TIG-Tectic 5HSS

High speed steel filler rod for TIG

Description:
High speed steel filler rod, with high alloy content of tungsten, molybdenum, chromium/vanadium for the use by the TIG process**.**
The microstructure of the un-annealed deposit is martensitic with residual austenite and carbides, has considerable toughness and excellent cutting characteristics.

Technical Data:
Standards
DIN 8555: WSG 4-GZ-60-65-ST
W.Nr 1.3348
Mechanical Properties:
(On test pieces prepared at 20ºC without annealing treatment)
Hardness after welding: 62-67 HRC
Soft annealing: 760-800ºC/ 2-4hr/ in furnace 23-32 HRC
Quenching: 1180-1220ºC/ oil or in air 62-64 HRC
Tempering: 540-560ºC/ 2x 1hr/ air 64-66 HRC
Shielding Gas:
Recommended gas 100% argon

Applications:
TIG-Tectic 5HSS is especially designed for maintaining and increasing the life of the following parts: cutting edges, trimming dies, shears, drill bits, cold drawing dies, coating of wearing parts such as engaging forks, cams, clamping jaws, milling cutters, cutting blades of wood working tools, mixer blades, conveyor screws, production of cutting tools from un-alloyed or low alloy steels, repairing worn needle roller bearing surfaces.

Procedure for use
Preparation:
Eliminate earlier deposits and worn metal by grinding or with the manual electrode Exotrode until a sound, regular and crack free surface is obtained. The surfaces of new work-pieces must be free from oxidation, grease, paint etc. Round off sharp edges.
Preheating:
Preheat depends on the type and dimensions of the work-piece and on the carbon equivalent of the base metal. In Practice preheating between 400-450ºC is recommended, in addition to the maintenance of this temperature during the complete welding operation.
Welding:
Polarity = (-) negative polarity
Angle between torch and work piece for a flat joint: 70-80º Angle between rod & work piece 15-30º
Welding Positions:
PA, PB, PC, PE, PF, PD according to ISO 6947

Recommended welding current:

Electrode Diameter mm	***Welding Current DC***
1.0mm	15-80
1.6mm	70-150
2.4mm	110-180
3.2mm	150-200
4.0mm	180-250

Machining: The TIG deposit can be machined with standard cutting tools & can also be cut by the plasma cutting process.

Rod Diameter: 1.6mm, 2.4mm

DIGITALWELD
J.D.M Holdings Ltd
Unit D/17 Hobill Avenue, Wiri, Manukau, 2104. P.O Box 97622 Manukau City, Manukau 2241, New Zealand
Ph: +64 (09) 263 7099 Fax: +64 (09) 263 5062 Email: sales@digitalweld.co.nz Website: www.digitalweld.co.nz