



# 宝鸡难熔金属开发公司

Bao Ji Refractory Metal Developer Co.,Ltd

Office Address:F10 Ronking International Mansion,No.61 GaoXin Road,Bao Ji Shaan Xi ,China

Production Address: Niejiawan,Bayu Town,Webin District,BaoJi,Shaanxi China

Tel:0086-917 3315889

Fax:0086-917 3313889

## TUNGSTEN ELECTRODES PRODUCTS

### ● PURE TUNGSTEN

#### AND CONTAINING VARIOUS OXIDE ADDITIVE TUNGSTEN ELECTRODES

#### ✧ Products properties:

—High melting point

—Steady electric arc

—Without self-Consume

#### ✧ Range of use:

—Protecting arc welding

—With inert gases and plasma

—Jointing, cutting, spraying and smelting




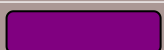




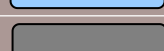
#### ✧ Quality of surface:

Smooth, clear, no defect, no greasy dirt and other impurity.

The end surface of electrodes should be even, smooth and no burrs, the section has no internal defect.

#### ✧ Chemical Composition:

Execute ISO 6848 international and AWSA5-95

|    | Designation | W%      | Oxide%                                  | Impurity% | Color Mark  |
|----|-------------|---------|---|-----------|---|
| WP | WP          | 99.95   | ————                                    | <0.05     |  |
| WT | WT10        | Balance | ThO <sub>2</sub> 0.8~1.2                | <0.2      |  |
|    | WT20        | Balance | ThO <sub>2</sub> 1.8~2.2                | <0.2      |  |
|    | WT30        | Balance | ThO <sub>2</sub> 2.8~3.2                | <0.2      |  |
|    | WT40        | Balance | ThO <sub>2</sub> 3.8~4.2                | <0.2      |  |
| WL | WL10        | Balance | LAO <sub>2</sub> O <sub>3</sub> 0.9~1.2 | <0.2      |  |
|    | WL15        | Balance | LAO <sub>2</sub> O <sub>3</sub> 1.3~1.7 | <0.2      |  |
|    | WL20        | Balance | LAO <sub>2</sub> O <sub>3</sub> 1.8~2.2 | <0.2      |  |
| WC | WC20        | Balance | CeO <sub>2</sub> 1.8~2.2                | <0.2      |  |

#### ✧ Specification and Tolerance:

| Diameter (mm) | Diameter tolerance (mm) | Length tolerance (mm) | Flat degree                         |
|---------------|-------------------------|-----------------------|-------------------------------------|
| Φ0.2~Φ2.5     | ±0.05                   | ±1                    | Not large 0.5% length of electrodes |
| Φ2.5~Φ25      | ±0.1                    |                       |                                     |

## ● THORIATED TUNGSTEN ELECTRODES

- ✧ The first selection material for high quality welding.
- ✧ Widely used for welding carbon steel, stainless steel, nickel alloy, titanium metal and as an additive oxide electrode
- ✧ Has much more advanced comprehensive welding property than the properties of pure tungsten electrode and other additive oxide electrodes .
- ✧ Can be operate easily and electric current load is big
- ✧ Can produce arc easily and steadily, the gap of the breaking arc is big, loss less and long life
- ✧ Has much higher recrystallizing temperature, much better conductivity and better mechanical cutting property

## THORIATED TUNGSTEN WIRES

- ✧ WTH7 can be used for making electron tube, the hook of emitting tube, spring, high temperature electrode and negative electrode of light air discharge.
- ✧ WTH10、WTH15、WTH20、WTH40 can be used for making a negative electrode and railing electrode of electrode and filament which is against vibration.

