Next-generation energy-saving

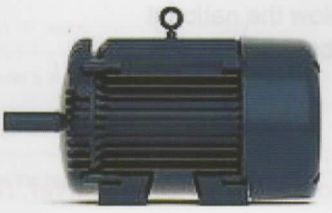
Power(Motor)-Saving System

DIGITAL

SHIGA SAVER

In a large-scale commercial facilities and production plants except household power, more than 70% of electricity consumption is consumed by power (motor).
The loss of power(motor) has been big influence to electricity consumption of air conditioning, machine tools, refrigeration and freezer.
Its power (motor) loss of about 10% due to some resistance generated on the structure was found to be that you are experiencing.
This power-saving system will be able to enable the power-saving reasonable to improve its loss.
Shiga Saver is new system was not in the conventional power generation.

The new system will improve the electrical consumption of the motor 10%.



URL http://www.shigasaver.co.jp E-mail info@shigasaver.co.jp

Introduction

Worldwide electricity prices has severely increased. It can not be overlooked.
Aggressive efforts of each company, including the global warming problem has been accelerated.

The Shiga Saver

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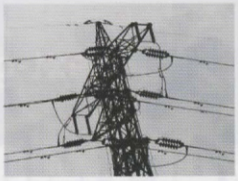
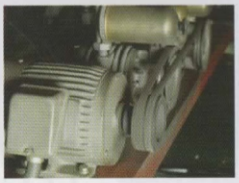
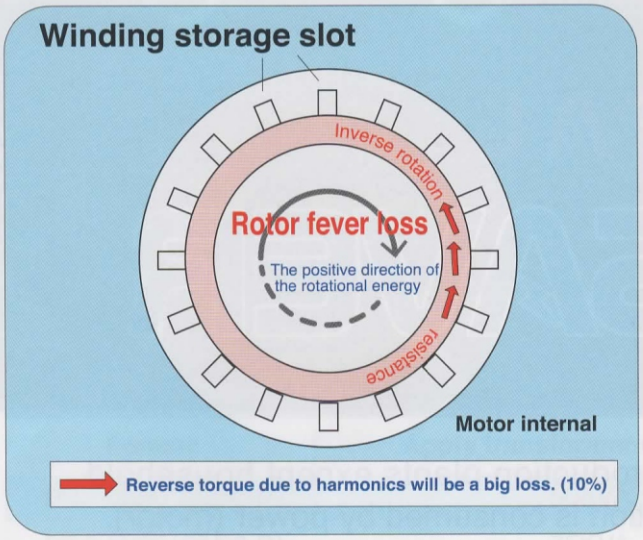



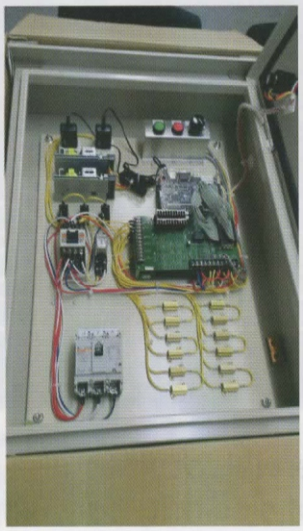
Technical Summary

The motor will decrease about 10% effect by reverse the positive direction rotational torque of the harmonics generated on the structure.Shiga Saver clears the loss by giving the harmonic of the opposite phase with respect to this harmonic.

current status of actual power(motor)



Inside of Shiga Saver giving the harmonic of opposite phase



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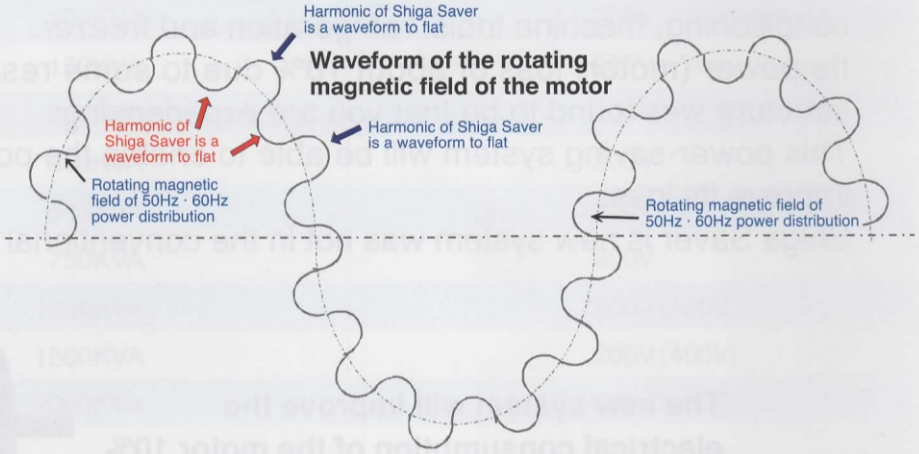
POINT

And applying a weak 11, 17, 23, 29-order harmonic voltage.

※Harmonics to be applied is significantly below the national guidelines in about 0.05A, safe and secure



By the waveform to the flat by Shiga Saver, rotation efficiency is improved, power-saving effect can be obtained.

New Viewpoints **Up to 10 percent power saving if the loss of the motor can be obtained**

In the past common sense, harmonic of a low-pressure mains that power(motor) is connected as compared to the fundamental was considered 0.1 to 0.2% in the voltage, and 0.2-0.3 percent in the current.
Therefore, the proportion of the induced current in the rotor side due to harmonics were believed to be weak, however,in fact,we found that up to about 15% harmonic current is present with respect to the fandamental wave of the rotor of the current.

That's why this discovery and improvement has created a Shiga Saver.

Benefits of Shiga Saver

Shiga Saver enables power saving of 10% for the motor.
*** only to the power (motor) 200v · 400V.**

Shiga Saver is

You must match the transformer capacity of the substation facility.
Since the price is different by the capacity, the load factor and utilization rate of the transformer is an important point to determine the amortization period.

The proportion of single-phase and three-phase by industries

Shiga Saver will exert an effect on the power (motor).

~~Electric heating~~ ~~lighting~~ ※There is no effect on the heat and light of the single-phase.

○○ Plaza [General commercial facility]	
Single-phase	Three-phase
30%	70%

○○ hotels [Hotel]	
Single-phase	Three-phase
40%	60%

○○ industry [Production plants]	
Single-phase	Three-phase
20%	80%

cost reduction

Environmental improvement

Informative : The average ratio.

Features and safety of Shiga Saver

- Shiga Saver may benefit the more power (motor) ratio.
- Shiga Saver may benefit at large scale of facilities, and the longer the running time.
- Shiga Saver may benefit at large electricity consumption .
- Shiga Saver may benefit the higher the transformer of capacity utilization.
- It is a completely different way than the demand system, but there are still more of the effect can be used in combination.
- Inverter - effect is also seen in the like.
- There is a very high level of safety in order to put in parallel to the low-pressure main line.
- Even if by any chance trouble occurs, dedicated breaker senses, does not cause a problem with the electricity use.

Attachment of Shiga Saver(example)

Attaching the Shiga Saver in parallel.

Check the waveform with an oscilloscope

FAQ Shiga Saver

Q 1. When using power costs down, does it also decreases the maximum power basic charge?

A There is no proportional relationship of maximum power and use the amount of power, but it decreases.

Q 2. Does it have any effect on the inverter additional equipment?

A It brings a signal is transmitted effect through the rectifier circuit of the inverter.

Q 3. By installing the Shiga Saver, Do you have any adverse effect on the existing facilities?

A No problem. High-frequency voltage is about 0.2%.

Q 4. How much useful life of Shiga Saver?

A Please understand about 10 years.

Q 5. Do you have a manufacturer's warranty?

A Yes, it is with a 5-year warranty.

Q 6. Does it have any effect on the high-efficiency motors?

A Yes, the effect there is. With high-efficiency motors is primary loss improvement, Shiga Saver It should be noted that acts on the secondary side, there is a further effect.

Q 7. Please tell me the maintenance.

A Shiga Saver is an electronic equipment. Please remove the regularly dust.

Q 8. During the installation of Shiga Saver Do you need a power outage?

A Installation of Shiga Saver is easy at low pressure mains connection, if there is no pre-breaker it is required power outage of a short period of time.

Application industries and achievements of Shiga Saver

Mold pressing plant	Auto parts factory
Plastic forming plant	Paint factory
Precision metal processing industry	Poultry, dairy farming
Department store・Complex	Industrial waste disposal facility
Restaurant	Hotel
Super・Convenience store	Refrigerated warehouse

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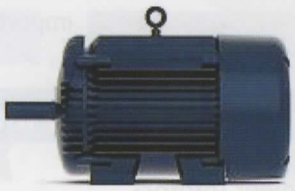

The flow of the introduction of Shiga Saver

STEP1	Description of Shiga Saver (Overview, technology, effects forecasts and actual results, etc.)
STEP2	Hearing (Electrical Safety Inspection Association monthly report and electric bill one year)
STEP3	After analysis, the effect prediction report and quote submission
STEP	After consideration by the customer, ordering
STEP5	Shiga Saver installation, delivery

Specification of Shiga Saver

Format	Apply transformer capacity	Specification
DSS-0050(50/60-P)	50KVA	200V (Build-to-order manufacturing)
DSS-0075(50/60-P)	75KVA	200V (Build-to-order manufacturing)
DSS-0100(50/60-P)	100KVA	200V (Build-to-order manufacturing)
DSS-0150(50/60-P)	150KVA	200V (Build-to-order manufacturing)
DSS-0200(50/60-P)	200KVA	200V
DSS-0300(50/60-P)	300KVA	200V
DSS-0500(50/60-P)	500KVA	200V
DSS-0750(50/60-P)	750KVA	200V
DSS-1000(50/60-P)	1000KVA	200V(400V)
DSS-1500(50/60-P)	1500KVA	200V(400V)
DSS-2000(50/60-P)	2000KVA	200V(400V)

[Manufacturer] SHIGA SAVER COMPANY LTD.