

PLANT AUDIT REPORT

PLANT AUDIT PERFORMED FOR:			
PLACE:			
CONTACT:			
DATE OF AUDIT:	Preet Mijar & David Hewitson		
TYPE OF MATERIAL PROCESSED:		ESTIMATED ANNUAL TONNAGES:	1,500,000 TPA

Please see the attached findings from the site visit performed on **Date**

#1



Observation: *Simple design – lost screening efficiency and wear life*

Solution: Redesign maximising open area by using staggered aperture arrangement

#2



Observation: *Side hook not sitting on side rail*

Solution: Check side clamping bars are correct profile and over-hook dimensions are correct

#3

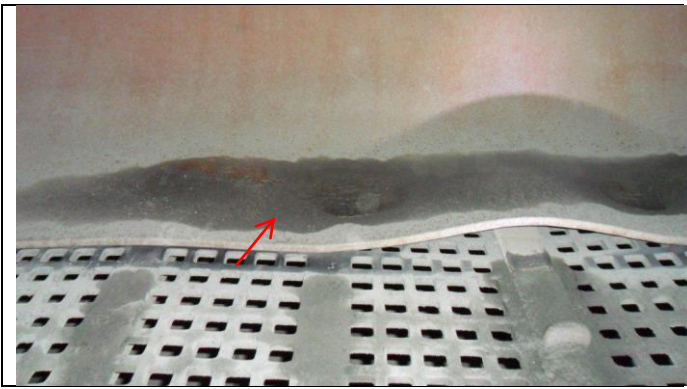


Observation: *Sign of over-tensioning which could lead to premature failure through tearing of fabric plies or screen cloth pulling out of hooks*

Solution: Check side clamping bars are correct profile and over-hook dimensions are correct.

Ensure good crown and support bar capping rubbers are of the same profile

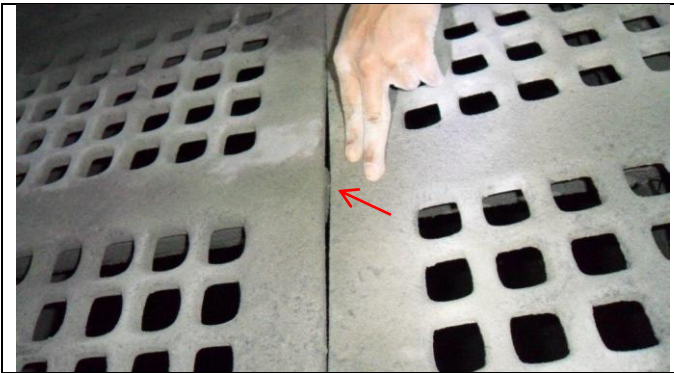
#4



Observation: Lost open area from rubber curtain. – nearly 50% of first screen cloth covered.

Solution: Shorten the length of the rubber so it is long enough to prevent spillage but short enough to expose all apertures

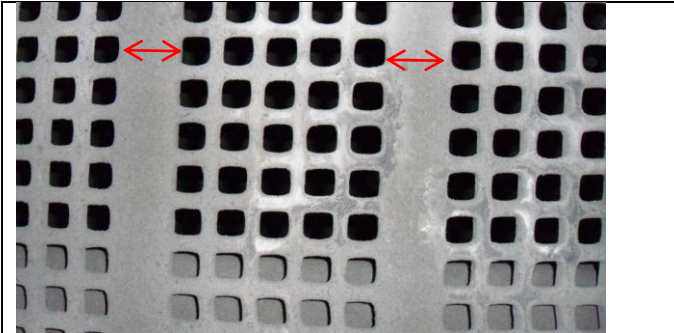
#5



Observation: Support bar capping rubber worn making it impossible to tension the screen cloth. This condition will result in premature screen cloth failure and poor screening efficiency

Solution: It is a good maintenance practice and cheap insurance to always fit new support bar capping rubbers when installing any new screen cloth

