

VRX 550 HARDFACED WEAR PLATE

Hardfacing is a process of depositing a wear-resistant layer on a surface to improve its resistance to abrasion, impact, erosion, and other forms of wear and tear. The hardfacing process involves welding a hard, abrasion and erosion resistant material onto the surface of the base metal. Hardfacing is done on metal surfaces, such as those found on industrial equipment, machinery, and tools to extend their service life and reduce maintenance costs. In general, using wear-resistant or hardfaced products provides significant cost savings over time.

Wear plate VRX 550 is commonly used in a variety of industries, including mining, cement, oil and gas, agriculture, and construction, where equipment and machinery are subjected to harsh environments and high levels of wear and tear. High hardness of VRX 550 overlay plate is a result of the combination of chrome micro alloyed with boron, niobium and molybdenum resulting with excellent wear and corrosion resistance as well as its toughness, ductility and high-temperature properties. In addition, the amount, type, size, and distribution of carbides in a hardfaced layer is optimized based on the required properties of the hardfaced wear plate.

The hardness of the chromium carbide hardfaced layer is important because it determines the level of protection that it can provide against wear and abrasion. A higher hardness generally indicates better wear resistance and longer service life. Typically, VORAX VRX 550 wear plates have hardness of 62 HRC (Rockwell C scale) which is considerably higher than the hardness of most steels and 50+% of hard carbides in matrix.

The total thickness of the hardfaced wear plate is the sum of the thickness of the base material and the hardfacing layer. Total thicknesses for VRX 550 hardfaced wear plates can range from 6 mm to 40+ mm (0.28 to 1.6+ inches) or more, depending on the specific application and level of

wear protection required. It is important to use appropriate tools and techniques when machining hardfaced wear plates to avoid damaging the hardfacing layer and preserve the wear resistance of the plate.

BENEFITS OF VORAX VRX 550 WEAR PLATE:

- ✓ **Hardness 62+ HRc, 50+% carbides, 30+% Cr in the hardfaced layer**
- ✓ **Extended service life:** VORAX VRX 550 extends the service life of components subjected to abrasive wear, which reduce the frequency of replacements and associated labor and material costs.
- ✓ **Reduced downtime:** By extending the service life of components, VORAX VRX 550 wear-resistant plate reduce the downtime required for replacements, repairs, and maintenance. This result in increased productivity and reduced labor costs.
- ✓ **Improved efficiency:** VORAX VRX 550 wear plate maintains the original dimensions of components, reducing the need for re-machining or re-sizing thus improving the efficiency of operations and reduction of costs associated with rework.
- ✓ **Lower inventory costs:** By reducing the frequency of replacements, VORAX VRX 550 hardfaced plate help to reduce the inventory of spare parts required and costs.
- ✓ **Machinable:** using appropriate cutting tools and techniques (plasma, water jet, EDM cutting), drilling, milling, grinding, bending...