



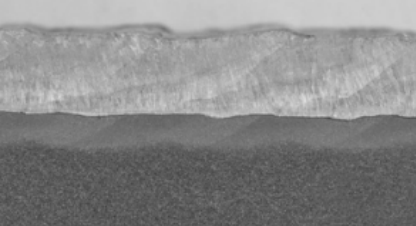
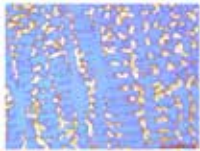


JOIN! Your Full Welding Solutions for Lasting Connections

# EFFICIENT AND HIGH QUALITY MIG CLADDING FOR THE O&G INDUSTRY


Achieve mechanical properties and corrosion resistance with a single layer as opposed to the two layers required by conventional processes. Cladding of alloy 625 with Fe<5% in one single layer is now possible using UTP A 6222Mo wire and our CladPulse process!

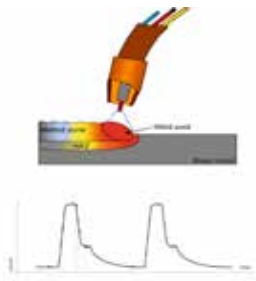

## Main benefits


- » Save up to 50% time and 20 % wire when cladding with our single layer process (5.5 mm clad thickness)
- » Even more challenging save up to 50 % time and 50 % wire when cladding with our single layer process with a THIN layer (3 mm clad thickness)

Product features	Product benefits	User benefits
<b>Cladding Details</b>		
   	<p><b>5,5 mm Clad Thickness</b></p> <ul style="list-style-type: none"> <li>» Wire speed: 7m/min</li> <li>» Travel speed: 15 cm/min</li> <li>» Weaving: 9mm/1Hz</li> <li>» Shielding gas: 100% Ar</li> <li>» Base material: ASTM A516 gr. 70</li> <li>» Filler metal: UTP A 6222Mo</li> </ul> <p><b>3 mm clad Thickness</b></p> <ul style="list-style-type: none"> <li>» Wire speed: 4.2m/min</li> <li>» Travel speed: 32 cm/min</li> <li>» Weaving: 8mm/2.5Hz</li> <li>» Shielding gas: 100% Ar</li> <li>» Base Material: ASTM A516 gr.70</li> <li>» Filler Metal: UTP A 6222Mo</li> </ul>	<p><b>Results, that convince:</b></p> <ul style="list-style-type: none"> <li>» Alloy 625 chemical analysis achieved in depth in one single layer</li> <li>» Smooth transition between passes</li> <li>» Uniform deposit and penetration</li> <li>» Save more cladding material in case of post machining is not required with our 3 mm clad thickness</li> </ul>



Uranos Welding Equipment	Product Benefits	User Benefits
 <p>The URANOS 4000 and 5000 GSM power sources offer the perfect combination of advanced digital control and exceptional ease of use, and guarantee top quality, welding results.</p>	<ul style="list-style-type: none"> <li>» “Green @ wave” inverter technology for high energy efficiency and perfect control over all welding phases</li> <li>» High power at 100% of duty cycle</li> <li>» Heavy duty and environmental conditions, high service life</li> <li>» CAN fieldbus digital communication protocol system (very high speed and high reliability digital communication)</li> <li>» Software based controls can be upgraded as new features become available</li> <li>» High temperature, shockproof, abrasion resistant plastic case</li> <li>» Energy-saving inverter technology (built-in P.F.C. - power factor controller)</li> <li>» Control of several welding units over Ethernet</li> </ul>	<ul style="list-style-type: none"> <li>» Simple and user friendly front panel</li> <li>» Wide range of synergic programs</li> <li>» Böhler Arc</li> <li>» Possible to interface with automatic and robotic systems</li> <li>» Multiprocess</li> <li>» Modular design</li> <li>» Perfect aligned synergic lines</li> </ul>

CladPulse Process	Product Benefits	User Benefits
 <p>CladPulse is a special process aimed to obtain low dilution with the base material as primary objective. In order to meet this target a very „soft arc” has been designed acting on more than 30 parameters governing the wave form resulting in “low pressure” on the base material.</p>	<ul style="list-style-type: none"> <li>» Innovative waveform: A special welding arc applies cladding at a high deposition rate while maintaining uniform physical characteristics in depth</li> <li>» Fine-tuning: Precise and focused research has minimised base metal dilution and reduced overlay penetration.</li> <li>» Pulsed MIG/MAG welding process for cladding</li> <li>» High protection and reliability</li> <li>» Start simple and quick thanks to iPanel</li> </ul> 	<ul style="list-style-type: none"> <li>» Easy to install</li> <li>» Easy to operate</li> <li>» High competitiveness cladding</li> <li>» Excellent arc stability and no wandering in the transition between base metal and already deposited clad material</li> </ul>

