particle brake was used because of its fast reaction time (less than a .10 of a second) and its smooth feel even when the player is rotating the simulated reel at low rpm.

More detailed information on this editorial and other Ogura editorials can be found in the "What's New Section" at www.ogura-clutch.com in the editorial archive.



Design News article

2003 Tokyo Auto Show

Ogura racing showed off its latest products at the January 2003 Tokyo Auto Salon. At the show, Ogura showed off its latest improvements to its line of racing products. The main draw at the show was Ogura's



Ogura's booth at the 2003 Tokyo Auto Show

line of mechanical pressure plate clutches. All units were on display from the single plate 300 HP clutch to the quadruple plate 1500 HP clutch. In addition to the mechanical pressure plate clutches, Ogura also exhibited their lightweight flywheels and drive shafts.



Ogura shows off their products

Industrial products exhibited for the Chinese market

At the Shanghai International Expo Center, Ogura exhibited their industrial products for the Chinese market place. A new catalog



New Chinese industrial catalog

and both products and catalogs were displayed at the Ogura/Sunholy booth.

Sunholy is Ogura's partner and will be promoting Ogura's industrial products to the Chinese market. There were approximately 15,000 visitors to the show.



Booth at Shanghai EXPO