



# CBM – Static X-Ray

## Maximising the return on your assets

### BUSINESS CHALLENGE

Obtaining the maximum value for every maintenance dollar you spend has always been the greatest challenge for companies needing to maintain physical assets.

The primary purpose of the Static X-ray system (cbmSX) is to detect any anomalies within a conveyor belt by producing a highly detailed and holistic view of the internals in any conveyor belt. With the ability to capture a single image of an area of damage with suspected underlying damage, the system can provide a complete view of the internal structure of the conveyor belt in a set position. There's no need for guess work when quantifying cord damage.

### SOLUTION

Performing destructive analysis on a conveyor belt by cutting rubber covers back to expose an area of cord damage is not necessarily the best option, as this exposes the encapsulated steel cords to air and moisture leaving them susceptible to corrosion. If an area of cords is to be exposed for repair and the suspected area is exposed, larger than required, more of the steel cords are prone to corrosion.

Capturing a still X-Ray image using the SX will take the guess work out of quantifying the area for repair. The static X-Ray system has the ability to see all steel cords within the belt in a clear and precise image, providing the belt repairer with detail of what is to be expected.

This is not limited to steel cord damage. Static X-Ray also provides ability to look at other faults such as bonding issues of steel cords within splices and provide quality assurance after splices have been completed. Paired with a CBM steel cord scan to find the locations requiring X-Ray, seeing how severe internal damage is has become an easy task.

An advantage of the cbmSX system is that it can be setup in almost any position on a conveyor belt. While the belt requires isolation during setup, it can be achieved quickly using a frame that permits a near 360 degree range making it possible to capture the images from above or below the belt or in a cradle that simply straddles the belt, providing precise movement of the generator and imaging plate.

### WHY CHOOSE CBM

#### ❖ Recognition

Founded in 1980, CBM is a worldwide leader in Conveyor Belt Monitoring. CBM has a long tradition of R&D and bringing to market beneficial technologies.

#### ❖ Knowledge & Expertise

Technical knowledge and constant training of our staff and distributors, ability to provide timely targeted information, are strengths appreciated by our clients.

#### ❖ Independence

CBM is completely independent of the conveyor belt manufacturers and our systems are designed to work on all manufactured conveyor belts, of any speed and all material types.

This ensures safety and security for the companies that we service.

Partner of Choice

#### RELATED SERVICES

- CBM – Steel Cord Scanning
- CBM – Portable Continuous X-Ray
- CBM – Beltspy Vision Monitoring
- CBM – Reporting
- CBM – Remote Monitoring
- CBM – Conveyor System Inspection
- CBM – Cover Thickness Testing

## CASE STUDY

A client with a CBM permanently installed X-Ray system required their belt to have internal examinations to determine if the irregular wear on their conveyor belt had been a cause of cord displacement.

Performing the X-Ray scans on a regular basis ensured the integrity of the internal structure was sufficient to continue operations, decreasing the concern of catastrophic failure from excessive wear, particularly within the splices.

The life of the belt was extended with continual monitoring, assisting in achieving an extended end of life for that particular belt.

After installation of new belting, X-ray imaging of the entire length of belt was performed to gather a base line for future examinations and was also used for quality assurance for the splicing.

The images revealed that during the splicing process a number of steel cords had returned to a natural position, overlapping the adjacent steel cords. If these overlapped steel cords in the splices were left unnoticed, premature wear and cord exposure within the splices would have been imminent.

Further analysis of the complete belt image captured also revealed the cord plane to be misaligned. This can assist the client with determining premature wear as well as causes of mis tracking conveyor belt.

## OUR APPROACH

Clear, concise, easy to read and above all, rapid indications regarding conveyor belt safety and durability.

Provision of the most comprehensive condition monitoring of conveyor belts and systems in the world today.

Non Contact / High Quality / Portability / Holistic Approach / Operating In All Conditions

## FAQ

### Do I need to have all my Belts Scanned?

Not at all, we only implement in a way that will benefit your companies' requirements

### What are the key benefits?

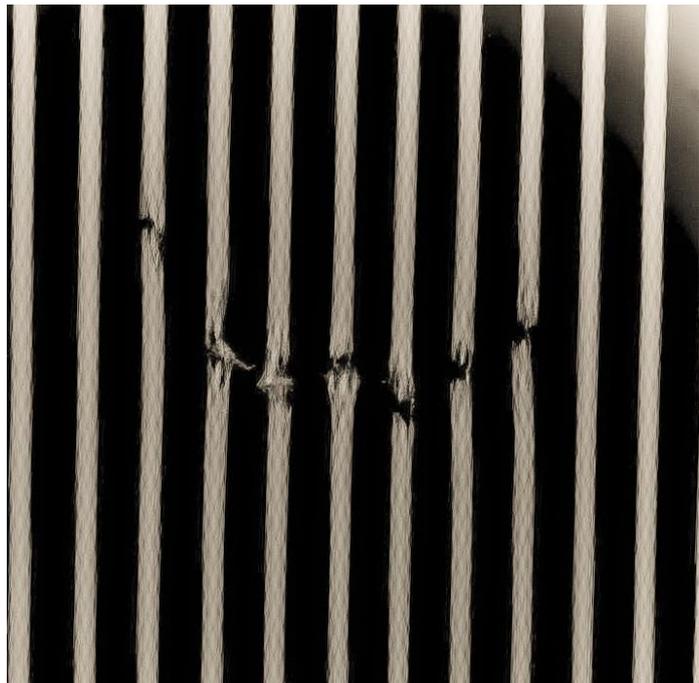
- Complete imaging of internal structure in a conveyor belt
- Effective maintenance & budgetary planning

### Who owns the Data?

You do – we keep a back up of that data and it forms part of the database for our trained technicians to analyse and make comparative recommendations. You receive regular reports and recommendations at a frequency that best suits your site operations.

### Do I have to shut down the belt for the scan?

A short shutdown is required when installing and removing the equipment.



## CONTACT

For details about this service, please contact CBM

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