

Metal-in-aluminum foil detector Patent Product

Japanese patent No.3857271 United States Patent US6,958,603B2

Chinese patent Acquisition

South Korea patent No.0543992

European patent Claim for examination

X-ray Detector

US7,102,347B2

Flat-belt Type NIP- V D (Wide Belt)

Dectect iron and stainless pieces

In both aluminum foil package and non-aluminum package

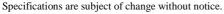
Equipped with mis-detect a little, highly accurate, magnetic sensor.

Possible to detect it even by the high temperature and the moisture adhesion.

The product of the aluminum wrapping and salinity is OK.

The operation easiness: All the condition settings of each commodity are unnecessary.

Specification			
Model	NIP- D	NIP- D	
Length	1300 mm 1000 mm		
Belt Width	450 mm	250 mm	
Aperture Hight	40 ~ 100 mm		
Sensor	Magnetic field type		
Inspection Range	Width:430mm Length:Free	Width: 230mm Length:Free	
Height of transportation side	800 ±50 mm		
ConvyerSpeed(Changeability)	10 ~ 30 m/min.	10 ~ 50 m/min.	
Display	5.7-inch touch panel LC.		
Operation part	Start button, stop button		
	Power on/off switch		
Monitor	10 level LED display		
Signal	Red		
Transportation load	10 Kg/plane e	1 Kg/plane	
Power supply	AC100V single phase 50/60HZ		
Weight	140 kg	80 kg	
Casing Material	SUS304		
Option	Motor Waterproofing, Main Waterproofing (IP65),printer		



	Metal detection system comparison table		
	TOK Detector	Conventional Metal Detector	
Detection Method	Relative permeability	Electromagnetic wave or force lines	

Detection Method	Relative permeability	Electromagnetic wave or force	X-ray & image processing
		lines	Electromagnetic wave (10^16 ~
Frequency in use	Audio range(50Hz ~ 20kHz)	Electromagnetic wave(33k-1Mhz)	10^18Hz)
Detection Capability			
Normal Package	Yes	Yes	Yes
Al evaporated Package	Yes	Yes, if no eddy current	Yes
Al foil package	Yes	No	Yes
(a)Fe (10mm from Sensor)	Fe □1.0mm		Depend upon shape and density
(b)SUS304 (Same as above)	SUS304 □1.0mm		
Salt Concentration	No influence	Strong influence	No influence
Temperature and humidity	OK -20 ~ 80 / Steam	Very complicated	Need to be adjusted for different shape & density
Conveyer Speed	Generally no need to adjust sensitivity	Need to adjust speed to avoid eddy current	Sensitivity adjustment is Necessary
Operationability			
Sensitivity adjustment	5 level	Need to be adjustment for different shape & density.	Need to be adjustment for different shape & density.
Warm-up time	7 Seconds	30 minutes	Very long time
Safety			
Influence of Electromagnetic wave & X-ray	No influence	Possible influence of electromagnetic wave	Possible influence of X-ray
Safety cover	Not necessary	Not necessary	Necessary
Economy			
Running cost	Very low	Low	Exchanges such as periodical maintenance and X-ray tubes

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