UTP Maintenance Cladding Wires	Product Benefits	User Benefits
 <p>For MIG cladding of alloy 625 the perfect choice is UTP A6222Mo with his fine-tuned balance of residual elements, chemical analysis in restricted specification, excellent surface finishing, which makes the clad metal corrosion resistant and also improves the cladding behavior.</p>	<ul style="list-style-type: none"> <li>» Specifically designed for cladding alloy 625</li> <li>» Chemical analysis in restricted specification (e.g. Fe &lt;0.5%)</li> <li>» Fine-tuned balance of residual elements</li> <li>» Excellent surface finishing for good arc stability and feedability. Robotic quality satined surface</li> <li>» High production consistency in wire surface and cast/helix</li> <li>» Controlled amount of lubricants</li> <li>» It can produce clad metal corrosion resistance proven according to severe corrosion testing methods such as ASTM G48-C and ASTM G28-A</li> </ul>	<ul style="list-style-type: none"> <li>» Consistent feeding properties</li> <li>» Excellent weld metal profile</li> <li>» No contact tip burn back issues</li> <li>» Wire does not stick in torch liner</li> <li>» Reduced defect rate</li> <li>» Improved production efficiency</li> <li>» Significant cost savings</li> <li>» Corrosion resistant in demanding conditions</li> </ul>



Perfect combination of process, filler metal and welding equipment are achieved thanks to Böhler Arc synergic lines, maximizing performances and arc stability coupled with an outstanding ease of use, resulting in great advantages for the welder and efficiency for the industrial process.

- » All the parameters are made and tested to perform best welding results
- » The welder simply choose the suitable synergic line and starts welding
- » The welding process is immediately perfect
- » Repeatability and constant quality
- » Customization and upgrade is possible
- » Easy to start: Start up a welding program on vaBW equipment control panel is quick and intuitive
- » Welding with the autopilot: when welding using synergic programs, all the parameters are dynamically controlled and balanced
- » Constant quality: the precise and constant adjustment allows to keep the quality in every welding condition
- » For all materials in any conditions: The Böhler Arc library of welding programs includes a wide range of filler materials and welding gas

Personal Protection



One of the most important aspects in the welding process is the protection of the welder.

- » Therefore voestalpine Böhler Welding created the new weldCare personal protection & accessories line.
- » The products reflect our high quality demands and give the welders the protection and the tools they need

weldTECH Application Services




For voestalpine Böhler Welding, being a Full Welding Solutions provider means acting as a partner for Oil and Gas manufacturers through the weldTECH Application Services, which include a team of welding engineers experienced in welding of cladding alloy 625



Typical cladding applications

- » Of pressure vessels
- » Nozzles
- » Tubes & pipes
- » Flanges
- » Valve bodies and internal parts
- » Cross-overs

# UTP A 6222 MO

Classifications		Operating data		
EN ISO 18274	AWS A5.14	Welding positions	Polarity	Shielding gas
S Ni 6625 (NiCr22Mo9Nb)	ER NiCrMo-3		DC+	I1 Z-ArHeHC-30/2/0.05

Typical chemical composition, all weld metal, wt. %							
Shielding gas	C	Si	Nb	Cr	Ni	Mo	Fe
I1	< 0,02	< 0,2	3,5	22,0	balance	9,0	< 0,5

Mechanical properties, all weld metal (single values typical)						
Shielding gas	Condition	Yield strength	Tensile strength	Elongation	CVN Impact toughness	
		R <sub>p0.2%</sub>	R <sub>m</sub>	A <sub>5</sub>	ISO-V KV J	
		MPa	MPa	%	J [RT]	-196° C
I1	As welded	> 460	> 740	> 30	> 100	> 85

Steels to be welded	
EN	ASTM
NiCr22Mo9Nb	NiCrMo-3 / UNS N06625

Approvals
TÜV ( 03460), DNV, ABS

Wire diameterh [mm]	Current type / Polarity	Shielding gas (EN ISO 14175)	
0,8	DC (+)	I 1	Z-ArHeHC-30/2/0.05
1,0			
1,2			
1,6			

Overview diameters and packaging		
Wire basket spool BS300		BASEdrum™ 250 kg
	Precision layer wound  Dimensions: Ø external 300 mm Ø internal 52 mm	 Round drum Weight: 250 kg  Dimensions: Height 780 mm Ø external 520 mm  Available spool weight: 15 kg  Diameters & Art. no. 0.8 mm 84683 1.0 mm 73447 1.2 mm 36873 1.6 mm 79053
		Diameters & Art. no. 0.8 mm 86829 1.2 mm 38931