COMWELD HIGH TEST

- **Copper Coated, Steel Filler Rod for Gas and Gas Tungsten Arc (TIG) Welding.**
- **Higher Strength (400-450MPa) Oxy-Acetylene and TIG Welding of Steels.**

JOINING PROCESS:

Gas (Fusion) and Gas Tungsten Arc (TIG) welding.

TYPICAL WELD DEPOSIT PROPERTIES:

All Weld Metal Tensile Strength	425 MPa.
Elongation	28%
Approximate Melting Point	1490°C.
Weld Metal Density	7.85 gms / cm^3

TYPICAL ROD ANALYSIS:

C: 0.12%	Mn: 1.17%	Si: 0.25%
S: 0.009%	P: 0.015%	Fe: Balance

Classifications:

AS 1167.2:	R1.
AWS/ASME-SFA A5.2:	R60.

Packaging Data:

Rod Size (mm)	Pack Weight/Type	Approximate Rods/kg	Part No
1.6 x 915	5kg Pack	84	321357
2.4 x 915	5kg Pack	34	321360
3.2 x 915	5kg Pack	21	321362

Description and Applications:

Comweld High Test is a copper coated steel filler rod suitable for the oxy-acetylene (fusion) welding and Gas Tungsten Arc (TIG) welding of carbon steels.

Comweld High Test produces a free flowing weld pool when gas welding, without the need for an externally applied flux. Resultant weld deposits are ductile and in the 400 - 450 MPa tensile class. A neutral to slightly reducing flame setting is recommended for use with Comweld High Test which is used extensively for the gas welding of pressure pipelines where higher joint strengths are required.

The nominal 1.2% Manganese and 0.2% Silicon deoxidant levels of Comweld High Test make it suitable for Gas Tungsten Arc (TIG) welding applications.

Procedure for Gas (Oxy-acetylene) Welding:

1. Thoroughly clean all areas to be welded.
2. Adjust flame to a neutral setting.
3. Preheat thicker joint sections.
4. Heat a small area of the joint until molten and progressively add Comweld High Test filler rod to the weld pool. Ensure the rod is melted by the molten weld pool and not the flame.
5. Allow completed joint to cool and remove residual scale by grinding, or wire brushing.

Procedure for Gas Tungsten Arc (TIG) Welding:

1. Thoroughly clean all areas to be joined.
2. For the butt welding of thick plates, bevel edges to 60°-70° included angle.
3. Use a Thoriated or Ceriated tungsten electrode, ground to a sharp needle point making sure the grinding lines run with the length (longitudinally) of the electrode's axis. The length of the needle point should be approximately 2-3 x the diameter of the tungsten electrode.
4. Use Direct Current Electrode Negative (DC-) and Welding Grade Argon.
5. Preheat thick sections prior to welding. Heat a spot on the base metal until it shows signs of melting and progressively add the filler rod to the weld pool.