

ONE STOP SHOP
FOR ALL YOUR CONVEYOR NEEDS



BELT SCANNER CONDITION MONITORING SYSTEM



FOR STEEL CORD CONVEYOR BELT

Provider of Steel Cord Conveyor Belt Safety Solutions

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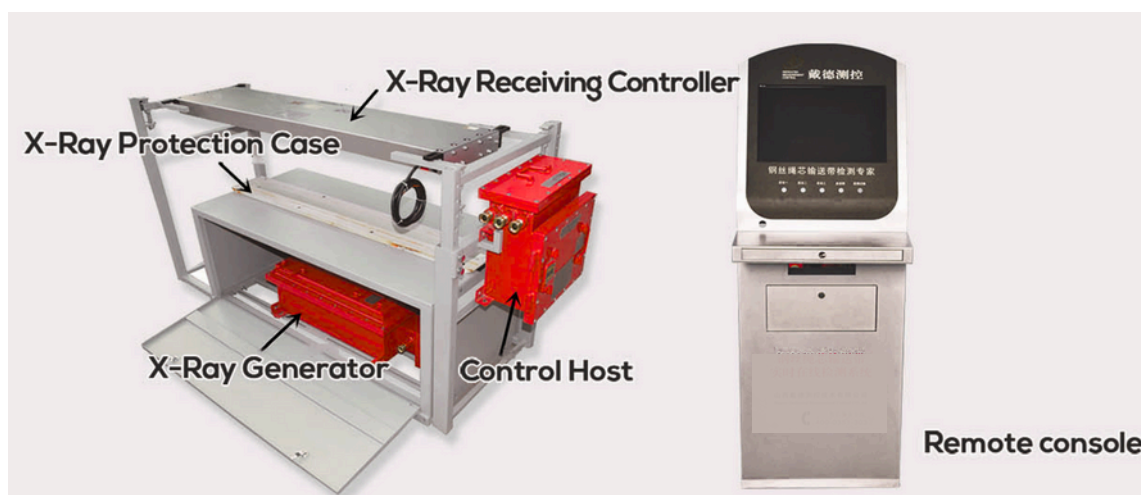


FIXED-TYPE 1 KJ581-F

Applicable to end customers who use conveyor belts such as mining companies, ports, power plants, etc.

Product introduction

The Online Condition Monitoring system can effectively monitor and report upon damage events & severity and changes to splice layout to prevent failures which would otherwise impact upon the safe operation of the asset and ultimately impact production. The system is capable of running unattended and reporting automatically the current condition of the conveyor belt.



It has the characteristics of simple operation, stable function and high detection accuracy. The equipment is installed in a designated conveyor belt, it also carries its anti—explosion and moisture—proof casing with a waterproof level of Ip57, it is resistant to corrosion and is very ideal for use in harsh working conditions such as copper mines, iron mines, coal mines, gold mines, ports, power plants, etc.

Dimensions

(for example, the equipment for a belt with a width of 1600mm)

Item	Dimensions/mm	Weight/kg
X—Ray generator	790*470*255	115
X-Ray Receiving Controller 1.8 m	1930*420*60	605
Control host	460*210*390	39
Remote console	670*540*1470	45
Customed bracket	1430*630*720	160

