



Resolve field problems...!

SOLUTION PRODUCTS

the Best **30**

JRC highly recommend solution products that contribute to improving customer site safety and productivity are summarized in one book.

Belt mistracking/misalignment

Efficient replacement of rollers

Adhesion of conveyed material

Spillage of conveyed material

Safety measures

Deposition of conveyed material

Spillage of conveyed material

ADJUSTABLE A TYPE HOLDDOWN RETURN IDLER / HANG TRAINING RETURN IDLER / MANUAL TRAINING RETURN IDLER / TENSION WEIGHT GUIDE / SHOE TYPE TRAINING IDLER(carrier · return) / TRAINING CARRIER IDLER (HIGH SPEC) / UPLIFT PREVENTION · GATE TYPE CARRIER IDLER / TROIS GUIDE IDLER / TILT CARRIER IDLER / EAZY SLIDE CARRIER IDLER / JACK DOWN CARRIER IDLER / EAZY REPLACEABLE FLAT CARRIER BRACKET / CASSETTE RETURN IDLER / SWING RETURN IDLER / ASGCO SKALPER / MF-DIP CLEANER / ASGCO CHEVRON / NON STICK ROLLER / NON STICK PULLEY / SCRAPING UNIT / FALL PREVENTION RETURN ROLLER / SAFETY FENCE / SAFE GUARD / FRAME RETARDANT HEAVY OIL RESISTANCE RUBBER ROLLER / NS GUARD / IRON FALL PREVENTION RETURN ROLLER / DROP OUT · DEPOSITIONAL PREVENTION FENCE RETURN ROLLER / DEPOSITIONAL PREVENTION CARRIER IDLER / STUB ROLLER COVER / IMPACT SLIDE and more



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SOLUTION PRODUCTS

the Best 30

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Belt mistracking and misalignment-solving products

What is "mistrack/misalignment"?

This is a phenomenon in which the belt travels unstably while mistracking left and right away from the center of the conveyor to be driven, or is largely moved toward one side, due to factors such as a piece of cargo being transported, the inclination of the frame, and the adhesion of the conveyed objects to the rollers and pulleys.

Load spill due to off center loading

Damage to belts and equipment

Major Factors of Mistrack and Misalignment Occurrence

The mistracking and misalignment of the belt is caused by various factors in complex entanglement. Therefore, it is important to identify the cause of the trouble and consider appropriate countermeasures.

Trouble due to entanglement of various factors! (Example of factors)

☒ Inclination of the conveyor frame	☒ Poor alignment of pulley or roller
☒ Belt lift	☒ Tilt/Sway of Tension Weight
☒ Adherence of conveyed materials to pulleys or rollers	☒ Effects of wind and rain
☒ Off center loading at the transit section	☒ Poor rotation of pulley and roller
☒ Belt splice failure	☒ Resistance unbalance due to skirt rubber wear
☒ Uneven wear of the belt	

Leaving trouble is developing into further trouble

Mistracking or misalignment of the belt is a cause of various problems, and it is difficult to identify the cause. Therefore, the belt tends to be left unsolved and further serious situations may occur which resulting in serious damage.

Increase in cleaning expenses and raw material losses



Load spills caused by belt mistracking result in an increase in cleaning costs as well as an increase in raw material loss.

Significant decline in productivity



The operation of mistracking detectors, etc., causes frequent emergency shutdowns of equipment, which leads to an inevitable drop in productivity.

Increase in equipment repair costs



Consumables such as belts, drive parts, rollers, etc. are under-loaded, and if they are damaged early, maintenance costs for repair will increase. (Photo: Remains that the belt car has been torn in a strip due to mistracking)

Points of countermeasures against mistracking and misalignment

It is important to comprehensively check not only the place where the symptom is actually occurring, but also the equipment such as whether there is any cause in the upstream of the conveyor and take appropriate measures.



Solve mistracking and misalignment issue!

Introducing Resolved Products from the Next Page!

Return side belt

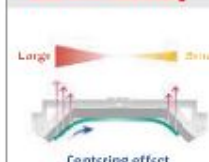
Mistracking and Misalignment

Correct mistracking from the return side by belt repulsion force

Balance of the repulsive force under normal conditions



Balance of the repulsive force when mistracking



ADJUSTABLE A TYPE HOLDDOWN RETURN IDLER

Utility Model Registration No. 3225596



This product corrects mistracking by utilizing the belt's own repulsive force generated by pressing the end of the belt against the rough at the return side of the conveyor.

No tools required for adjustment by adopting a bracket.



Angle adjustment of the pressing allowance is possible.

Normally, the 45-degree holding allowance can be freely adjusted between 40 to 50 degrees by inserting and removing the fixing pin.

It doesn't just push it in! Belt-friendly two mechanisms

POINT 01 Belt does not touch frame

For 2-roller type



With a less rigid belt, the belt may bend and interfere with the frame.

For 3-roller (offset) type



The end of the belt can be precisely held without interference with the frame due to belt bending.

POINT 02 Adopt the pendulum principle



To prevent excessive load on the end-loc portion, one side is pushed in, and the other side is released, adopting the "pendulum principle".

You can also use it like this!

The angle can be adjusted individually on one side by removing the top plate on the top of the product.

Due to the hang type, conveyed material does not accumulate and the centering function continues for a long time.



HANG TRAINING RETURN IDLER

Patent application open JP 2017-001756

Unlike the conventional return-side self-centering idler, this is a "hanging type" with a slowing frame at the top of the roller. This is a mistracking countermeasure product that reduces the premature deterioration of the automatic centering function due to the accumulation of conveyed materials around the slowing shaft.

By prolonging the life of the self-centering function, the fear of "Doesn't it the belt be damaged by mistracking?" is reduced!

