HARDFACE TECHNOLOGIES by POSTLE INDUSTRIES

Hardfacing Newsletter

Edition: Volume 22, April 2020

Hardness alone is not good criteria for evaluating the abrasion resistance of a hardfacing alloy.

Hardness is one of the basic criteria for selecting and predicting wear for equipment designed for handling, crushing and screening abrasive ores and minerals. However, hardness can be very misleading and when measured with a Rockwell machine, is not a true indication of wear resistance. It is easy to obtain a quenched tool steel or carburized steel, that will exceed 60Rc. Yet, experience tells us that chromium carbide will outwear these materials by several times. The difference is that the microconstituents (chromium carbides) are not being evaluated in a standard hardness test.

During a Rockwell test, under the load of the diamond penetrator, the hard particles tend to move away from the penetrator and the resistance to penetration is provided primarily by the matrix. A standard Rockwell reading measures only the matrix hardness, and to a lessor extent, the resistance of the movement of the carbides. Consequently, hardness alone is not good criteria for evaluating the abrasion resistance of a hardfacing alloy. What is important is the amount and type of carbide-forming elements in the weld deposit overlay, and the quantity and quality of the carbides formed in the deposit.

Metal-cored wire is better to pull than push.

Many Welders, when using flux-cored wire, have been taught to "push" the wire for increased deposition rates. Unfortunately, with metal cored wire this causes spatter. It is better to pull metal-cored wire instead of pushing it.

New Technology – POSTALLOY® 242 Electrode

Chromium-vanadium tool steel hardfacing electrode. Primary applications include overlays of hot forging die impressions and hardfacing of steel scrap and demolition shear jaws.

- **Ideal for overlay of hot-working die impressions that must be in the machinable range of hardness as welded.**
- **Excellent choice for scrap shear jaws. Deposits are the perfect hardness to resist crushing and spalling.**

Contact Mike Korba at 216-265-9000, mkorba@postle.com or your salesman with any questions

Hardface Technologies by Postle Industries, Inc.
5500 West 164th
Cleveland, Ohio 44142

216-265-9000
wwww.hardfacetechnologies.com
Contact: Mike Korba: mkorba@postle.com
Edition: Volume 22, April 2020