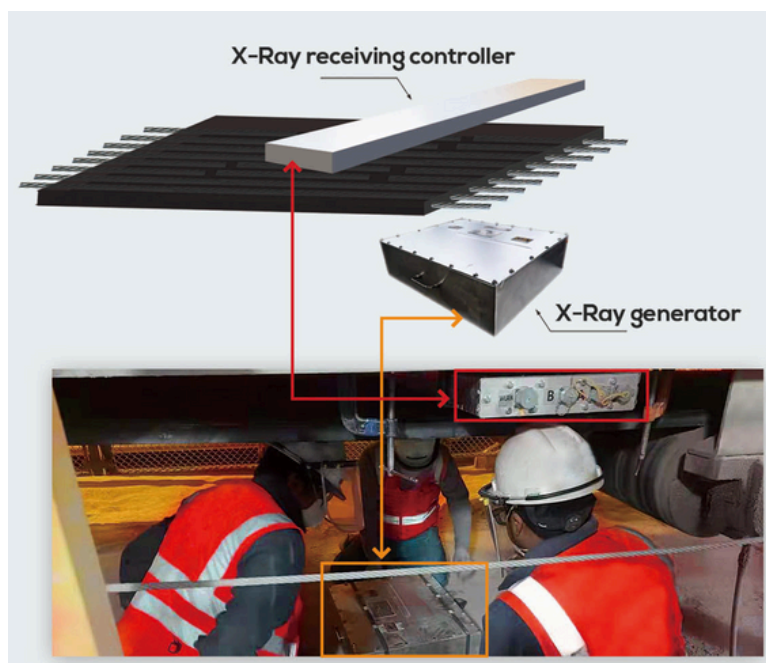
MOBILE-TYPE / KJ581-M

AJseåby belt service providers to detect and maintain
multiple conveyor belts of the mining companies



Product introduction

Based on the fixed type, DMC has also designed and developed the mobile equipment. Compared to fixed equipment, its components are integrated into two parts: the X-Ray generator and the X-Ray receiving controller. The size is reduced by half, the weight is reduced by one third, and the structure is simpler, the transportation and installation are more convenient, so the detection is more flexible. This equipment better meets the needs of mobile detection, that is, multiple belts of different widths can be detected in a short










Dimensions

(for example, the equipment for a belt with a width of 1800mm)

Item	Dimensions/mm	Weight/kg
X-Ray generator	610*530*175	38.5
X-Ray Receiving Controller 1.8 m	2140*420*70	45

KJ581-F / I(J581-M Parameter

7 Functions

-  Unattended operation
-  Real-time display
-  Automatic identification
-  Defect positioning
-  Holographic storage
-  Safety analysis report
-  Video playback



Item		
Performance Parameter	System operating voltage	AC 110V-240V
	System operating current	≤4A
	Belt speed	0-9.6m/s
	Belt width	≤2.2m
	Admissible of rubber belt thickness	<40mm-80mm
	Communication Mode	Ethernet/Optical
	Communication Distance	≤120km
	Protection Rating	IP57
	Resolution Rate	0.8mmx0.8mm
	Identify Minimum Fracture	1.6mm
	Identify Minimum Twitch	3mm
	Defect Positioning Error	Horizontal ≤1cm, Logitudinal ≤5cm
	Software Operating Environment	Windows 7/10

Work Environment	Environment Temperature	-20°C~+40°C
	Humidity	≤95%
	Atmospheric Pressure	86~106Kpa

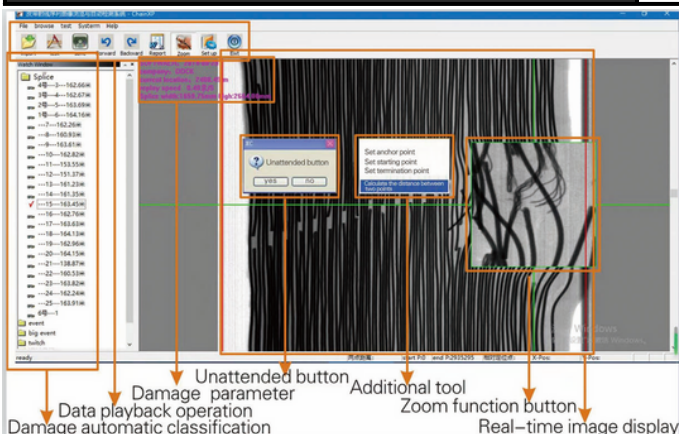
Electrical environment	Supply Voltage	AC 110-240V Sustainable fluctuation range 75%-110%
	Input Operating Current	≤4A
	Consumed Power	≤1000W

4Features

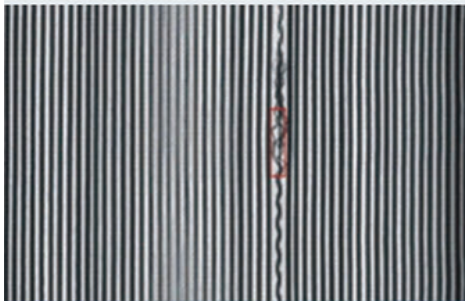
- During the detection, it's not necessary to stop the conveyor. The internal perspective of the whole conveyor belt will be displayed on the screen like a film, which is clear, intuitive, accurate and reliable.
- The system will automatically generate detection report after each detection. In the detection report, it gives detailed picture and description about the abnormal situation such as steel core breaking and splice twitch.
- The system conducts accurate positioning of problem part.
- All the images can be saved, and customers can pull out the current or historical images to carefully look through the entire belt and check on the current overall state of the belt.