✧ **Specification and Tolerance:**

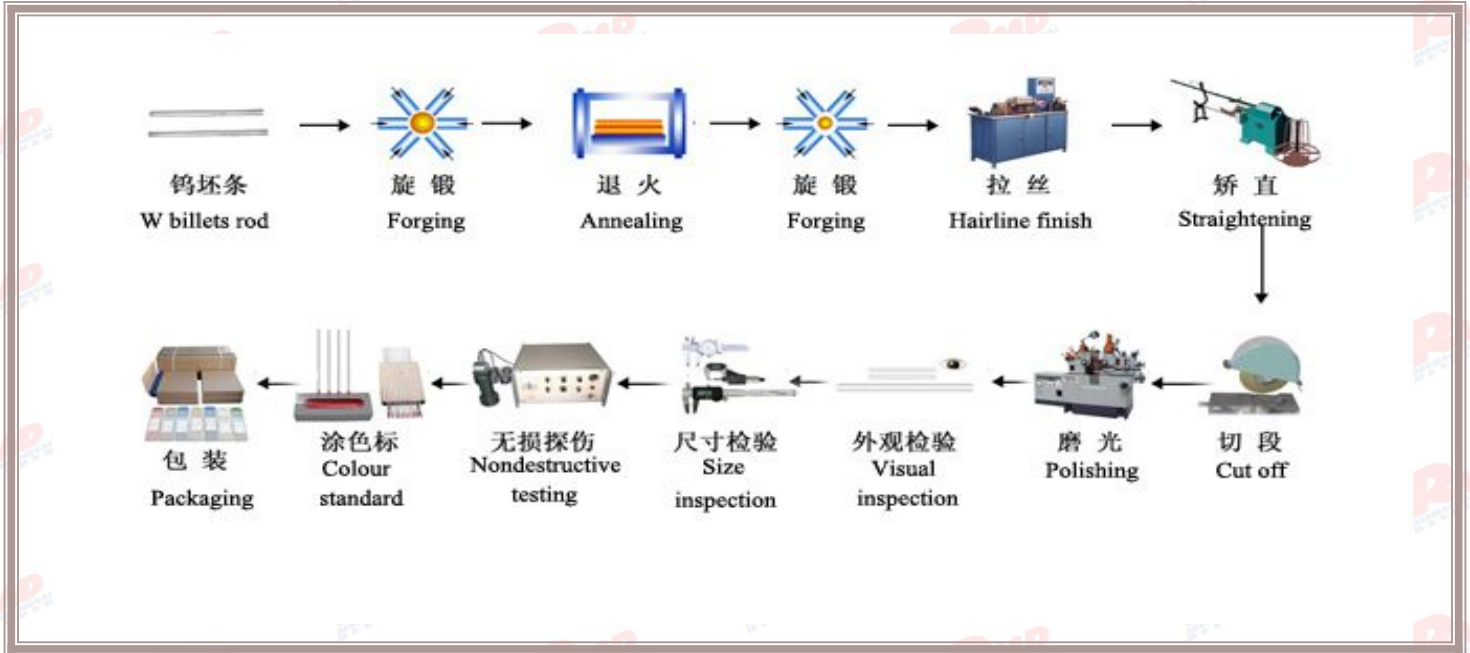
| Designation | WTH7            | WTH10 | WTH15 | WTH20 | WTH40 |
|-------------|-----------------|-------|-------|-------|-------|
| Condition   | R               |       |       |       |       |
| Size        | Φ0.15mm~Φ0.16mm |       |       |       |       |

| Diameter mm   | 200mmweight of tolerance% |      | Diameter of tolerance% |      |
|---------------|---------------------------|------|------------------------|------|
|               | I                         | II   | I                      | II   |
| Φ 0.2~Φ 0.35  | ±1.5                      | ±2.0 | —                      | —    |
| >Φ 0.35~Φ 1.6 | —                         | —    | ±1.0                   | ±2.0 |

✧ **Chemical Composition:**

| Designation | W% min | Oxide%    | Impurity% | Each Impurity |
|-------------|--------|-----------|-----------|---------------|
| WTH7        | 98.90  | 0.70~0.99 | <0.10     | <0.01         |
| WTH10       | 98.41  | 1.00~1.49 | <0.10     | <0.01         |
| WTH15       | 97.91  | 1.50~1.99 | <0.10     | <0.01         |
| WTH20       | 97.64  | 1.99~2.50 | <0.10     | <0.01         |
| WTH40       | 95.69  | 3.90~4.2  | <0.10     | <0.01         |

❖ Tungsten electrode production flow chart:



❖ Real scene shooting of the workshop



◆ Products show:

