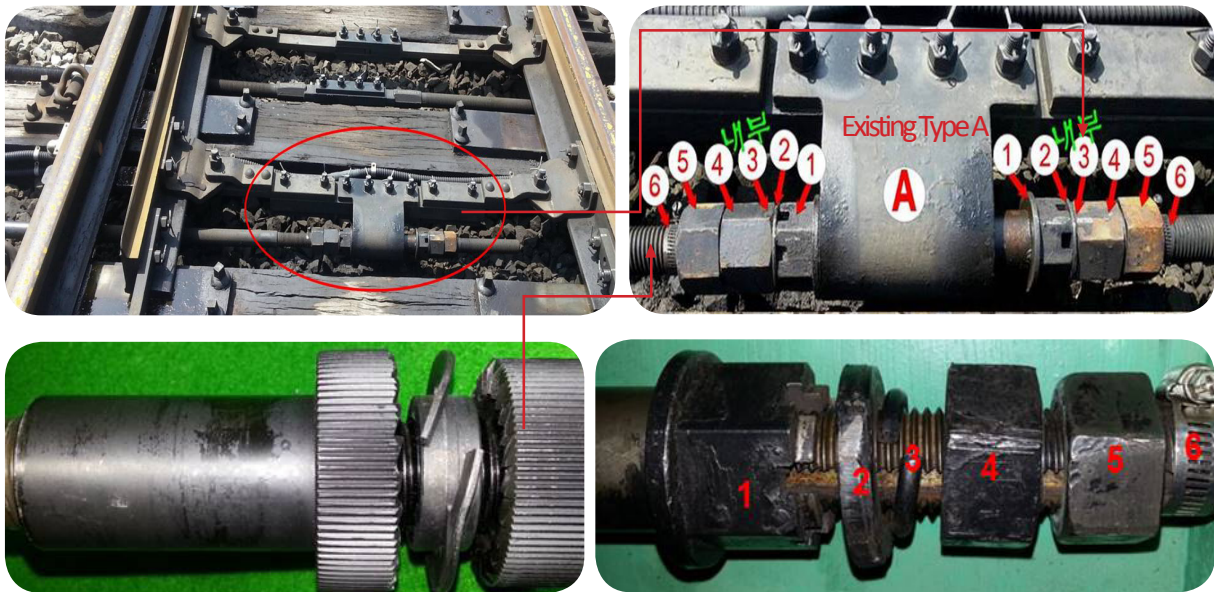


# Comparison SY-NUT with Existing Type A

The photograph of the main(operation) switching point at the railway track switchboard



## Comparison SY-NUT with Existing Type A/B

### Comparison of existing nuts



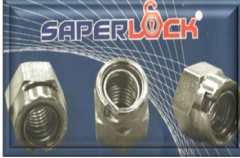
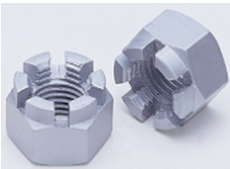
Existing nuts require a lot of parts to prevent the release from vibration of trains as a key component of the on-site railway track switchboard.



It is a structure that the key-washer is caught between the saw tooth formed on the left and right nuts, so it cannot be loosened without the artificial release by the tool.



## Comparison Table of Similar nuts

	SY-NUT	(B Company)	(C Company)	(D Company)
Image				
Principle	Built-in Key Washer (Stainless steel and Alloy)	Material : Plastic	Built-in Heli-coil	Bolt drilling, Using split pins
Merits and Demerits	Free screw tightening, Lubricant application recommended	Material deformation due to lubricating oil	Difficulty in applying lubricant	Re-drilling bolt on reuse
Maintenance	easy		Total change	Difficult
Price	(very low)		Expensive	

## Certification



99, Sinheungmal-gil, Seocho-gu, Seoul, Korea  
[www.greensaver.kr](http://www.greensaver.kr)  
 Tel: +82-2-445-7722 Fax: +82-0505-341-7722  
 E-mail: master@greensaver.kr