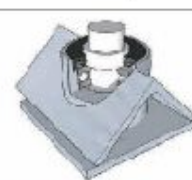


Iwata Norihito
Densetsu Sales Office



Pivoting frame on the upper part of the roller

Depending on the arrangement of the sand frame to the upper part of the roller, conveyed material does not accumulate around the pivot shaft, and the automatic centering function continues for a long time.



Improved performance and strength of slowing parts

Thrust bearings are adopted for the slowing part, and the center pin is thickened and reinforced. Smoother and more stable frame slowing is possible.



Prevents adhesion of transported objects to rollers

Nonstick Roller (P.25) is coated with 32-degree hardness soft rubber, eliminating roller adhesion problems of high-viscosity conveyed materials.

Eliminates the deposition of conveyed materials and does not impair the automatic centering function



Deposition on the lower part of the roller buried the pivot shaft in the center of the frame, and the centering function was stopped.



There is no concern of accumulation at the upper part of the roller for the slowing part, and we succeeded in reducing the accumulation by adopting a load drop prevention roller.

Changing the roller is also effective!



"FALL PREVENTION" RETURN ROLLER is recommended to reduce deposition on the lower part of the roller.

Return side belt

Mistracking
and
Misalignment

This point is useful



No tools required for adjustment by adopting a Lynchpin

Front and back positions of rollers can be adjusted manually with fine freedom.



Front and back positions of rollers can be adjusted by inserting and removing pins

The front and rear positions of the rollers can be freely adjusted within a range of 10 degrees forward and backward by simply inserting and removing the supplied fixing pin into one of the 9 holes.



Design that can be safely adjusted away from the rotor

The brackets with holes for inserting and removing the pins and the handles for moving the rollers are placed on the outside of the conveyor frame which makes it safe.



MANUAL TRAINING RETURN IDLER

Patent No. 6745601

Roller's longitudinal position can be manually adjusted to prevent mistracking. It is convenient to place the belt in a position where it tends to be offset in a certain direction, so that it can be fine-tuned at any time.



This point is useful

Simple and economical since it is OK to retrofit/existing facilities

TENSION WEIGHT GUIDE

This product reduces the inclination, sway, and twisting of the tension weight when the conveyor is started or in operation by attaching it to the support of the tension pulley, and suppresses mistracking and misalignment of the belt.



Easy fine adjustment of heavy tension weights

The two guide rollers push back the misalignment of the support and correct it. Since it can be freely installed at the optimum positions of up, down, left, and right, adjustment of heavy tension weights can be performed easily.



Use of guide rollers to prevent equipment wear

A guide roller is adopted at the contact portion with the strut to smoothly adjust the weight position. This reduces maintenance costs by eliminating equipment wear due to rattling and rubbing.

Belt contacts "shoe" to instantaneously correct mistracking

SHOE TYPE TRAINING IDLER (carrier + return)

A product in which the frame rotates and corrects mistracking by contact friction to special metal parts called "shoe" provided on both left and right ends of the stand symmetrically in front and rear during belt mistracking. For carrier and return are available.



The frame turning performance has dramatically improved and evolved!

TRAINING CARRIER IDLER (HIGH SPEC)

The entire idler is constructed to pivot at a fixed angle around the center pin. When the belt comes into contact with the guide roller during belt mistracking, the frame rotates and returns the belt to the center of the conveyor by the component of the generated resistance.



Viewing on Movable



This point is useful

Mistracking allowance can be adjusted in three stages



Improved performance and strength of slewing parts

The use of thrust bearings in the slewing section and the thick reinforcement of the center pin has made it possible to swivel the frame with a smoother and more stable.



Higher slewing performance with support bearings

The support bearings (two on one side) are adopted at the lower part of the slewing frame to further smooth the motion during slewing and enable stable mistrack adjustment.

Carrier side belt

Mistracking
and
Misalignment

This point is useful



It can also be placed on the reverse conveyor



Mistracking allowance can be adjusted

The shoe height (angle of contact with the belt) and serpentine allowance can be adjusted according to the conditions of the site, and the optimum serpentine correction can be performed easily.



Replacement with shoe alone is OK.

Even if the shoe wears out due to aging, it can be replaced by itself, eliminating the need to replace the entire stand, making maintenance simple and economical.



Just the "gate keeper" of mistrack troubles caused by belt lifting

UPLIFT PREVENTION • GATE TYPE CARRIER IDLER

Utility Model Registration No. 3215812

The presser rollers and guide rollers arranged vertically and horizontally suppress mistracking caused by the floating of the belt, thereby contributing to the improvement of productivity of the entire facility by ensuring stable running.

Belt-friendly, mistracking is prevented, and cargo is not easily spilled. This product is truly a "2-way" product. We hope you will consider to install it.



Kikkor Sales Office
Ryo Mizoe

Contributing to the Longer Life of Belts

The vertical and horizontal rollers are designed to be spaced back and forth (offset type), so there is no risk that the belt will enter between the rollers and be damaged, which contribute to a longer life.



Installation cost and labor are not necessary.

Dimensional compatibility with existing carrier idlers eliminates the need for conveyor frame modification work and eliminates the cost and effort required for installation.

Prevents undue belt damage and Mistracking caused by ascent



Forcibly pressing the floating belt with the wheels caused damage and mistracking of the belt.



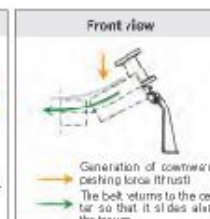
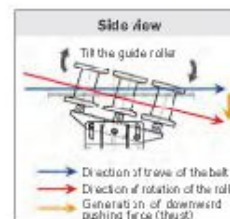
The function of the holding roller and guide roller suppresses mistracking caused by the floating of the belt, thus realizing stable running.

