utp by voestalpine

Tailor-Made Protectivity™

UTP ROBOTIC 601

Seamless metal-cored wire

Premium seamless gas shielded metal-cored wire for crack-free Niobium carbides weld overlays.

Product features	Product benefits	User benefits
» Crack free deposit	» Reliable weld deposit checked by die penetrant test » Crack free when applied over the base material, over itself or over different hard-banding weld deposits	» Time savings because there is no repair needed » Reliable weld deposit with and enhanced lifetime
» Stable arc	» Welder-friendly » Smooth wetting » Low spatter	» Low defect rate » Good fatigue resistance » Less post weld cleaning
» Excellent feedability	» Dependable feedability » Low contact tip wear	» No starting defects » Increased arc time
» Seamless design	» Copper-coated surface » Low diffusibile Hydrogen	» Excellent arc stability » Resistance to porosity and rust formation » Better resistance to cold cracking

UTP ROBOTIC 601 is a metal cored wire, gas shielded, developed for applications with high productivity and high integrity requirements. Crack free deposit with very smooth surface. In critical applications such as heavy impact and high pressure, UTP ROBOTIC 601 shows good resistance to stress abrasion and erosion in the daily application.

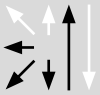
Due to the particular design of the product, the wear loss according to ASTM G-65 A, is much lower than standard 600 HB hardfacing wires.

The seamless, copper-coated wire design adds sufficient stiffness and glide to overcome friction in liners, welding guns and contact tips. The copper-coating enhances current transfer between contact tip and wire resulting in a stable arc. Controlled wire cast and helix largely avoids “dog tailing”, promoting straight, well positioned welds.

Typical applications

» Mining industry – crushers, bucket wheel excavators, drilling heads, bulldozer wheel loaders, etc.
» Cement industry – excavators, wheel loaders, crushers, conveyors, etc.
» Agriculture equipment

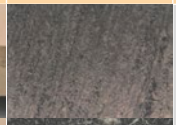
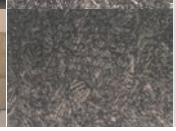
UTP ROBOTIC 601

Classifications		Operating data Allows welding with standard power sources	
EN 14700	**Welding positions**	**Polarity**	**Shielding gas**
T Fe 8		DC+	EN ISO 14175: M21

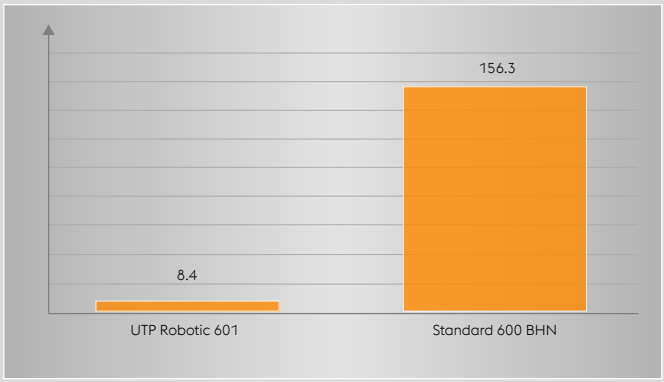
Typical chemical composition, all weld metal, wt. %					
Shielding Gas	**C**	**Si**	**Mn**	**Cr**	**Nb**
M21 (82% Ar – 18% CO_2)	1.4	1.0	0.7	6.0	5.5

Mechanical properties, all weld metal (single values typical)		
Shielding gas	**Condition**	**Hardness as welded (HRC)**
M21 (82% Ar – 18% CO_2) M13 (98% Ar – 2% O2)	as welded	57 – 62

Macro and micro pictures

Layer	Macro 2.3X	Micro 400X	Note	HRC
1			Dendritic solidification structure mainly made of martensite and of carbide	56
2				55
3				58

Wear loss ASTM G65-A (mm^3)



Packaging

Wire basket spool BS300			BASEdrum™ 250 Kg		
	Precision layer wound **Dimensions** Ø external: 300 mm Ø internal: 52 mm Width: 100 mm	Available spool weight: 16 kg Available diameters: 1.2 mm (art. nr. 38748) 1.6 mm (art. nr. 38899)		Round Drum Weight: 250 kg **Dimensions** Ø external: 520 mm Height: 780 mm	Available diameters: 1.6 mm (art. nr. 30826)