

# WELDCUT

## TUNGSTEN ELECTRODE FOR TIG (GTAW) WELDING



### TIG ELECTRODE MANUFACTURING PROCESS IN DETAIL

- 1) The tungsten metal powder and oxide additives are checked for grain size miscibility even before MIXING. The intensive mixing and good ensures a homogenous distribution of materials.
- 2) The subsequent COMPRESSION of the metal powder is carried out hydraulically and isostatically, whereby piping is avoided by the correct build-up of pressure upto 3000 bar, thus ensuring a uniform microstructure.
- 3) The pressed rods are then converted into metal by SINTERING. The exact observance of sintering parameter such as temperature, time and inert-gas purity guarantees a homogenous distribution of the admixture. This greatly improves the subsequent burn-off rate and ease of striking.
- 4) During the ROTATORY SWAGING of the sintered tungsten bar, the microstructure is selectively optimized by varying the process temperature.
- 5) In accordance with EN26848/ANSI/AWS A5.12-92 the tungsten electrodes shall display no surface faults such as microcracks and scale. Moreover, the surface must be free of oil, grease or other impurities.

Code	Oxide additives Wt.%	Colour code	Standard
WT20	1,80..2,20thO <sub>2</sub>	Red	EN26848 / ANSI / AWS
WC20	1,80..2,20CeO <sub>2</sub>	Grey	EN26848
W	Pure	Green	EN26848



### 2% CERIATED - NON RADIOACTIVE

#### THE THORIUM FREE TUNGSTEN ELECTRODE WITH MORE POWER

**2% CERIATED** is equivalent if not superior to thoriated tungsten electrodes for normal application because it causes:

- I) **NO CONTAMINATION**  
of the atmosphere through radioactive particles
- II) **NO RADIATION EXPOSURE**  
Moreover, **2% CERIATED** has further **advantages**:

- 1) Universal application for high and low alloy steels, non-ferrous and light metals
- 2) Good welding results with d.c.
- 3) Suitable for manual and automated welding
- 4) Very good striking characteristics for contact free (HF) and scratch or lift start
- 5) Stable arc throughout the whole load range up to 500 A
- 6) Prolonged service life through reduced burn-off rate

**2% CERIATED** with its various admixture produces **excellent welding properties** in welding tests and **through practical field use**.

SIZE : Ø1.0 mm TO Ø10 mm  
LENGTH : STANDARD 150 MM / 175 MM LONG  
MATERIAL ALONG WITH BATCH TEST CERTIFICATE

e-mail : [siwi@vsnl.com](mailto:siwi@vsnl.com)



#### WELDCUT EQUIPMENT INDUSTRIES

10, GOKUL ARCADE "B" BLDG., Nr. GARWARE HOUSE,  
SUBHASH ROAD, VILE-PARLE (E), MUMBAI 400 057.

ISD : +9122, NSD : 022 / 9522 PHONE : 2825 5253 / 9322512042 FAX : 2837 5341



# PRE - GROUND TIG ELECTRODE



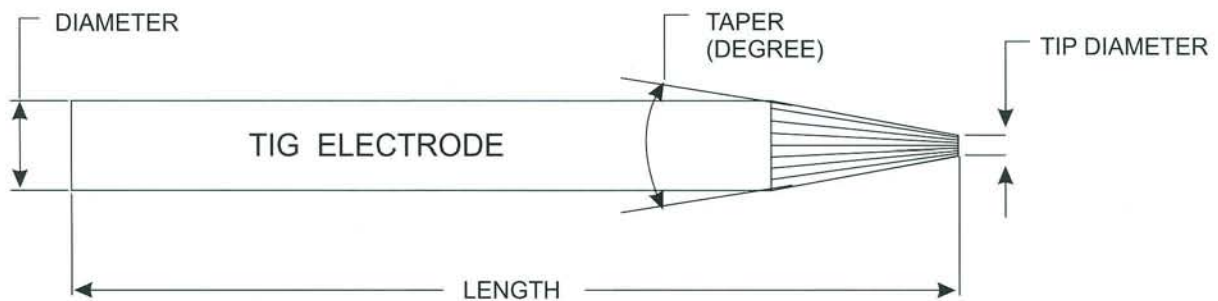
### TYPICAL HAND GROUND

- ⊗ INCONSISTENT FINISH
- ⊗ INCORRECTLY GROUNDED
- ⊗ POOR ARC STARTING AND STABILITY
- ⊗ REDUCED ELECTRODE LIFE
- ⊗ RISK TUNGSTEN X-RAY DEFECT
- ⊗ INVOLVES POTENTIALLY HAZARDOUS HAND GRINDING



### SAP STANDARD FINISH

- ⊗ EXTREMELY CONSISTENT FINISH
- ⊗ GROUND ON DIAMOND WHEEL
- ⊗ LONGITUDINAL GRINDING
- ⊗ EXCELLENT ELECTRODE LIFE
- ⊗ EXCEEDS ALL STANDARDS SET FOR TIG WELDING
- ⊗ MUST FOR ORBITALS / PLASMA / TUBEMILLS / MECHANICAL AUTO TIG PROCESS



TYPE - 2% THORIATED, 2% CERATED  
 DIAMETER - 1.0 / 1.6 / 2.0 / 2.4 / 3.0 / 3.2 / 4.0 MM

OTHER TYPE AND/OR DIAMETER ON REQUEST

### HOW TO ORDER :

QUANTITY	LENGTH	DIAMETER	TAPER	TIP DIA.	TYPE

SPECIFY TOLERANCE ON : LENGTH / DIAMETER / TAPER (DEGREE)