SUPPLY SERVICES

performance engineering products

CAN-AM CHAINS INDUCTION HARDENED AISI 1045 SPROCKET A-PLATES



In high duty, abrasive environments Quench & Tempered (QT) abrasion resistant plate has long been the go to material for flame cut semi-precision conveyor chain sprocket A-plates. Typically for fabrication into a finished sprocket the maximum nominal plate hardness is limited to 400 BHN. The actual hardness range across a full plate of QT-400 could vary between 370-430 BHN (41-46 Rc).

Flame cut profiles from QT plate will also have a heat affected zone (HAZ) on the cut surface, where the hardness will be variable and may drop to well below the nominal hardness. The HAZ can extend to a depth of 4-5mm before it recovers to the original QT plate hardness.

Superior sprocket A-plates can be achieved by flame cutting the A-plate from AISI 1045 plate which has a nominal hardness of 190 BHN (~12 Rc) and then induction hardening the tooth profile to 50-55 Rc. This ensures a harder, uniform layer exactly where it is needed on the tooth surface. With this solution, the centre of your A-plate will still have a low hardness allowing easy fitment of your B or C hub design.

The benefits:

- 1. Higher tooth hardness for improved wear resistance.
- 2. Uniform hardness across the tooth section.
- 3. Low hardness around the bore area is more suitable for machining and welding.

The bottom line:

High tooth hardness and uniformity will extend both sprocket and chain life.



Steel Uni-Sprockets

- Tooth sizes: 8, 9, 10, 11, 12, 13, 14 & 15.
- B or C Boss.
- Heat treated teeth A-Plates, B or C Boss.



Steel Split Uni-Sprockets

- Available with the same teeth numbers as the Uni-Sprockets above.
- C-Boss & split, with 4 machine screws.



CAN-AM CHAINS can produce induction hardened A-plates or fully finished sprockets to your specifications.

As standard, induction hardened A-plates will be supplied with:

- 1. An induction hardened tooth profile.
- 2. Chamfered teeth.
- 3. Flame cut pilot bore to your requested diameter.
- 4. High, standard or low tooth profile to suit your application.

CAN-AM CHAINS the one others are measured by.

Made in Canada & the USA