Synergistic effect of mistracking countermeasures



Effective when combined with other anti-mistrack products such as Trois Guide Idler (page 13)

Achievement of adoption in a wide range of industries Strongest partners for mistracking countermeasures



Using "Thrust" generated by tilting the guide

A slight tilt of the guide in the belt traveling direction generates a downward pushing force (thrust), which makes use of the mistrack adjustment principle that the belt returns to the center of the conveyor so that it slides along the trough.



Viewing on Movies

TROIS GUIDE IDLER

Patent No. 6272734

JRC's proprietary anti-mistrack product with three guide rollers of unique shape, like the "crum" of a Japanese musical instrument.



Adjustable serpentine allowing with run long holes at the top and bottom



Unique shape of guide roller

Three drum-shaped guide rollers are arranged so that the upper and lower flanges prevent the belt from riding up and falling, and they are turned in the belt traveling direction to suppress mistracking.



"Cast iron" resistant to wear

A guide roller made of ductile Cast iron (FCD450) with excellent wear resistance is adopted. Effective in belt mistracking and misalignment adjustment over a long period of time.

Extensive range of variations to suit customer sites



Drum type (standard)



Drum type (guide split type)



Crum type long



Uniaxial type



Single shaft type long

We propose the most suitable product type according to the customer's request, conveyor specifications, and the environment of the site, such as where there is interference with skirt rubber and where the belt moves up and down like a tripper.

In addition, we have a track record of adopting various special types of "Trois". Please feel free to contact us. (Trois = named it from the French word "3 (trois)"



Kira Kanta Block
Masatake Nakata

High places and places where moving is troublesome

Narrow corridor area

Areas where the roller pitch is narrow

Blockage areas such as underground pits

Roller replacement can be performed safely and in a short time even at sites where such work is difficult!

Roller replacement efficiency solving Product

Introduction of JRC's replacement work efficiency product greatly improves work efficiency!



Roller Replacement Work Efficiency Targets

The replacement work of the broken roller is complicated and severe, but the aim is to eliminate the damage of conveyor users, in which the belt is damaged and expensive "left unattended".

Bye-Bye for troublesome roller replacement work!
Introducing Resolved Products from the Next Page!

Solution Provider Dept.
Takuya Kase



Do you have any issue ?

Challenges of Roller Replacement Work in the Field

Largescale work such as lifting the belt or loosening the tension is often required to replace the roller for the belt conveyor, and unexpected accidents may occur at high places, underground pits, or other closed places.

Lower productivity



Long-term replacement work lengthens the equipment shutdown time, which leads to lower productivity.

Risk of accident occurrence



Replacing heavy rollers at heights crowding in closed or confined places causes an unexpected risk.

Increase in maintenance costs



Leaving the broken roller unattended due to the complexity of replacement increases costs such as belt repair costs.

Easy replacement from the gap by simply tilting the stand

TILT CARRIER IDLER

Patent No. 6352823

Viewing
on Movies

Simply push it down! Work time can be reduced by more than 90%!



Suggested where the belt can not be lifted!

Since the stand can be tilted, this product can easily and safely replace rollers in places where the belt cannot be lifted by interfering with the skirt.

Simply pull out the stand on the walkway side! Realizes quick roller replacement



EAZY SLIDE CARRIER IDLER

Utility Model Registration No. 3185860

Viewing
on Movies

Shortly complete roll replacement if the stand can be drawn out!



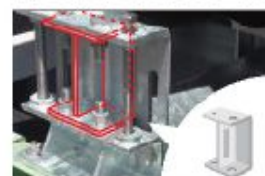
Optimized for sites with surplus corridors

The two-split left and right stands can be pulled out largely to the side of the walkway, so there is no need to lift the belt or worry about the interference of the skirt rubber as before.

New concept of lowering the stand! to a narrow pitch area



JACK DOWN CARRIER IDLER

Viewing
on Movies

Shock-resistant structure for use under chute

Since it is structured to receive a load with a "U-shaped bracket" during operation, it can be used even under a transit chute or in other places with a large impact.

A gap is created between the belt and the roller due to the descent of the idler!



The carrier pitch under the transit chute was narrow, and the domino-type carrier idler (P. 16) it flashed suddenly this product when we were looking at the situation where there was not enough space to tilt it!



Solution Promotion Dept.
Kazuhiro Zaima

Easy replacement of flat carrier roller!

EAZY REPLACEABLE FLAT CARRIER BRACKET



Rotate the fixing plate and roll the roller.
Replace immediately from the gap!



To flat specification equipment such as steep inclined conveyors

This product dramatically simplifies the replacement work of the flat carrier roller.



Turn around, immediate replacement! Effective for mistracking and spillage!



This point is useful
Lynch pin eliminates the need for replacement tools

CASSETTE RETURN IDLER

Unity Model Registration No. 3221964



Right-and-left split, one-piece replacement system that is "small-handed"

This is a left-right split return idler that can be replaced from one roller on one side and is compact and convenient to carry. The roller replacement method is very simple. Simply remove the two lynch pin on the bracket manually and slide them toward the fulcrum shaft for immediate replacement. It is an excellent product that can reduce falling ore and adjust belt mistake by setting forward and backward inclination.

Bracket swivel, roller replacement from one side OK!

Remove the Lynch pin



Pin the bracket



Replace roller



Replacement of the return roller is also possible for high-altitude work. To ensure operator safety and workability, we recommend this product, which is lightweight and easy to carry, with also reduces work time and prevents heat stroke.



Okayama Sales Office
Kenta Sugihara



Only left and right contacts reduce spillage

Due to the left-right split type idler, contact with the roller does not occur at the center of the belt, and it is effective in reduce the falling of transported materials.



