



## WearX 210 Plus ARC-SPRAYED COATINGS

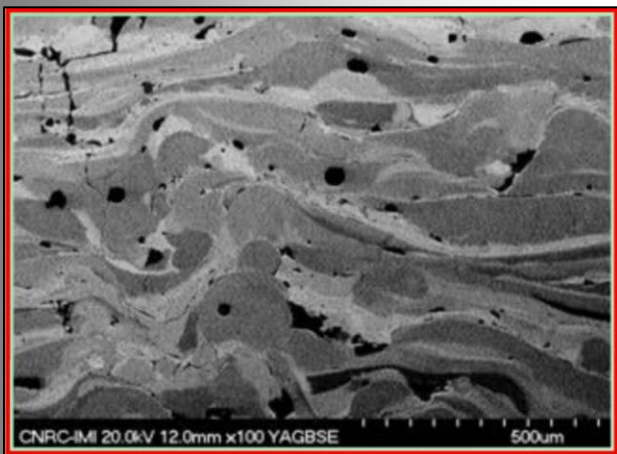
**WearX 210 Plus** cored wire is the result of R&D efforts to produce through arc spraying a coating containing chromium to enhance corrosion resistance in aqueous media and high temperature environments. This cored wire can be easily arc-sprayed. In addition to wear resistance, it offers additional protection to industrial end-users facing corrosion issues.

**WearX 210 Plus** arc-sprayed coatings offer an excellent protection against slurry erosion, and can be safely applied to white cast iron.

**WearX 210 Plus** is precisely formulated to produce upon spraying coatings rich in borides (mainly Fe<sub>2</sub>B). Fe<sub>2</sub>B is a ceramic material known for its high chemical stability, high hardness, high hot hardness, high temperature oxidation resistance up to 1562°F (850°C) and corrosion resistance to acids.

The unique micro-alloying process involving reaction between the metal strip and core elements rich in boron produces arc-sprayed coatings containing more than 70% in volume of sub-micron spherical crystallites of borides as Fe<sub>2</sub>B. This large quantity of boride crystallites is responsible for excellent anti-wear properties.

These crystallites are imbedded in a hardened steel containing more than 25 wt.% chromium. Although the cored wire contains 11 wt.% chromium, the process ensures the adequate dispersion of this chromium in the embedding medium which results in hardened steel containing more than 25 wt.% chromium.



Scanning electron micrograph of the cross-section of an **WearX Plus** arc-sprayed coating

**WearX 210 Plus** arc-sprayed coatings are composed of:

- ❖ lamellae very rich in sub-micron boride spherical crystallites (dark phases),
- ❖ more ductile lamellae containing less sub-micron spherical boride crystallites (lighter phases),

The metallic phase is a hardened steel containing more than 25 wt.% chromium.

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