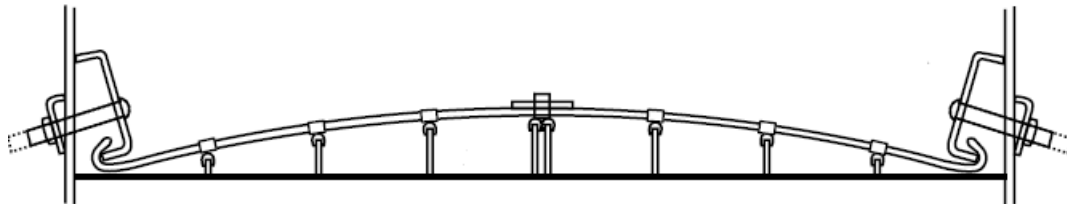




Get the most out of your screen media

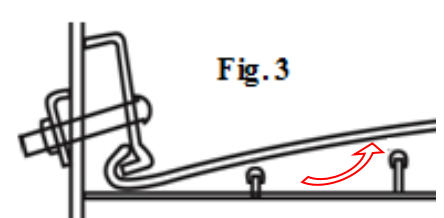
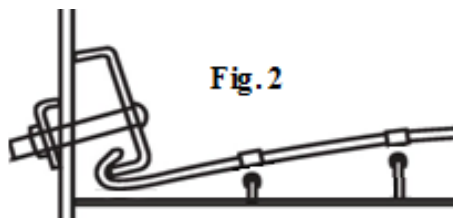
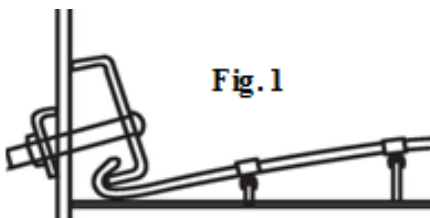
There are many factors that affect the wear life and performance of your cross tensioned screen media. Good tension is critical for maximum screen cloth wear life and this can only be achieved with the use of the right support bar capping rubber and good even crown across the deck. There is however another equally important and often neglected component critical to the successful performance of your screen media - the **Side Clamping Bar**.

The purpose of the side clamping bar is to secure, stretch and tension the screen cloth over the crown of the screen.



Screen box manufacturers design their side clamping bars so the side clamp sits in the base of the screen cloth's side hook, applying force on the side hook at the correct angle. The clamp bar pulls the hook down towards the side wall and side support rail of the screen box (fig.1).

Quite often replacement side clamps are sourced from a local fabricator and sometimes the profile angles can be different to the OEM bar or the bolt holes can be punched at the wrong height. Incorrect profile side clamping bars or bolt hole position can cause the hook to apply pressure to the screen cloth side hooks at the wrong angle, sometimes lifting the hooks up and away from the side support rails (fig. 2) or causing the middle of the screen cloth to bow upwards, creating a gap between the screen cloth and the support bar capping rubber (fig 3).



These conditions will lead to inefficient screening and eventual premature screen cloth failure



Side clamping bars overlapping from one screen cloth to another is a common and serious problem that will affect screen cloth tension and wear life

No two screen cloths are ever identical in width so one cloth or part of one cloth will be tensioned while the other is under-tensioned. A loose cloth will move with the vibrations of the screen box and cloth wear life will be reduced.

The number of side clamp bolts is important. Some screen box manufactures only have two bolts for a 1220mm long clamp bar, while others may have three or four bolts. Ideally the clamp bolts should be spaced at around 300mm centres. Where there are too few bolts or the clamp bars are made from thin steel the clamp bar will flex and the cloth will only be under full tension closer to the bolts while the remainder has little tension at all.



The Self-cleaning style wire screens are very sensitive to this uneven tension and localised wear areas can result.

Increasing the steel thickness of the clamp bar will help spread the load and reduce flex of the bar.



Worn bars will flex and bend, applying uneven tension across the screen cloth and reducing screen cloth wear life.

It costs much more to replace a failed screen cloth than it does a side clamp so replace your side clamp bars regularly, before they are "worn out".



Some screen box manufactures supply new screens with springs for side clamp bar tensioning.

From a screen media manufacturer's perspective we would prefer to see the springs removed and replaced with domed washers.

Unless the springs are fully compressed the screen cloth will pull on the clamps as the screen box vibrates and the cloth can move.

Tips

- Only use the OEM profile side clamping bar
- Replace bolt springs with domed washers
- Use bolts with full length thread
- If your side clamp bars only have 2 or 3 bolts increase steel thickness. It will even out tension over the cloth, increasing cloth wear life
- Never overlap side clamps and screen cloths. One hook → One clamp bar
- Rubber line the side clamps for longer wear life and bolt head protection

Quarrying attracts a diverse range of people from career professionals with extensive resources and technical expertise to farmer's wives looking to supplement their family income. Not everyone has access to their own in-house technical gurus to solve problems and advise on best maintenance practices. Too often we gain our knowledge the hard way, through mistakes.

For those of you who don't have your own technical specialists and even those who do, Nepean Rubber offers our obligation free **Screening Plant Audits**. We can help you identify any issues you may have with your side clamping bars, screen cloth installation, screen box set up and many other problems that may be causing reduced screening efficiency and reduced screen media wear life. And while we are there let us train your people on the correct screen cloth installation and maintenance procedures.

Contact you Nepean Rubber representative to arrange your free **Screening Plant Audit** or **Screen Maintenance Simplified** training.