Can be set to forward or backward tilt

Three bearings are provided inside the bracket on the fulcrum shaft side for easy adjustment of forward inclination, backward and backward inclination, and each roller angle.



When the roller receiver is rotated, the belt is pushed up by "principle of leverage"!

SWING RETURN IDLER

Unity Model Registration No. 3234953

This is a return idler that allows the stay pipe to push up the belt by rotating the roller holder with the handle for rotation, allowing the roller to be easily replaced from the gap created between the roller and the belt.



The belt tension of a grained belt conveyor is also high, making roller replacement extremely difficult. However, we developed this product, because we have that the danger of safety a largesized belt conveyor can reduce even less grinding work.



Solution Promotion Dept.
Mitsuyoshi Igashine



Roller replacement is possible simply rotates the roller holder by using the handle

Mount the rotation handle



Turn handle



Fix the rotation handle



Replace rollers through gaps



The belt is pushed up naturally

When the roller holder is rotated, the stay pipe pushes up the belt, creating a gap between the belt and the roller, making it easy and safe to replace.



Designed to prevent rollers from dropping off during rotation

The drop off prevention stopper prevents the roller from falling off unexpectedly when the roller receiver rotates. Designed with consideration for safety such as work at heights.



Both hands can be used with the handle fixed

Since the handle can be fixed by the stopper for fixing, both-hand work is possible. The rollers can be replaced quickly and safely with two people.

Key to ease of maintenance

Products to resolve adhesion of conveyed material



Sticked like a dumpling

To the cause of mistracking or misalignment



Three approaches to adhesion countermeasures

- 1 Remove accretion in the head chute.
- 2 Do not stick to the surface of the belt after the head.
- 3 Do not adhere to the surface of rollers or pulleys.

Now we will take measures to prevent adhesion and falling of mines!

We will introduce the products to be solved from the next page.

Why does adhesion originally occur?

Carriers with small particles contain moisture and stick together



If you leaves it?

To the loosening of the belt or the cause of mistracking or misalignment

To the cause of the spillage of conveyed material

Risk of entanglement during cleaning and accidents

spillage and material

Solution product



Increase cleaning work



Increase in costs and disaster risks

Why does the spillage originally occur?

The belt accretion spills every time it passes over the return roller



If you leaves it?

Increase costs for cleaning operations

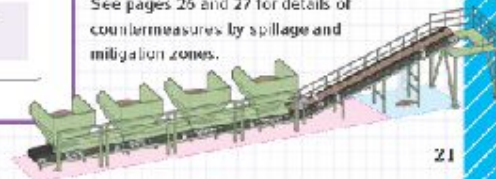
Production loss due to spilled cargo or an emergency stop

Risk of entanglement during cleaning and accidents

Three approaches to spillage countermeasures

- 1 Prevents adhesion to the return side belt which causes
- 2 Does not drop in areas where working is difficult or dangerous.
- 3 Facilitate spillage in areas where work is easy and safe

See pages 25 and 27 for details of countermeasures by spillage and mitigation zones.



Strongest cleaner born in the United States

Belt-friendly and powerful scraping



Blade wear status and replacement timing are clear at a glance with a wear indicator.

ASGCO
Complete Conveyor Solutions

Blade type belt Cleaner ASGCO SKALPER



Adopted high-performance blades

Uses proprietary polyurethane blades. Excellent abrasion resistance, always with edges sharp against the belt. There is no bite of transported objects in the split type at all because of a single steel.



Easy blade replacement

When a blade is worn out, it can be replaced detachable simply by plugging and unplugging the two pins. Because no tools are required, replacement work can be performed easily in a very short time.



Self-adjusting tensioner

A large torsional torque spring is used for the tension mechanism. It is made of rust-resistant stainless steel and automatically adjusts the optimum tension for the blade.

Strong belt cleaner trained by the United States

We import directly from ASGCO from the U.S. as the sole domestic distributor. In addition to a rigid structure that can withstand harsh operating environments, the excellent features such as heavy power to scrape the belt adhesion of all conveyed materials strongly, simple blade replacement, and belt-friendly self-adjusting tension function have enabled many customers to be installed and replaced existing products in recent years.

Follows the unevenness of the belt and evenly scrapes off the accretion



Tip-type Belt Cleaner MF-DIP Cleaner

Depending on the shape of the conveyed object or belt conveyor, you can freely select the 'tip material,' 'frame material,' and 'contact width' that suit your application with a custom-made feeding.



SENDAI Sales Office
Yu Wakatsuki



Sub-divided carbide chips

The carbide chip, which is divided into small sections of 15 mm wide and has excellent wear resistance, is difficult to create a gap between it and the belt, and it flexibly follows the unevenness, vibration, and mistracking as well as scrapes the deposits forcefully for a long period of time.



Belt-friendly elasticity

Urethane bars with excellent elasticity absorb shock and gently scrape off deposits on the belt. This prevents damage to endless parts, etc. No short-term readjustment is required.



Minimize clearance to belt

The tip shape of the cleaner can be freely adjusted to match the unevenness of the belt surface. (Push up the urethane bar with the lower tuning belt and press it against the belt.)

Belt-friendly mechanism for long-term maintenance-free

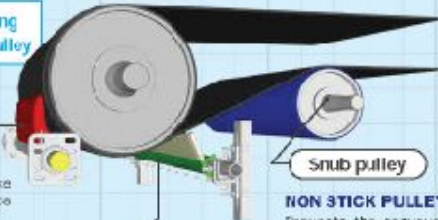
Uniform contact to the belt, which is difficult for conventional chip-type cleaners, is realized by adopting sub-divided chips. Urethane bars are used to flexibly follow the unevenness, vertical vibration, and mistracking of the belt, making it gentle to the belt and lasting a strong scraping for a long time.