Howto choose the right equipment for you?

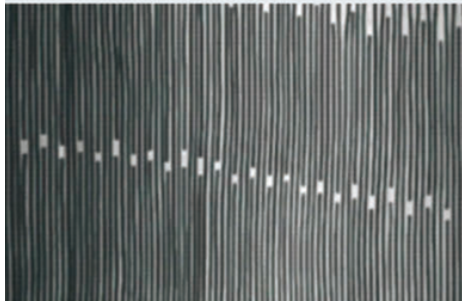
Detection Content	Fixed	Dimensions/mm	Weight/kg
Which users are applicable?	End users	Trading Company	38.5
Whether it can monitor the steel cord in conveyor belt	Yes	Yes	45
Whether the image of the steel cord scanned is clear	Clear	Clear	Clear
Whether the conveyor belt needs to be shut down for detection	No Need	No Need	No Need
Conveyor belt area that can be monitored at each time	Entire belt	Entire belt	Ø76mm
Time required to scan a complete conveyor belt	20min—90min	20min—90min	Unable to detect only able to verify
Scanning of wire cable breakage, rust and split	Accurate	Accurate	
Monitor of splice movement of conveyor belt	Yes	Yes	
Equipment price	High	High	Low



Testing Cases



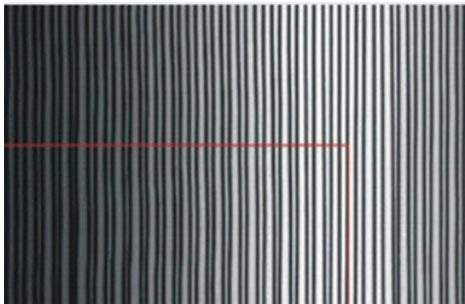
Steel wire rope split



Standard Splice



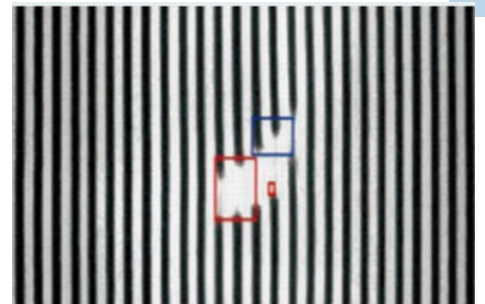
Fatigue and splitting



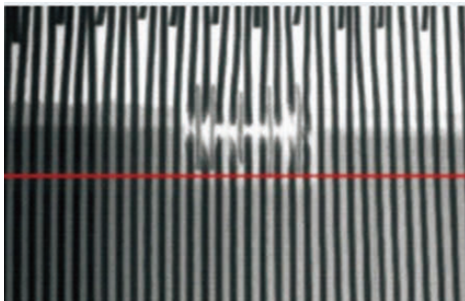
Factory Defects



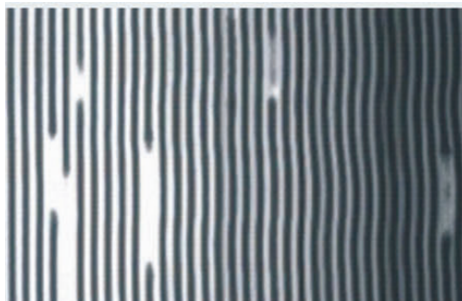
Non-standard Splice



Faracture



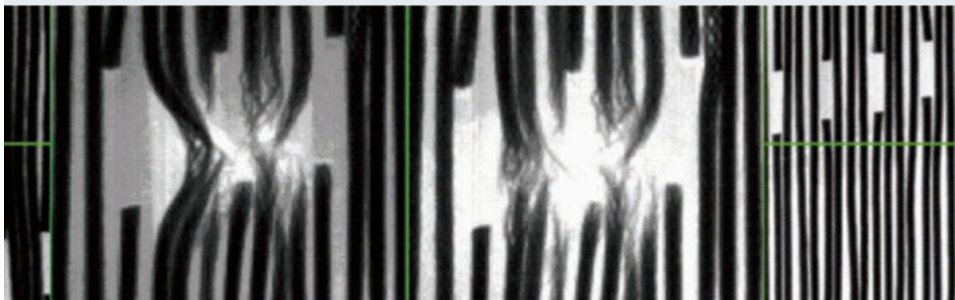
Repair



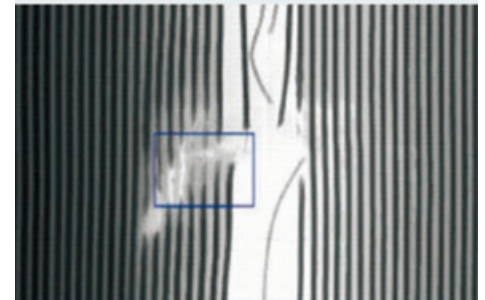
Cable breakage and Corrosion



Edge and rubber layer damage



Faracture and Splice Movement



Break and split

Hand-held 1 ZSK160D

use to verify and detect the defect of the conveyor belt found manually



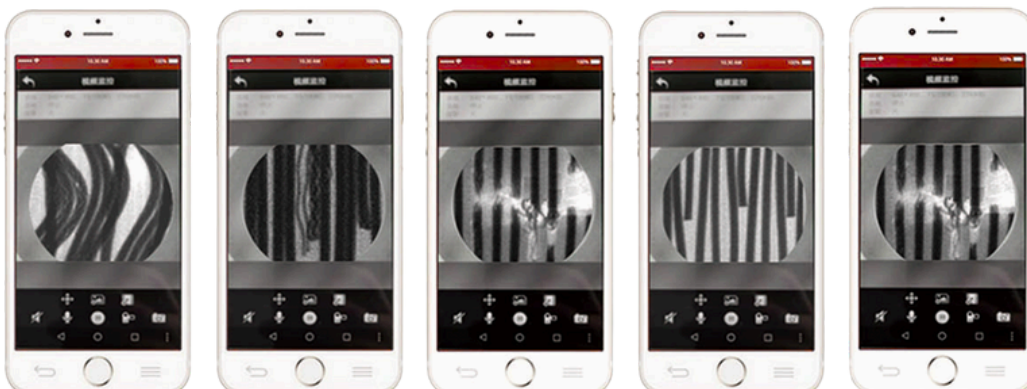
Product introduction