INNOBIZ  
기술혁신영종소기업

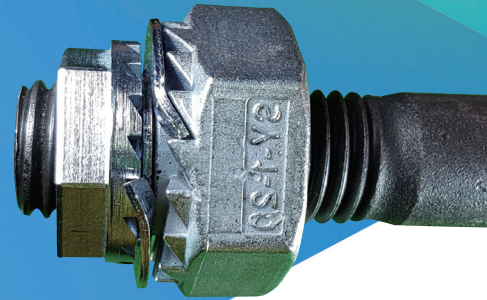


CE

# SY-NUT

SY-NUT for locking bolts and nuts

철도, 지하철레일, 선로전환기 등  
철탑, 자동차, 각종 볼트너트



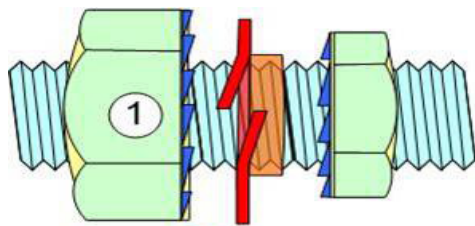
**SHINYOUNG**  
Tech Vision



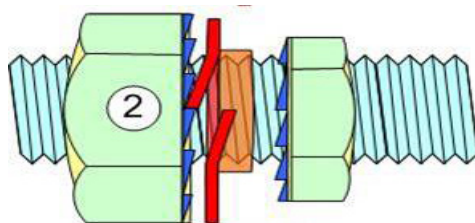
# Principle of SY-NUT (Tightening of Bolts & Nuts)

SY-NUT is most suitable for fastening structures under vibrations

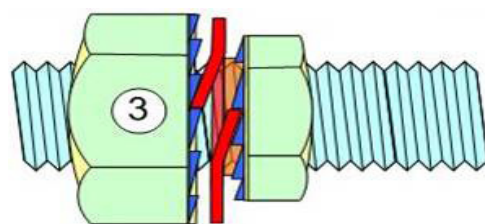
## Diagram



Before engaging



During engaging

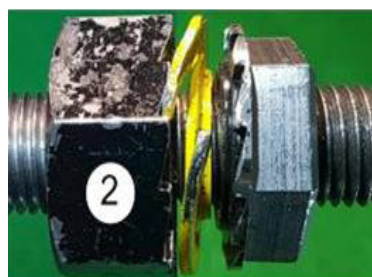
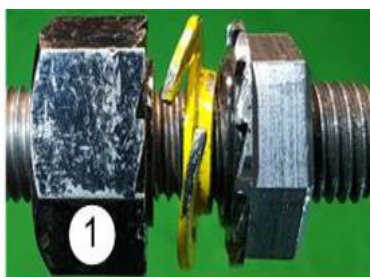


Engagement completed

## For railway branching



## For general use



Jul 15, 1991

Established as Shinyeong

Incorporated and expanded its manufacturing business.

Apr 27, 1999



Sep 10, 2004

Acquired high efficiency product certification

Won Award of Patented Technology (Ji Seok-Young Award)

Sep 15, 2005



SY-NUT guarantees bolts and nuts to be sale and locking engagement from structures under vibrations and shock in the following fields

- The engagement of railway rails
- Locomotives
- Beams of the transmission line(Pylon) bridge deck
- Beams of construction structure
- Various heavy machinery (military tanks, automobiles and planes), etc