Flush off by combining anti-sticking products around the head pulley!

Example of mounting around the head pulley

Primary cleaner

ASGCO SKALPER
Remove most of the cake adhesion on the belt surface here.



Snub pulley

NON STICK PULLEY (P-23)
Prevents the conveyed objects from sticking.

Secondary cleaner

Intermediate cleaner such as MF-DIP cleaner (P-23)

Place before the snub pulley to prevent placement in the snub pulley.

Insufficient function and adjustment of the belt cleaner (Primary cleaner) of the head pulley mounting may cause malfunction of other counter-measures such as secondary cleaner, rattling of the belt, sticking to the roller or pulley surface, mistracking, spillage, etc. It is important to cut off the conveyed material adhering to the belt in the head chute by the combination as shown in the figure on the left, and make it difficult to adhere there after.

Introduce to other secondary (intermediate) belt cleaner



NVC-SA α type

The excellent scraping performance and maintainability of NVC-SA type self-adjusting SA type, which can be said to be the standard of the intermediate type belt cleaner, have been greatly improved.



BELLE BANNE U-3

A single tip with an arcuate structure capable of applying the maximum surface pressure to the center of the belt is adopted, which provides excellent follow-up for the trough habit of the belt. The relief structure ensures greater safety.

Rubber disc that fits the belt Good for V-shaped and metal-faster belts



ASGCO
Complete Conveyor Solutions

Rubber disc type belt cleaner ASGCO CHEVRON



Rubber discs can be removed independently, making them eco-friendly.



Contributes to measures against adhesion of special belts

Special belts, such as "V-shaped" and "Crosspiece", used for inclined conveyance are provided with "horizontal crosspiece" on their surfaces, and the scraping type cleaner introduced earlier cannot normally be used. This is an unrivaled "rubber disc type" belt cleaner developed by ASGCO, U.S.A. that can be used for these special belts.



Friendly to belt surface

Rubber discs offer excellent flexibility and wear resistance, and can be used in a variety of shapes. It continues to scrape the deposits skilfully without carrying the surface of the belt.



Compatible with all types of materials transported

Uniquely shaped rubber disc with matched circumference is used. Available for a wide range of conveyed items, whether wet or dry, such as coal, iron ore, wood chips, and chemical fertilizers.



No power required for rotation

Since the rubber disc rotates as the belt runs, no power is required for the motor, air, etc. No noise is also easy.

"ASGCO Chevron" for attachment and removal of special belts



The rubber disc fits flexibly into the concave-convex portions of the flat belt, even with a V-shaped (crosspiece) belt or a belt with a heat-vulcanized/metal fastener at the end, so it can be used for adhesion removal.



Sales Office
Takuya Oda

The carrying materials does not stick due to the rebound elasticity of the soft rubber!



NON STICK ROLLER

Utility Model Registration No. 3211252



Prevents adherence of conveyed material

Due to the characteristics of smart rubber with a high rebound modulus, the initial adhesion layer is difficult to form, and even if it sticks, the rubber peels off due to the rotation and vibration of the rollers.



Excellent wear resistance

Even for highly abrasive conveyed material, the smart rubber deforms flexibly to alleviate the "Pressing force" thereby preventing premature wear of the surface and contributing to a reduction in the frequency of replacement.



As well as the effect of draining water at sprinklers

Due to the characteristics of the baked rubber, water runs out at the sprinkling section. (Photo: The belt surface after passing through the Non stick roller is completely clean.)

Reducing sticking, which causes problems

Rollers (pulleys) baked with soft rubber (commonly known as smart rubber) with a hardness of 32 degrees, which has an extremely high rebound modulus and excellent wear resistance. It has been confirmed that it is effective in preventing adhesion of wet conveyed objects and high-viscosity conveyed objects, in preventing mistracking of the belt due to adhesion, and in preventing freezing in winter.



The use of Non stick snub pulleys prevents cake transition (sticking) to the pulley surface due to insufficient adjustment of the cleaner, etc., and reduces the occurrence of mistracking and misalignment of the belt and other problems.



NON STICK PULLEY

Utility Model Registration No. 3211252



Spillage area
division

Spillage of con-
veyed material

Triple roller unit forcibly facilitates spillage

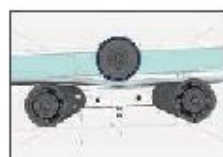


"NON STICK ROLLER (P25)" with soft rubber bake is adopted to the upper holding roller to prevent sticking of high viscosity conveyed materials to the roller itself.



Powerful "Twin spiral"

The wire double spiral return roller forcibly scrapes off deposits on the bottom of the belt to facilitate the spillage.



Pressing roller facilitates effect

This pressing roller promotes the rolling through flexibility of the belt to facilitate the scraping effect. Adjusting the pressing force amount is also easy with the roller function.

Daikin Sakai Co., Ltd.
Shoketsu Yamashita



Reduced belt contact area and greatly reduced the amount of spillage



Effect of minimizing spillage by 90% or more

The verification test of the actual machine showed a reduction effect of more than 90% compared to steel pipe rollers (according to our investigation).



Prevention of belt ride-up and fall-off

The tapered shape at both ends to lower the trough height of the belt to prevent the belt from riding. Since the distance between rollers A in the above figure is short, the belt can also be prevented from riding off.

Load-resistant "Baked" ring

Since our roller ring is a "Baked" rubber ring, it is firmly integrated with the roller, and it cannot be easily removed even if it is subjected to the load when the belt is tracks.

FALL PREVENTION RETURN ROLLER

This roller has the effect of baking multiple special rubber rings on the surface to reduce the area of contact with the belt, to minimize the amount of spillage. The tapered shape at both ends also has the effect of returning the belt to the center.