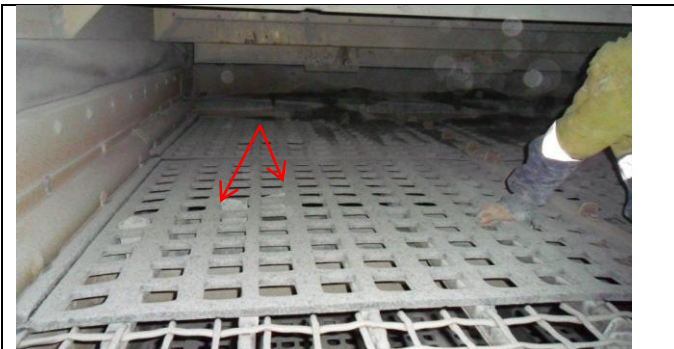
#6



Observation: Simple design – lost screening efficiency and wear life

Solution: Redesign maximising open area by using staggered aperture arrangement

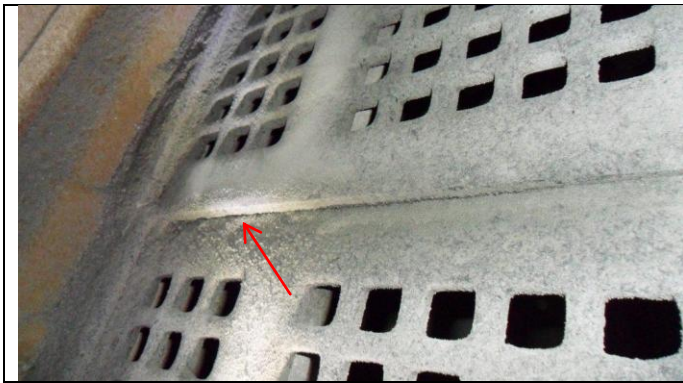
#7



Observation: Poor screen cloth design

Solution: Use off-set aperture arrangement and or redesign for easier installation

#8



Observation: Screen cloths not sitting evenly on the support bars

Solution: Check side clamping bars are correct profile and over-hook dimensions are correct.

Ensure good crown and support bar capping rubbers are of the same profile

#9



Observation: Pegging. Concentric missing. Side clamps uneven. Very little camber

Solution: Consider self cleaning Flexmats to eliminate pegging and extended wear life.

Check side clamping bars are correct profile and over-hook dimensions are correct. Notice 2 different type of clamps.

Ensure good crown and support bar capping rubbers are of the same profile

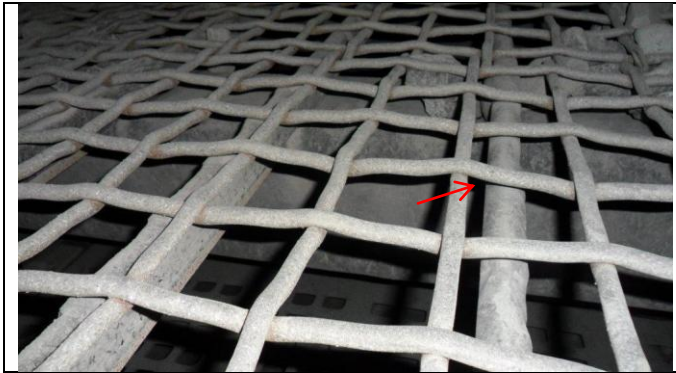
#10



Observation: Concentric missing. Concentrics are used to force the side hooks firmly down on the side rails

Solution: Re-fit concentrics

#11



Observation: Screen cloth not sitting on support bar capping. Notice how it is the closest support bar to the side clamp

Solution: Check side clamping bars are correct profile and over-hook dimensions are correct.

Ensure good crown and support bar capping rubbers are of the same profile

#12



Observation: Side clamp difficult to fit. Side hook not sitting on side support rail. Concentric missing

Solution: Extend steel hook plate on screen cloth by 15mm.

Re-fit concentrics

Check side clamping bars are correct profile and over-hook dimensions are correct.

