They nail horse shoes, don't they?

Yes indeed, we found that they do nail horses' shoes – but in the process of custom fitting each shoe a farrier will generate a lot of impact energy on his anvil – not only does this cause the ear damaging "ringing" sound but also generates a potentially damaging reflective shock wave up the hammer into the farrier's body and moves the anvil while working. This problem has been recognised for some time and may be addressed by use of a percussive pad placed under the anvil. So when Ian Payne at Hand Made Shoes was looking to manufacture really effective pads he found he needed a high-grade impact resistant adhesive to hold them together. Our answer was Araldite 2040 flexible polyurethane adhesive.

Hand Made Shoes percussive pads consist of two sheets of aluminium sandwiching a 12mm rubber pad with 25mm diameter lead discs held in place by the rubber. Vibration is effectively dampened by deformation of the lead and rubber which absorb different wavelengths of the impact shock. This not only reduces Health and Safety related damage but also greatly reduces the anvil's tendency to move or "walk" while in use.

Our solution of Araldite 2040 simply involves application of a bead in criss-cross pattern on the aluminium "bread" parts of the sandwich then assembly with the rubber/lead "filling" with gentle overnight pressure to ensure a tough resilient bond.

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This quite unusual application does demonstrate the sometimes extreme conditions which modern high performance adhesives can endure. In particular we are very impressed with the way Araldite 2040 has taken this in its stride – for a general purpose polyurethane intended to bond a wide variety of substrates it has performed beyond expectations. Araldite 2040 is well suited for bonding of polycarbonate and polyamides as well as metals, especially where low shrinkage, good flexibility and good gap filling are needed.

And whilst they do nail horse shoes, not always! Araldite 2012 has been used for the bonding of “racing plates” directly onto horses hooves – another high impact application!

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