SCRAPING UNIT

Utility Mode Registration No. 3137959

This product forcibly scrapes off deposits on the belt with a roller consisting of one holding roller and two lower spiral rollers to facilitate the spillage.



Achieved both efficiency and safety by limiting the area to be cleaned by dividing into spillage area mitigation zones

JRC has
new method
spillage
mitigation



Load fall prevention return roller installation

Minimizing the amount of spillage reduces the chances of dangerous conditions, which can help prevent severe injuries such as falling or deposits caused by spillage.

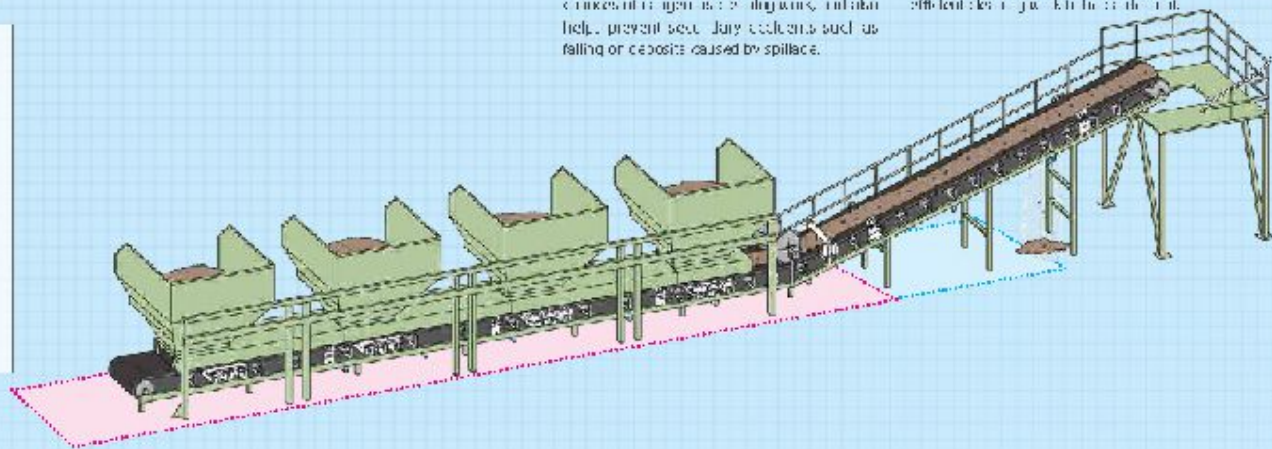
Installation of scraping unit

Forcibly facilitating spillage enables safe and efficient cleaning work to be carried out.

Remote cleaning in hazardous locations

Advantages of setting on-site zones

This can "divide" a hazardous area into multiple "on-site" zones that are dangerous and difficult to maintain" within conveyor facilities. By setting the "safe and easy-to-maintain" area as a "Spillage reduction zone" and the "area with danger to work" as a "Spillage reduction area", it is possible to control the location of the occurrence of spillage. This makes it possible to perform safe and efficient cleaning work. It also has many advantages, including improved conveyor durability and productivity, and the ability to divert extra time to other maintenance work.



Spillage area

- Areas that are dangerous if cleaning is done, etc. are in confined spaces
- Roof tops, passages and other areas where you want to prevent accidents



Spillage advanced area

Areas where there is enough space around the unit for safe cleaning.



Safe at the site of belt conveyors where there are many dangers

Pinched or entangled

(Photo) Work started without the conveyor fire safety.

Rollers falling off

Before an accident occurs

Products that resolve belt conveyor safety measures

Conveyor fire

Be the most frequent in belt conveyor disasters

Resolving products that help prevent "Pinched or entangled" accidents

Safety measures

Pinched or entangled

Compatible prevention of accidents involving rotating parts and daily maintainability!

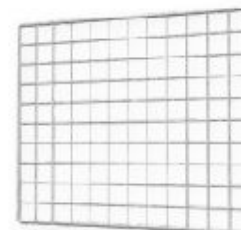


Structure with excellent strength

The slotted 50mm square wire gauze surrounds the pulley with a pulley ring and is strong enough to withstand harsh installation environment of the conveyor.

Removal and attachment are OK when necessary.

"Cutter (arrow) type" is adopted for mounting and dismounting in consideration of maintainability. There is also a "Hanging type" that does not require tools or fasteners and can be attached or detached more easily.



SAFETY FENCE

Patent No. 5172369

▼ View info on Movies

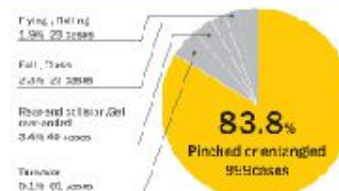


We propose the most suitable installation method for the customer from two types, one is mounted on the center roller and the other is mounted on the conveyor frame.



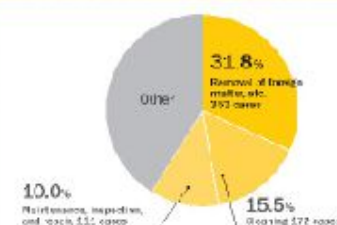
Accidents involving pinching and entanglement are as follows!

Breakdown of conveyor accidents (Yearly)



Among the 1182 occupational injuries caused by conveyors that occur for more than 4 days off work (caused by conveyors in 2006), the overwhelming incidence of "Pinched or entangled" is over 83%. Establishment of disaster prevention measures with emphasis on these accidents is considered particularly important.

