CASE STUDY- METAL STITCHING

Background To The Metal Stitching Repair
One of our customers had an engine block with a cracked (main bearing cap) stud hole. Nicol & Andrew were approached to see if our casting repair technique could salvage the block.

Survey Findings (Libya)
NDT checks showed extensive cracks radiating from the stud holes in two positions. Localised metal stitching would obviously have been of insufficient strength. We suggested that “in our experience” the best repair method would be to cut out the whole of the main bearing pocket and to metal stitch in a new one.

How We Carried Out the Repair
We drilled a series of holes around the damaged pocket conforming to the shape of the new insert. We removed the damaged portion, then carefully positioned, restrained and metal stitched the new insert into place. (We manufactured the insert in our workshops in the UK).
After stitching we carefully hand ground and dressed the surrounding areas to blend in seamlessly with the original.

Precision Line Boring To Standard Size
We set up precision line boring equipment referencing the existing undamaged pockets either side. We then line bored the new pocket out to the original size and OEM tolerances.

Timescales
Design and manufacture of the insert took 12 days. The on site metal stitching and boring process took 7 days. The engine was then reassembled and ran without any problems.

+44(0) 1494 429800
repairs@nicolandonandrew.com
www.nicolandonandrew.com

Nicol & Andrew Group
Mayday House
Oakridge Road, High Wycombe
Buckinghamshire, HP11 2PF
Tel: 01494 429800

2 Mossland Road
Hillington Industrial Estate
Glasgow G52 4XZ
Tel: 0141 882 4724 Fax: 0141 883 3350