AMERICAN WELDQUIP CONSUMABLES
HRT - "HEAT RESISTANT TECHNOLOGY"
EXTENDED LIFE CONTACT TIPS

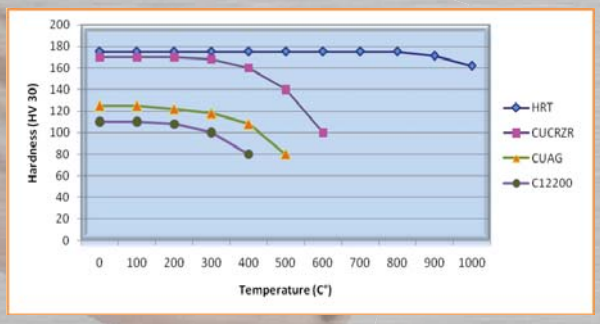
Advanced Contact Tip Technology for High Wear Resistance and Superior Electrical Conductivity

- Superior hardness and wear resistance.
- High electrical conductivity for improved arc transfer and arc starting as compared to other copper alloy tips.
- High performance, unaffected by higher operating temperatures.
- Outperforms other tip materials.
  - 5x the life over C12200 copper
  - 3x the life over CRZR and CUCRZR
- Mandrel drawn for superior bore tolerance and finish.
- Substantially increases scheduled cycle time tip change-outs.
- Lower operating costs and reduce downtime from arc failures and unscheduled tip changes.
- Manufactured in our Wadsworth, Ohio USA facility.

What is HRT – Heat Resistant Technology

Heat generated from the welding process is a major influence affecting your contact tip life. This heat tends to anneal and soften the copper tip material thus, increasing the weld wire abrasion, micro arcing, and decreased conductivity on the ID bore causing premature tip failure. The higher the operating temperature the worse the performance. Different tip material formulations, such as Copper Chrome Zirconium, have been used over the years to increase hardness and help improve tip life.

Hardness at Operating Temperatures



While the introduction of different tip materials may improve wear resistance in certain applications, the harder material with a higher annealing temperature sacrifices electrical conductivity which can lead to poor arc starting characteristics. The American Weldquip **HRT** contact tips are engineered to provide unsurpassed resistance to annealing at high operating temperatures while maintaining excellent electrical conductivity. The outer shell of the tip is made from highly conductive copper for superior electrical conductivity. The inside diameter is comprised of mechanically alloyed copper based compounds. These special copper based composite materials provide a stable microstructure at elevated operating temperatures guaranteeing the high hardness, wear resistance and high electrical conductivity. The tip material is then produced by cold pressing the outer highly conductive copper and the inside diameter composite material. The final finished copper rod is then mandrel extruded to insure a finished tip with excellent ID surface finish and concentricity.