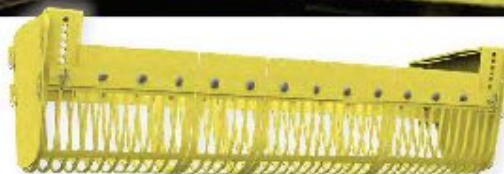
Type of work that had been carried out in the event of a disaster



Similarly, with regard to the types of work (accidents/year) that were carried out at the time of the disaster, the number of accidents involving "removal of foreign matter, etc.," "clearing," "maintenance, inspection, and repair" accounts for more than half of all accidents, and thus it is a challenge how these work opportunities can be reduced.

Source: National Institute of Occupational Safety and Health, KOKORO (2013), J-437-44: Industrial Accident Analysis of Conveyors, National Institute of Occupational Safety and Health.

Cover combines prevention of rollers falling off and contact accidents with ease of cleaning



SAFE GUARD

This "SafeGuard" cover is recommended by us for the prevention of "falling off" or "Pinned or entangled" accidents of the return rollers and for their attention.

Viewing on Movies



Cover made of super-high-molecular polyethylene

Highly durable and lightweight, to suppress the accumulation of transported materials. It is a reliable grid-shaped cover that ensures safety even in the event of a roller fall-off.



With one pin for opening the cover

For daily maintenance such as roller replacement and cleaning, opening the cover is possible with a single pin-type stopper (no tool required).

Iron safeguards are also available
(as a guideline for proper use with resin)



Resin safeguards

Rollers involved in an accident when polyethylene mesh is damaged. Therefore, the mesh has a fine grid shape to prevent loads from being caught in the rollers, even if they are likely to be caught in the mesh. Since the transported material is not so large, it is not caught in the mesh and can be easily deposited. The resin is made of a material that can be easily opened with a single pin, so it is easy to clean the deposited transported material.



Iron safeguards

The main purpose of this system is to "prevent rollers from falling off". It is a safety device that is installed on a high place or a place where people pass and rollers are conveyed, to prevent accidents such as rollers falling off. There is a risk that people will get in or caught in high places, but on the other hand, the eyes of the rollers are relatively large so that it is difficult to catch them. Because it is difficult to frequently clean the rollers and objects accumulated inside the rollers.

Cause large-scale disasters, resulting in serious damage

Solving Products Help Prevent "Conveyor Fire"



Fire-resistant & self-extinguishing to prepare for emergency fire

FRAME RETARDANT
HEAVY OIL RESISTANCE
RUBBER ROLLER

Excellent flame retardant performance

Excellent flame retardant and self-extinguishing properties equivalent to JIS K 6324-3 class can be expected to reduce the spread of fire in the event of conveyor fire.

Heavy oil and wear resistance

It also contributes to extending the life of the rollers on the line where transported objects containing oil are handled.

Contribute to fire prevention measures at these sites!

Power plants,
steelworks, etc.

Conveyance line where there is a lot of fire risk (conveyance of coal)

Waste and garbage
treatment plants, etc.

Conveyance line that handles oil-contaminated materials and combustible materials

Preventing sparks from getting caught in foreign objects!



NS GUARD

Excellent sealing performance for enhanced dust and water resistance

The NS Guard is attached to the byfrith Seal of the JRC standard roller, which has excellent sealing performance, to further enhance its dust and water-proof performance.



Preventing sparks from getting caught in foreign objects!

Completely prevents sparks caused by friction between rollers caught on the side of the roller. The NS Guard does not rotate even if it is caught, so no sparks are generated.

All-steel to reduce the risk of catch fire



IRON FALL PREVENTION RETURN ROLLER

Viewing on Movies



The performance of the "FALL PREVENTION RETURN ROLLER" (page 27) is kept unchanged, and the rubber ring is produced in steel. It can now be used on conveyors that require flame retardancy.



High corrosion resistance and self-corrosion protection contributes to longer roller life

Materials with high corrosion resistance and self-corrosion protection that are 10 to 20 times higher than those of ordinary galvanized and 2 to 3 times higher than those of hot-dip galvanized and aluminum alloy plating.



Lead to poor roller rotation or premature damage Solving products that help prevent "deposition of conveyed materials"

Evolutionary version of the fall-prevention fence that also prevents deposition in the fence



Viewing on Movies



This point is useful
can be replaced with
EXBUNG (PAPER 12107)



Wires scrape off the stick

The sticking material on the roller surface is scraped off by contact with the "scraping wire" fed into the product and does not grow to a certain size or larger.



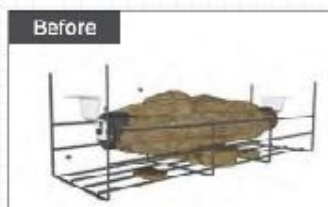
Rollers can be temporarily placed inside the fence

In addition to the role of preventing rollers from falling off, the fence section can be temporarily placed with rollers dropped inside the fence during replacement, making it safe to replace heavy return rollers at high altitudes. (You can also pull out from the slide.)

DROP OUT - DEPOSITIONAL PREVENTION FENCE RETURN ROLLER

This is recommended not only for preventing the return roller from dropping out, but also for the site where troubles caused by sticking of conveyed objects and accumulation in the fence.

The cause of the deposit is the difference in the size of the lump.

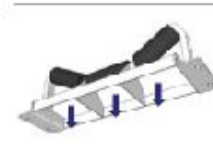


Since the adhered matter shakes with vibration or its own weight and falls in a lump shape, a large mass tended to accumulate on the fence.



The wire was scraped, but the mass became large, and it became difficult to accumulate inside the fence because it passed through the mesh of the fence.

Stand frame structure in which conveyed materials are difficult to accumulate



"slipping" structure

A stand frame with a notched form shape is adopted to prevent fallen transported objects from slipping out and accumulating.



