Contractor 1 – Mid Trial Damage Report

Running *'Ferobide'* discs only

The damage sustained to the base cutter discs (as depicted in images 1 to 16) resulted from the disc coming into contact with residual subsurface irrigation from a previous crop (not sugar cane) being grown in this particular paddock. The contractor was engaged to cut cane in this paddock by the farmer and it was the first time he had cut in this particular area. Not only did the base cutters sustain reasonable damage, but the harvester also sustained damage to its drive and gear box components.

The arrows marked on the discs in images **1.** and **7.** depict the discs direction of rotation on the harvester. As identified in the images presented, the majority of the damage and lost tiles has been sustained on the lead side where the blade intersects the disc.

With the rotational speed of the base cutters, travel speed of the harvester and interaction with an immovable object such as large rocks, boulders or redundant fixtures as in this case, this damage is not surprising and will continue to happen in the future. Images **12.** to **15.** show the damage the cutting blade did to the blade retaining bars on the underside of the disc. These bars are 16mm square bar and the blade had no problems cutting through this section, again highlighting the shock / impact sustained in this case.

Repairs involved removing the damaged tiles, cutting replacements, re-prepping the disc as needed, re-welding the damaged blade retaining bar, welding tiles in place and hard-facing the areas worn up until this stage. These repairs took approx. 1 ½ hrs. With the use of current hard-facing wires / electrodes, this process would have taken anywhere up to half a day for the same repairs.

The harvesting contractor in this instance noted that the damage was "segmented" and contained to the tile pattern. With traditional hard-facing techniques in this application, when damage occurs it tends to "peel" the hard-facing medium from the base material.

Repairs made using hard-facing electrodes would require 6-8 weld runs to cover the same surface area as one perimeter tile, however the contractor noted that to repair the tile design, only two weld runs were required to repair the same area using ***'Ferobide'***, thus significantly reducing maintenance time.

The opinion of the contractor is that nothing would have survived this impact. The ease of repairs provided by using ***'Ferobide'*** was far more time saving than current methods. With smaller areas of damage, the contractor would only need a handful of tiles, a low amperage welder and a generator which would allow repairs to be carried out in the field without removing the discs from the machine, saving even more time.

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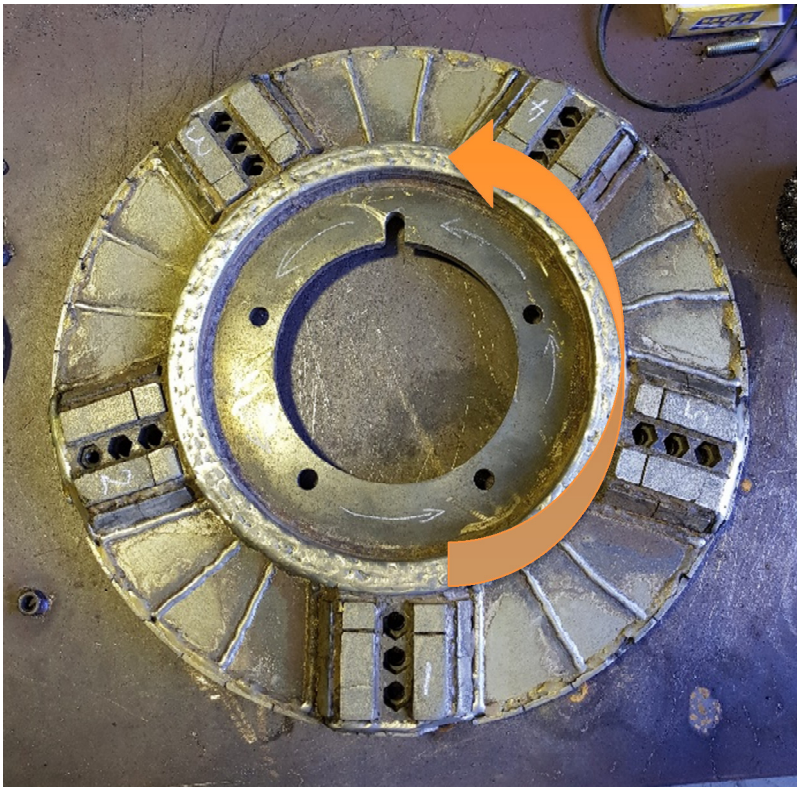

Image 1.

Image 2.

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Image 3.

Image 4.

Image 5.