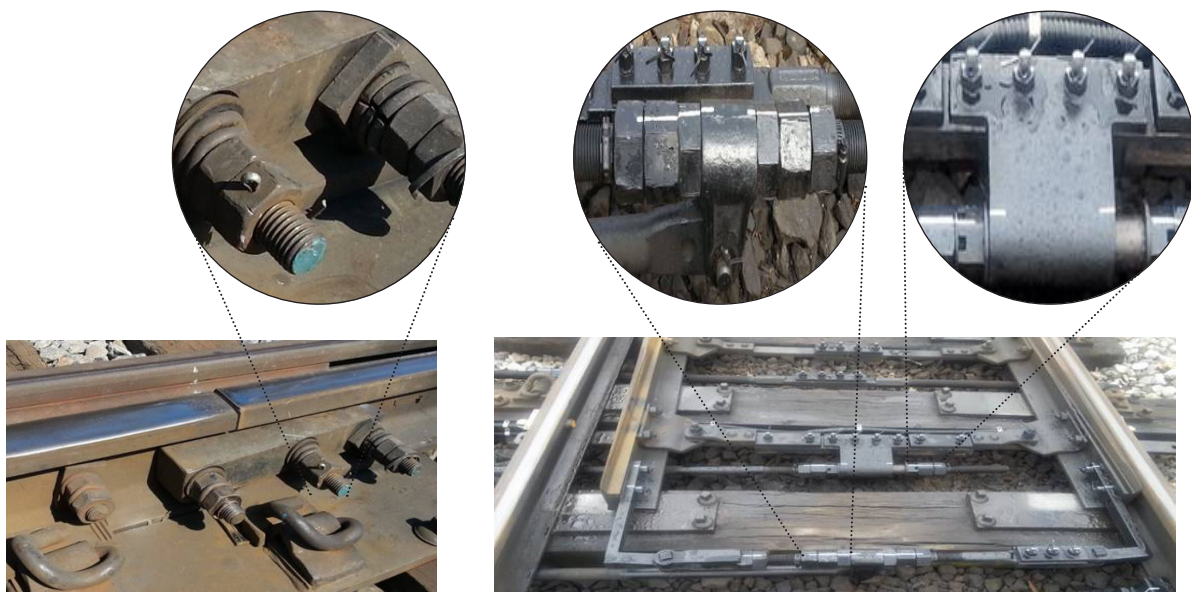


- (Left) The train derailed due to loosening of bolt and nut at the track branch.
- (Right) The transmission tower that could not withstand a typhoon.
- These are 'the problems of flexibility'.

## SY-NUT (Prevention of bolts & nuts Loosening under Vibration and Shock of Structures)

Bolts and nuts are essential components for tightening structures, but they have structural problems by vibration and shock.

**SY-NUT** (Bolts and Nuts that prevent loosening) solves this phenomenon fundamentally.



Jun 30, 2006

Registered excellence products (48 products)  
In Public Procurement Service.

Won Presidential Citation

Oct 13, 2009



Jan 01, 2012

Selected as a company of  
Hi Seoul Brand.

Acquired Green Technology  
Certification, MOTIE

Jul 24, 2013



# SY-NUT (Free tightening; Loose tightening is also possible)

The feature of SY-NUT is to maintain the tightening condition without releasing, even if it is moderately tightened at any tightening end point.



When fastening different materials, for example, concrete sleeper and rails, Excessive tightening can pose a risk to train safety due to concrete rupture, and loose tightening will not ensure the safety of the train due to incomplete fastening.

Concrete sleeper that ruptured on railway tracks



The joint region of excavator : Excessive tightening will inhibit rotation and loose tightening is unsafe and dangerous.



Screws will not loosen even if moderately tightened at any point.

## The Excellence of SY-NUT Technology

- 1) Existing methods to prevent loosening
  - To fasten several nuts
  - To insert split pins by drilling holes in the bolts and nuts
  - To fill the space between the screw nuts with ring-shaped coils
- 2) This **SY-NUT** product is normally rotated in the screw tightening direction so that it can be tightened. However, it prevents loosening by making it impossible to rotate due to a latch at ordinary time.
- 3) During the maintenance, bolts and nuts can be loosened by pressing the latch with a box wrench.
- 4) Even if properly or loosely tightened, it will never be released in the opposite direction.
- 5) Existing nuts have many difficulties.
  - They cannot be used for long term due to corrosion(oxidation) of metals caused by the water ingress such as rain.
  - They can be also damaged during the inspection of dismantling.
- 6) This **SY-NUT** product can use nonmetallic stainless steel or alloy, and can prevent corrosion by applying lubricant(grease) to effectively block oxygen and moisture.



Oct 13, 2013

Won Award for the 1st Korea's Beloved Companies (Environmental Category)

Registered its lighting control system in Korea Online E-Procurement System, Public Procurement Service.

Oct 20, 2014



Mar 31, 2015

Authorized as ESCO (Energy Service Company)

Won the award of Minister of Trade, Industry and Energy for good Green Technology-certified companies.

Jul 06, 2016

