Metalock Engineering UK Ltd
Unit H5 Pilgrims Walk
Prologis Park, Coventry
CV6 4QG, England

Tel: +44 (0) 2476 338205
Email: sales@metalock.co.uk
Web: www.metalockengineering.com

METALOCK REPAIR - METHOD STATEMENT

Lloyds Register
LR119046REP-01

AUTHORIZED BY: A Evitts . Job number ……..

Lloyds LR method statement approval

Sequence of Events

1. Arrive at site and report to your designated site contact.
2. Ask your contact for a site induction.
3. Put on the required PPE before entering the work site including overalls, safety boots, safety gloves and any other site specific PPE as required by the site.
4. Survey damaged item and complete the survey sheet in full.
5. MPI test the area working to MPI Procedure MET WP -003 and complete the MPI report
6. Design the repair i.e. no. and positions, size and depth of keys and record this information on the survey sheet.
7. Size and position of Inserts if required
8. Lightly grind damaged area and remove any debris. Ensure PPE including safety googles and respiratory protective equipment is worn.
9. If necessary clamp component to secure and to close fracture as much as possible.
10. Mark out the hole centres for key positions and centre pop.
11. Drill centre hole for first key aperture making sure it is at 90° to work piece.
12. Jig drill holes for first key aperture, (make sure at least two holes are either side of crack and stagger all following apertures).
13. Flat bottom holes to required depth.
14. Cut out key aperture using sizer.
15. Repeat 10 (until completely flat at bottom of aperture).
16. Cut keys to length.
17. Place 1st key in aperture and peen into place.
18. Place 2nd key in aperture and peen into place and repeat until all but the last key is fitted.
19. Drill anchor holes in all apertures.
20. Using an annealed final key place into aperture and peen into place, making sure a small part of the key is proud of work piece.
21. Repeat operations 7-16 for remaining apertures.
22. Mark out stud positions.
23. Drill and tap stud holes.
24. Fit studs to full depth of thread and shear off.
25. Drill and tap adjacent stud holes and fit studs until the line of fracture is completely studded and interlocks with its neighbor, creating a seal.
26. Peen along the line of studs and apertures and remove excess metal. Re-peen the repair taking care not to damage surface.
27. Grind repaired work piece if permissible. Ensure PPE including safety googles and respiratory protective equipment is worn.
28. MPI test the area working to MPI Procedure MET WP -003 and complete the MPI report
29.
30. vibration exposure limits (HAVS) will be worked to at all time to BS EN ISO 10819:2013+A1:2019 and recorded on the Reactec HAVWear (information can be obtained by contacting Metalock UK)

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31. Clean the work piece and clear up the work area at the end of your shift.
32. Complete the job report and the certificate of customer satisfaction – ensure customer signs both documents.
33. Wash your hands and clean yourself thoroughly before leaving site. Dirty overalls should be taken back to the head office so they can be sent away for washing.

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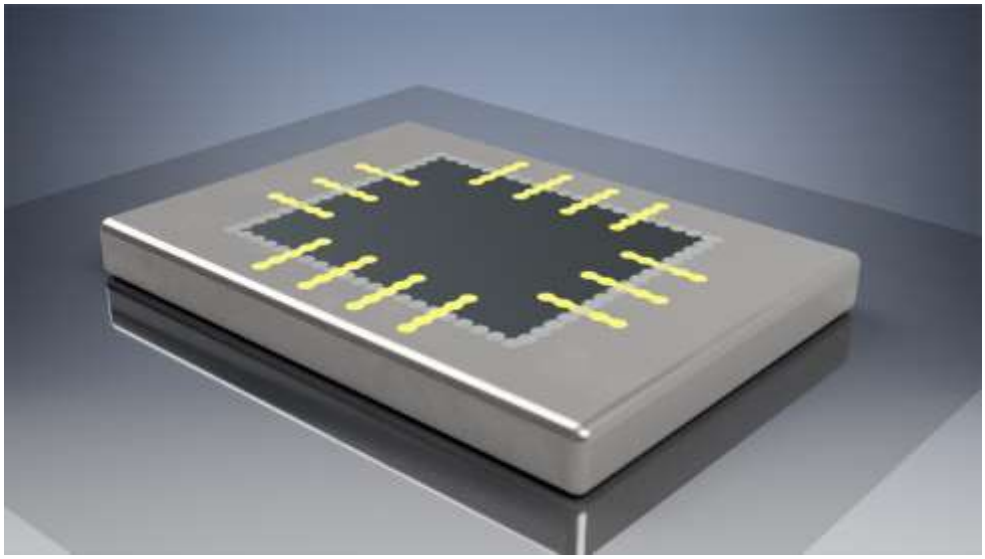

By Andrew Evitts
Date issued 19/01/2021

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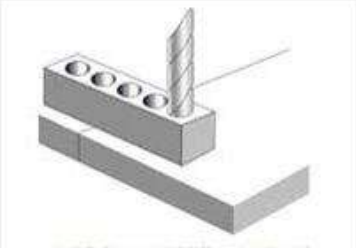
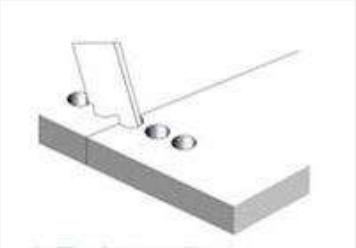
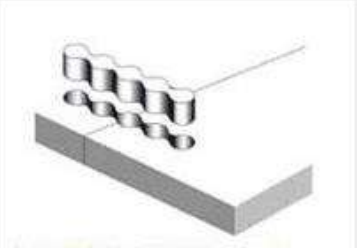
HOW THE PROCESS WORKS



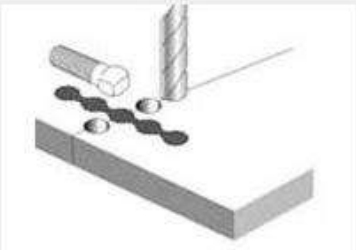
1. Using a drill jig, rows of blind holes are drilled perpendicular to the direction of the crack, each row to act as a key.



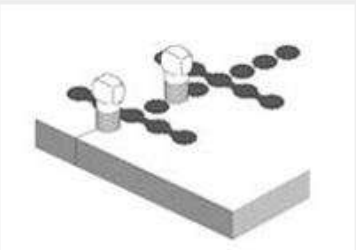
2. The intermediate partitions are removed with pneumatic chisel.



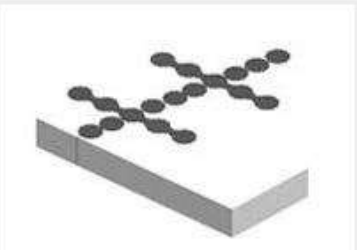
3. Metalock keys are driven into the opening and caulked.



4. Holes for Metalock screws are drilled along the crack between the keys.



5. The screws are fitted to ensure they overlap, effecting a seal along the fracture.



6. Finally, the entire installation is caulked to ensure stability and pressure tightness.

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