Viewing on Movies

DEPOSITIONAL PREVENTION CARRIER IDLER

This product specializes in preventing the accumulation of conveyed materials. Deposit on the stand frame is reduced, which can be expected to lengthen the life of the idler and reduce cleaning work.

Contributes to longer roller life by reducing the deposition of conveyed materials on the idler frame



Deposit on the stand frame caused problems such as poor roller rotation.



The simulation of deposition eliminated premature roller breakage, resulting in longer life and reduced replacement frequency.



STUB ROLLER COVER

Prevents short roller rotation failure such as steep inclined conveyor change angle

This is a special cover for stub rollers used in steep inclined conveyors, etc. that prevents rotation failure and premature damage due to accumulated conveyed materials by attaching them to their slots (on the shaft side).

Eliminates stub roller rotation failure caused by deposited conveyed material



In the lower part of the steep inclined conveyor, there were frequent rotational failures due to the large accumulation of conveyed materials.



The use of a "Stub roller cover" to prevent deposition eliminates rotation failures.

Install like this place



This leads to deterioration of the surrounding environment due to transport loss and dust.

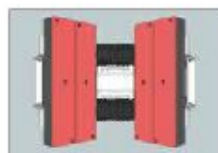
Solving products that help prevent "Blow over of conveyed materials"

Blow over is greatly reduced by eliminating gap with skirt rubber



IMPACT SLIDE

This product eliminates the gap with the skirt rubber due to belt deflection between rollers by replacing the conventional trough roller with a slide bar with low friction resistance, and reduces spilled or blown load on the conveyed load.



Right and left slide bars are used.

The right and left slide bars, which are excellent in impact resistance and abrasion resistance, have a thickness of 500mm and 750mm in width, making them easy to follow the shape of the skirt rubber, and also give consideration to maintainability.



Center is impact roller

By adopting an "impact roller" in the center roller section, the increase in running resistance of the unit is minimized, making it a product that does not impose an excessive burden.



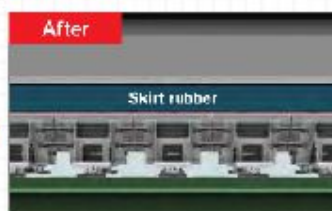
Easy replacement with drawer structure

The right and left slide bars and the center roller are of the "drawer structure" so that you can easily replace them if they are worn out. The stand is divided into two sections and three sections.

Seal "Spills" from gaps with skirt rubber



The belt deflected and gapped easily between the belt and the skirt rubber, causing spills or blow over of conveyed materials.



Slide bars eliminated gaps with skirt rubber and reduced spills and blows of conveyed materials.

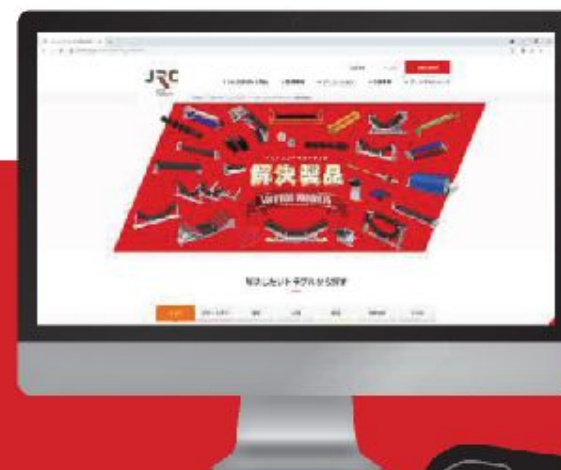
Replacement with existing equipment



Replacement with existing roller is possible by adding wearings to the frame.



A new "Resolving Products" special page has been created on the JRC official site!



Detailed videos and flyers of solved products can be viewed anytime and anywhere from your PC or smartphone!



Read with Smartphone

Web www.Search.jrcnet
www.jrcnet.co.jp/solution/solution_products/



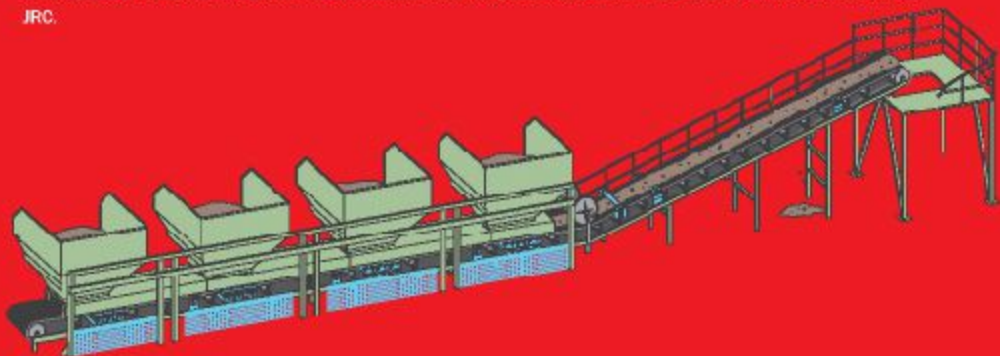
Please leave it to us for any issue with the belt conveyor.

Propose optimal solutions for your site

Flow of JRC Solutions



Troubles in belt conveyors affect each other like gears, so individual measures can induce other problems. Taking measures by comprehensively recognizing visible phenomena will lead to improved conveyor productivity, safe operation, and the creation of cost benefits. All troubles can be prevented beforehand. Please feel free to consult with JRC.



JRC CO.,LTD.

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You can find more information about our products and services here.

● JRC official website

<https://www.jrcnet.co.jp/>



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Reception hours (weekdays) 9:00 to 18:00

● The content of this booklet is as of July 2022. The contents of this manual are subject to change without notice for various reasons.

● Please note beforehand that photos and illustrations posted are images. The color may differ slightly from the actual product.