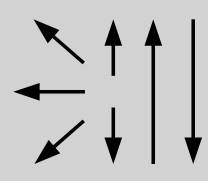


Classifications						
<b>EN ISO 18276-A</b>		<b>EN ISO 18276-B</b>				
T69 6 Mn2NiCrMo M M21 1 H5		T766T15-1M21A-N4C1M2-UH5				
<b>AWS A5.36</b>		<b>AWS A5.36M</b>				
E110T15-M21A8-K4-H4		E760T15-M21A6-K4-H4				
Characteristics and typical fields of application						
<p>diamondspark 700 MC metal cored wire manufactured with seamless technology is developed for shielded arc welding of thermo mechanically and quenched and tempered fine grained structural steels. The metallurgy combined with a very precise production technology results in high strength combined with very good toughness behaviour and excellent welding performance. This tubular wire possesses higher rigidity – as a result it offers exact ignition and excellent feeding characteristic. Due to the manufacturing technology, this metal cored wire ensures low diffusible hydrogen content of &lt;2 ml / 100g. This metal cored wire is designed for welding under mixture gas (Ar + CO<sub>2</sub>) in PA and PB-position. Good results were also achieved after using alternative gases CO<sub>2</sub>, 8 – 10 % CO<sub>2</sub> + Ar and different welding positions (PG). This filler material is used for high strength steel constructions, crane and vehicle manufacturing, for ship building, offshore applications and also for penstocks.</p>						
Base materials						
<p>thermo mechanically treated and quenched and tempered fine grain steels up to 690 MPa. S550Q-S690Q, S550QL-S690QL, P550Q-P690Q, P550QL-P690QL ASTM A 514 Gr. F, H, Q ; A 709 Gr. 100 Type E, F, H, Q; A 709 Gr. HPS 100W</p>						
Typical analysis of all-weld metal (wt.-%)						
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.07	0.7	1.6	0.35	2.0	0.3
Mechanical properties of all-weld metal						
Condition	Yield strength R <sub>p0,2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J		
	MPa	MPa	%	-40 °C	-60 °C	
u	<b>770</b> (≥ 690)	<b>830</b> (770 – 900)	<b>19</b> (≥ 17)	<b>130</b>	<b>85</b> (≥ 47)	
u untreated, as welded – shielding gas Ar + 18 % CO <sub>2</sub>						
Operating data						
	<b>Polarity:</b> DC ( + )	<b>Shielding gases:</b> (EN ISO 14175): M21; M20 Argon + 5 – 25 % CO <sub>2</sub>			<b>ø (mm)</b>	
					1,0	
					1.2	
					1.6	
Preheating and interpass temperature as required by the base metal.						
Approvals						
TÜV, DB, DNV GL, LR, CWB, CE						