

<p align="center">NCNb-35.45</p>	<p align="center">A CHEMICALLY BASIC FLUX COATED ELECTRODE THAT DEPOSITS A NIOBIUM STABILISED WELD METAL CONTAINING A NOMINAL 35Cr-45Ni RESISTANT TO THERMAL FATIGUE UP TO 1150°C</p>				<p align="center">DATA SHEET NO. 105</p>				
<p align="center">SPECIFICATION</p>	<p>NO SPECIFICATION EXISTS FOR THIS ELECTRODE, BUT IT MAY BE COMPOSITIONALLY CODED AS 35.45.HNb B</p>								
<p align="center">CLASSIFICATION</p>									
<p align="center">PRODUCT DESCRIPTION</p>	<p>Manufactured on a high purity Cr-Ni wire, the chemically basic flux provides high resistance to microfissuring when welding thick sections and ensures low levels of non-metallic inclusions.</p> <p>The flux is extruded on to the core wire using a blend of silicates that ensures both coating strength and a coating resistant to subsequent moisture absorption.</p>								
<p align="center">WELDING FEATURES OF THE ELECTRODE</p>	<p>Suitable for use on DC+ only, the arc is stable and directional but strike and re-strikes should be made with the back-step technique. The weld beads are bright with fillet welds having a convex profile. Slag detachability is good even in thick butt welds. Positional welding is best undertaken with 3.2mm and smaller diameters.</p> <p>Metal recovery is some 130% with respect to weight of core wire.</p>								
<p align="center">APPLICATIONS AND MATERIALS TO BE WELDED</p>	<p>This Alloy has superior resistance to carburisation and oxidation than those based on 25.35.HNb at temperatures up to 1150°C but creep strength is slightly lower. Applications occur mainly in the Petro Chemical Industry. Proprietary alloys include Lloyds T80 and T75 Ma (LBA).</p> <p>Paralloy it 46M (Doncaster Paralloy).</p>								
<p align="center">WELD METAL ANALYSIS COMPOSITION % BY Wt.</p>		C	Mn	Si	S	P	Cr	Ni	Nb
<p>MIN</p>	0.4	-	1.0	-	-	34	44	-	
<p>MAX</p>	0.5	2.0	1.6	0.015	0.015	38	50	1.5	
<p>TYPICAL</p>	0.44	1.4	1.2	0.01	0.01	36	47	1.3	
<p align="center">WELD METAL PROPERTIES (ALL WELD METAL)</p>	<p align="center">PROPERTY</p> <p>Tensile strength</p> <p>0.2% Proof stress</p> <p>Elongation on 4d</p> <p>Reduction of Area (RA)</p> <p>Impact energy 0°C</p>	<p align="center">UNITS</p> <p>N/mm²</p> <p>N/mm²</p> <p>%</p> <p>%</p> <p>J</p>	<p align="center">MINIMUM</p> <p>450</p> <p>250</p> <p>-</p> <p>-</p> <p>-</p>	<p align="center">TYPICAL</p> <p>700</p> <p>530</p> <p>3</p> <p>-</p> <p>-</p>	<p align="center">OTHERS</p> <p align="center">HV 268</p>				
<p align="center">WELDING AMPERAGE DC+</p>	<p>Ø (mm)</p>	2.6		3.2		4.0			
<p>MIN</p>	70	85		110					
<p>MAX</p>	95	120		160					
<p align="center">OTHER DATA</p>	<p>Electrodes that have become damp should be re-dried at 150°C for 1 hour.</p>								
<p align="center">RELATED PRODUCTS</p>	<p>Please contact our Technical Department for detail.</p>								

