

EKO Wires - BRONZE Wires

Special treatments: EKO (non-copper coated) • BRONZE (coating based on bronze)

The R&D department at ISAF has, in partnership with the Materials Science Faculty of Trento University, developed a series of innovative manufacturing processes for its' production of wires. To be used in demanding applications, these wires meet the requirements of clients particularly concerned with problems linked to productivity of welding equipment/plant and environmental issues.

ISAF, publishing its new catalogue has decided to make available to all its' clients the products manufactured with these avant-garde production processes.

Characteristics EKO

ISAF wires produced with the EKO process are COPPER COATED free. The wires have a colour characteristic of the parent metal (metallic grey) after drawing.

The exclusive process of manufacturing creates a homogeneous surface and absence of ruinous impurities DURING WELDING. In particular the following characteristics describe the advantages and improved results obtained by utilizing ISAF EKO manufactured wires in contrast to copper coated wires:

**ABSENCE OF COPPER COATING
= REDUCED QUANTITY OF COPPER IN
THE WELDING FUMES**

The copper in the coating is in part released during welding from the wire into the fumes, consequently creating health risks for unprotected workers.

Utilizing EKO treated wires almost completely eliminates this health risk.

**ABSENCE OF COPPER COATING
= FEED IN THE TORCH SHEATHING**

The guarantee of constant feed in the torch sheathing is essential in wire welding.

The EKO treatment ensures maximum feed for ISAF EKO wires avoiding, thus machine stops and reduced performance. EKO technology permits a constant arc, thanks to the perfect and continuous electrical contact with the contact tip, which results in very low spattering.

**ABSENCE OF COPPER COATING
= REDUCED TORCH MAINTENANCE**

No copper on the surface of EKO treated wires results in no spattering of particles from the wire feed rollers and successively pulled through the sheathing, thus clogging of the sheathing and consequent reduced flow of the wire is prevented.

Besides the saving made in the increased life-cycle of the torch, an increase in the productivity of the welding system is obtained thanks to the extension of the effective arc time.

**ABSENCE OF COPPER COATING
= INCREASED HIGH TEMPERATURE
CRACKING RESISTANCE**

The copper and other impurity residues (e.g. sulphur) in the welding bath can cause cracks at high temp. The absence of copper on the surface and the minimal quantity of impurities in ISAF wires reduces to a minimum this significant problem.

**WIRES IN STOCK - EKO treated
(non-copper coated)**

- IS-10 with the trademark IS-10 EKO
- IS-10S with the trademark IS-10S EKO

Characteristics BRONZE

ISAF wires produced with the BRONZE process are manufactured utilizing wire rods selected precisely according to the composition of alloy elements. The surface is coated with a film of based on bronze.

The wire has a characteristic colour of (polished gold) drawn parent metal.

Characteristics of very compact coating and high auto-lubrication are obtained from this exclusive manufacturing process. As is true for other ISAF wires, the finished product is impurity free at welding.

The BRONZE produced wires are particularly suitable for automated/robot controlled welding which requires the highest currents (equal to \varnothing of the wire) and thus elevated feeding speeds.

**BRONZE WIRES = HIGH DEPOSITION
RATE WELDING**

The special coating combined with the action of specific concentrations of alloy steels allows ISAF wires to be utilized with current densities 30% greater than for normal copper coated wires traded on the market.

**BRONZE WIRES = PERFECT ARC
STABILITY**

The special production process for BRONZE wires and the minimal tolerances applied for the cast and helix quality parameters reduces to a minimum the spatters in automated welding while ensuring perfect reproduction of the welding cycle.

**BRONZE WIRES = LOW WEAR-OUT OF
WIRE GUIDE**

Users will note the significant reduction in the wear-out of the wire guide and wire feed rollers, with consequent reduction in maintenance costs and greater productivity of the welding system.

**WIRES IN STOCK - BRONZE treated
(coating based on bronze)**

- IS-10 with trademark IS-10 BRONZE
- IS-10S with trademark IS-10S BRONZE

On request, all the other ISAF solid wires can be produced with the EKO BRONZE processes.

Please contact our client services offices