


<b>GA-24</b>	<b>RUTILE IRON POWDER ELECTRODE FOR HIGH EFFICIENCY WELDING IN THE DOWNHAND (FLAT) AND HORIZONTAL-FILLET POSITIONS</b>				<b>DATA SHEET NO. 5</b>						
	SPECIFICATION	AWS A5.1	BS EN ISO 2560-B								
CLASSIFICATION	E7024	E4924									
PRODUCT DESCRIPTION	<p>A rutile based flux with a high iron powder content that also contains the necessary alloying and deoxidising elements. The fluid slag has a short freezing range allowing excellent deposition rates to be achieved. The flux is extruded onto a mild steel core wire that ensures coating strength and stability.</p> <p>Metal recovery is some 180% with respect to core wire weight.</p>										
WELDING FEATURES OF THE ELECTRODE	<p>The arc is stable on both AC and DC. Arc strike and re-strike are instant. Weld seams are smooth and evenly rippled. Slag detachability is excellent, often self-detaching. The high metal recovery ensures improved welding economics.</p> <p>Fillet welds are of a mitred to very slightly concave profile.</p>										
APPLICATIONS AND MATERIALS TO BE WELDED	<p>Butt welds in the flat (downhand) position and fillet welds in the flat and horizontal positions with the following materials:</p> <p>Mild and medium carbon-manganese steels up to 15mm thick with a UTS of 500N/mm<sup>2</sup> max. Typical grades : BS 1449 plate and sheet, BS 4360 grades 43A and 43C, Lloyds A &amp; D ship steel BS 4360 grade 50B Lloyds grades AH and DH, BS 3059 and BS 3601 grade 320-410 API 5L A-B and X42.</p>										
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Ni	Mo	V	Fe
	MIN	-	-	-	-	-	-	-	-	-	
	MAX	0.15	1.25	0.9	0.035	0.035	0.2	0.3	0.3	0.08	
	TYPICAL	0.07	1.0	0.4	0.02	0.02	0.03	0.03	0.03	0.04	Bal.
WELD METAL PROPERTIES (ALL WELD METAL)	<u>PROPERTY</u>	<u>UNITS</u>	<u>MINIMUM</u>	<u>TYPICAL</u>	<u>OTHERS</u>						
	Tensile strength	N/mm <sup>2</sup>	490	530							
	0.2% Proof stress	N/mm <sup>2</sup>	400	480							
	Elongation on 4d	%	17	29	-						
	Reduction of Area (RA)	%	-	70							
	Impact energy 0°C	J	-	80							
WELDING AMPERAGE AC or DC	Ø (mm)	3.2	4.0	5.0							
	MIN	130	170	210							
	MAX	180	240	310							
OTHER DATA	Electrodes that have become damp should be re-dried at 150°C for 1 hour.										
APPROVED BY	BKI - Grade 2Y										