Ensure good crown and support bar capping rubbers are of the same profile

#13



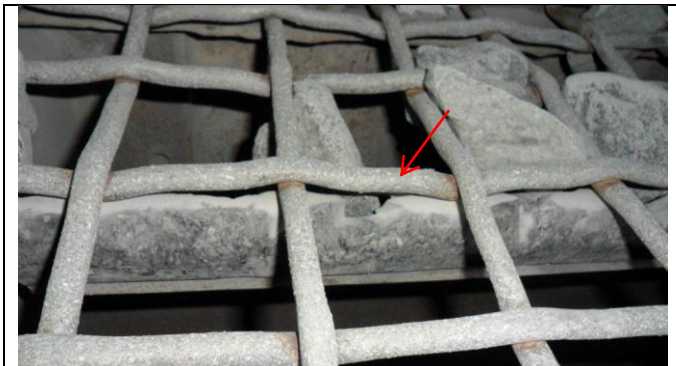
Observation: Differing side clamps, screen cloth hard up against the side wall. Screen cloth not sitting on side support rail. Concentric missing

Solution: Re-fit concentrics

Check side clamping bars are correct profile and over-hook dimensions are correct.

Ensure good crown and support bar capping rubbers are of the same profile

#14



Observation: Pegged rock not clearing the aperture resulting in wear to capping rubbers and steel support bars

Solution: Consider self cleaning Flexmats to eliminate pegging and extended wear life.

#15



Observation: Support bar capping rubbers not sitting flush on the support bars causing gaps between the screen cloths and capping resulting in difficulty in obtaining good cloth tension

Solution: cut away interfering sections of the capping

#16



Observation: Side hooks not sitting on side support rails

Solution: Re-fit concentrics

Check side clamping bars are correct profile and over-hook dimensions are correct.

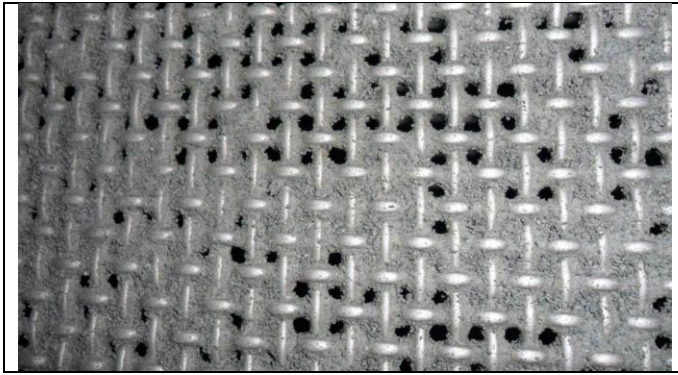
#17



Observation: Poor screen cloth design. Reduced wear life and inefficient screening

Solution: Better utilisation of the screening area available by staggering the apertures will give longer screen cloth wear life and increased screening efficiency

#18



Observation: *Wear* This photograph shows how the tops of the exposed woven crimps wear first. When the crimped wire wears thin the wires break and the cloths requires replacement

Solution: The flat vibrating wires of the Flexmats do not have any exposed crimped wires therefore they wear more evenly and commonly last 2-3 times longer than woven mesh with increased screening efficiency

#19



Observation: *Extreme blinding of 5mm screen cloths.* It was reported that the blinding causes reduced production, unnecessary recirculating load, addition wear on crusher and additional wear in chutes

Solution: The flexible vibrating wires of our stainless steel SELF CLEANING Flexmats will eliminate blinding, significantly increase screening efficiency and return wear life several times longer than woven mesh

Summary

One of the most critical factors for maximum screen cloth wear life and screening efficiency is to have proper screen cloth tension. This can only be achieved through having a good crown (camber) on the screen deck, the correct screen cloth over-hooks dimensions, the correct profile side clamping bars and the correct support bar capping rubber.

Incorrectly tensioned screen cloths can reduce screening efficiency by around 10%.

Addressing the problem areas identified in this report will no doubt increase screen cloth wear life and screening efficiency. With production around 1,500,000 TPA, if only a 1% efficiency improvement is gained that equates to annual increase in production of 15,000 tonnes. At \$20.00/tonne = \$300,000.00 additional revenue at no additional cost. All this can be achieved through the better screen cloth design, the use of the most appropriate screen media and the correct screening accessories such as side clamping bars and support bar capping rubbers.

Nepean Rubber appreciate the opportunity to work with your company to solve your screening problems, eliminate premature screen media failure, increase your production and reduce your cost per ton to produce saleable materials.

We hope that you find this audit report to be beneficial and we would be happy to work with you on any future screen media needs or screening challenges. Please feel free to contact us at the numbers listed below.

Preet Mijar
David Hewitson
Applications Engineer
Nepean Rubber