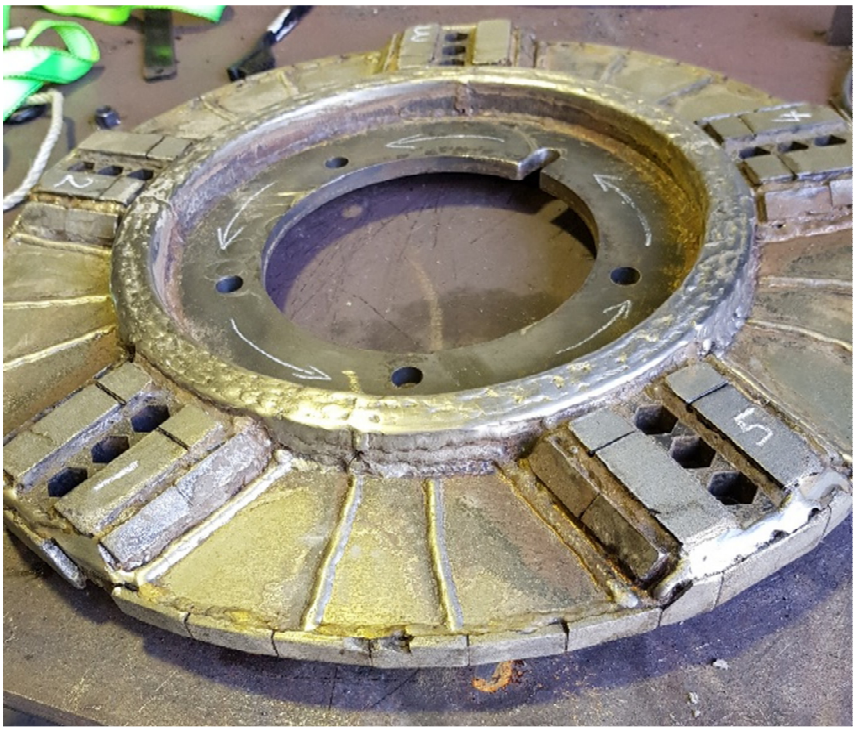

Image 6.

Image 7.

Image 8.

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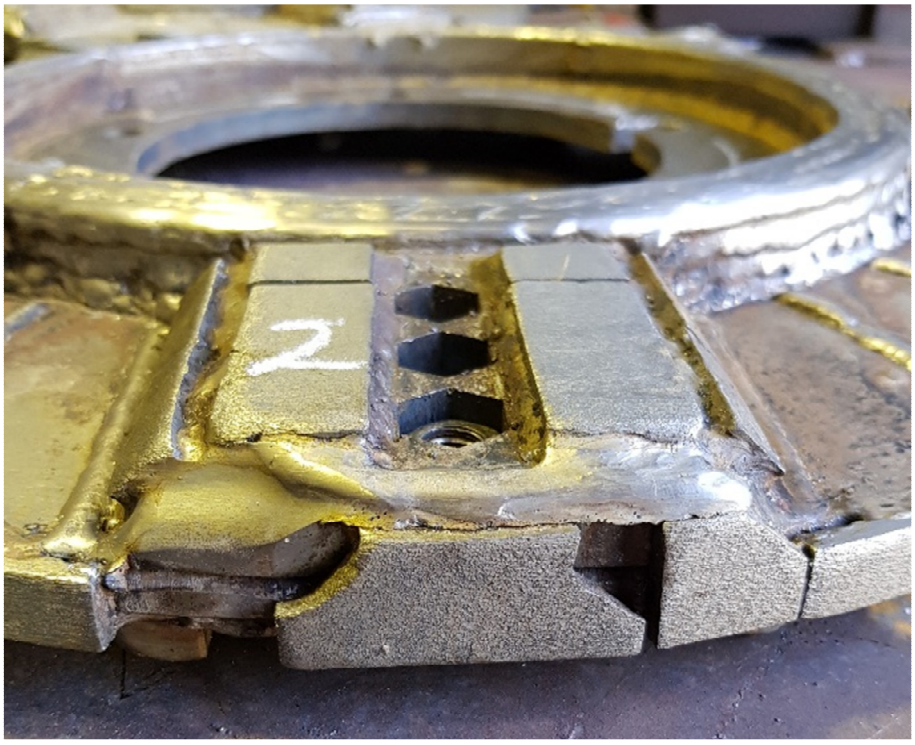

Image 9.

Image 10.

Image 11.

Image 12.

Image 13.

Image 14.

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Image 15.

Image 16.