DMC's portable equipment is especially used to detect static conveyor belts, such as X—Ray of known injuries or suspected problems, check the quality of vulcanized splices, and view the shape of internal wire ropes in real time, especially when electromagnetic equipment detection of suspected fracture, it is used for secondary confirmation of the part to ensure that the detection result is intuitive and accurate, and the damaged part is clear at a glance.

5 Features

- Small size: 550mm*420mm*T30mm.
- Light weight: only 9kg.
- Ideal for single person operation.
- Low price: It is the cheapest X—Ray detector on the market.
- Support wireless connection via APP.

Remote observation can be done through a wireless connection with a cell phone/tablet



Hazard of broken belt accident

- Roadway damage
- Pile of coal roadway
- Rack damage
- Damaged rubber
- Casualties
- Shutdown

Broken belt accident

Assuming that there is a broken belt accident in a mine with an annual output of 3 million tons, production will be suspended for at least one week, with indirect losses of up to 10 million USD!

Benefits for using this product

- ◆ It can identify and detect the quality of newly replaced conveyor belts and the vulcanization process of joints.
- ◆ It can detect and judge the running state of the old conveyor belt intuitively and accurately.
- ◆ It can avoid the waste caused by blindly replacing or repairing conveyor belts for safety reasons.
- ◆ It can avoid economic losses such as production reduction or shutdown caused by belt breakage accident.
- ◆ It can avoid casualties caused by belt breakage accident.
- ◆ It is possible to arrange reasonably for the maintenance time according to the operation status and production tasks of the conveyor belt, so as to increase the service life of the conveyor belt.

Application site

