

FPS Member Feedback

- 1.1 • Used similar system on a previous project and it was good for small pile cages under 1t weight. I would not recommend for heavy cages.
 - 1.2 • It looks fiddly to use and relies on manual handling / manipulation to install and connect which goes away from the purpose of these systems. It's good that all the suppliers are looking to develop rival systems to SuperLatch from RCL and AMCS's QuickSplice though so there's no monopoly for one supplier and even the lower end of the Piling market Gets the safety benefits we are pushing for. This system probably has a place but perhaps not in our main market share. Still better than bulldog grips! Has everyone completely moved away from coupler connections now? The one issue with all these systems is lapped bars at the connection zone reducing steel spacing and inhibiting concrete flow potentially.
 - 1.3 • I haven't used the NGR system but it doesn't look as user friendly as the Steve Render Superlatch system that Total use. From the photos, there would appear to quite a lot of manual handling work to perform during splicing. Superlatch does not rely on any manual work at all.
 - 1.4 • The use of Bull Dog Grips is included in the FPS guidance which has no real guidance on capacity, so this has a place also.
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- 2 • I think this is a good idea but I am concerned that the lifting aspects have not been considered.
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- 3.1 • My initial thoughts are although it looks a decent system in general, I have used simpler systems with hands free, the last option for using a pin clasp in place of the nut and bolt, the pin wouldn't hold much weight compared to the nut and bolt. The whole thing looks very steel congested, this would need to be run by designers.
 - 3.2 • 'I am concerned about the design of the top clamp (item A). The item is fabricated from four individual plates which are joined by horizontal welds. A vertical pull is already introducing bending moment along the weak axis of the weld. This is even made worse if the lifting operation introduces some bending moment into the entire cage. The risk of weld failure in item (A) would be significant. For light mini piling cages this may still be ok due to a relatively large factor of safety, but I would not feel comfortable putting our lads' hands on any large diameter piling or diaphragm wall cage spliced with this system (as suggested by the supplier on the last slide).
 - 3.3 • 'In summary I would avoid these, the design does not convince me'.
 - 3.4 • 'Looks fine in principle however I still think it's 'a sledgehammer to crack a nut' solution. Easyloc from F Brazils or AMCS is far simpler and quicker to splice cages'.
 - 3.5 • 'The main issue with such and similar systems, we saw one called Superlatch (Romtech designed) in Thames' yard the other day; when you slide the too section in the band or bars catch with each other which means you need to use hands to wriggle the cage to slide in. Hence defeating the purpose. The other issue is getting the bolts on; which again introduces hands in pinch/trapping points'.

- 3.6 • I think what's meant here is the systems all look good on the correct cage, but they all have issues when the cage becomes over congested.
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- 4 • Looking at the design it wouldn't be suitable for a CFA piling as the connection would take too long and it would cause extra friction while installing into the concrete pile. Again, with rotary piles it would take too long and have to be very accurate to splice cages together, where other methods are safer and much quicker to connect the sections together.
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- 5 • Good system. Worked well for us in Marble Arch. Quick and safe.
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- 6 • This is not a system I have seen or that, as a company, we have used before. It looks like it could work but without having experience of the system I would struggle to comment on its use

NGR.Ltd Feedback

1.1 As stated in the feedback a similar system was used on a previous project and described as 'good', for what reason would the system not be recommended for heavy cages because if the connection can carry the load, the system works.

1.2 Both systems, SuperLatch from RCL and QuickSplice from AMCS, require an element of manual handling. Our idea of the NGR Supercatch system is to significantly minimise the risk created to operatives when splicing cages; our system is fitted from the outside of the cage, which prevents operatives from inserting their hands and arms inside the cage. The biggest risk for both methods from RCL and AMCS, is the barring system of the lower cage as the top cage is supported by the crane. In both systems the failure mode will be the bar or the upper support band of the lower cage, the band can be designed from weld calculations but still relies on the QA/QC of the weld. The bar that supports the cage can be calculated but again will rely on human interference to ensure that it is installed correctly. So the fact is the risk is the support of the lower cage, NOT how the connection is made surely.

1.3 See above response.

1.4 No Relevance in the use of the quick splice systems.

2 The lifting aspects of any cage are under the guidance of the contractor on site, any lifting bands can be designed for the forces of the lift from a crane or rig. The lift plan should address other matters.

3.1 NGR.Ltd offers the alternative of using a securing pin in the Supercatch System so that clients have the option of choosing a cheaper yet effective method. The securing pin would be used in instances where lighter cages are required. If the cage is a heavier weight, the client would then have to go with the set screw and nut, due to a greater safety factor and that it can resist heavier loads.

3.2 All aspects of our NGR Supercatch System have been checked by calculation on proof testing by load. If any of the components that make up the system had any major/significant risks, we as NGR.Ltd would never offer the splice system to our clients in the first place because our client's safety means as much to us, as it does to them. The band should NEVER be induced into bending from cage lifting, as the cage should have a tandem lift if the cage is that long. If cages are only being lifted by single lift, the worst moment is at maximum curvature; if the welds fail then all forces are translated to the support bands but by this time the lift should have been

aborted. It would be the piling contractor to decide upon the nature of the lift so not causing undue stress in the cage.

3.3 The use of any splicing system is down to individual preference and value for money if all boxes are ticked. Not all designs look good/perfect when they are newly introduced to the market, for example Continuous Flight Augering was frowned upon when it was first introduced into the UK, however now it's the main form of piling; the design was checked and verified to work, so it comes down to choice of what system is used.

3.4 See above response.

3.5 Our NGR Supercatch System does need a degree of manual handling; however this handling is based on the outside of the cage, therefore the risk and danger of finger entrapment is minimised by a significant extent. The trapping of fingers and hands will always be a concern if the recent online videos of all the main market systems show that hands are used to move the cage. Like most things it has to be managed correctly and if so, it then becomes safe to use.

3.6 No response.

4 Our NGR Supercatch System has proven to be quick with other projects we have undertaken so there wouldn't be any reason for the process to take any longer than it should do. This once again comes to the point of how the splice is managed on site; it can only become difficult if it is not processed and handled correctly - this is the same with other splice systems from RCL and AMCS.

5 No response.

6 No relevance.