



UNITED STATES WELDING CORPORATION

<p align="center">USW ALLOY DESIGNATION AND BRIEF DESCRIPTION</p>	<p align="center">TURBALOY® 1212 MC-GRADE GTAW SOLID BARE WELDING WIRE IRON BASE</p>	<p align="center">ISO 9001 AS 9100</p>	<p align="center">DATA SHEET 6459</p>																																										
<p align="center">CROSS-REFERENCE CONFORMANCE SPECIFICATIONS</p>	<table border="0"> <tr> <td>AMS 6459</td> <td>USW 1212</td> </tr> <tr> <td>UNS K22720</td> <td>GE B50 T41A</td> </tr> <tr> <td>CROMOLOY</td> <td>BARE TY - 1</td> </tr> <tr> <td>USWC 6459 (V)</td> <td>COPPER COATED TY - 2</td> </tr> <tr> <td>1Cr 1Mo 0.12V (0.18-0.23C) VM</td> <td>Available in COMM-GRADE</td> </tr> </table>			AMS 6459	USW 1212	UNS K22720	GE B50 T41A	CROMOLOY	BARE TY - 1	USWC 6459 (V)	COPPER COATED TY - 2	1Cr 1Mo 0.12V (0.18-0.23C) VM	Available in COMM-GRADE																																
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<p align="center">METALLURGICAL BACKGROUND INFORMATION</p>	<p>TURBALOY®1212 is produced by vacuum induction melting and remelting techniques and the final wire is produced by special lubricant-free, roller-die forming followed by surface abrasion and cleaning processes.</p> <p>These manufacturing routes ensure consistent metallurgical integrity of the alloy with regard to control of trace elements and physical purity of the welding wire surface, resulting in repeatable excellent weld quality.</p> <p>TURBALOY®1212 is a high strength low alloy steel filler metal used for fabricating materials of similar composition, giving high toughness and ductility. Ultra clean weldment conditions essential for obtaining optimum properties.</p>																																												
<p align="center">MATERIALS TO BE WELDED APPLICATION AND ADVICE</p>	<p>UNS K22720 Cromoloy ASTM A356 Gr 819; A389 Gr C23, C24 Steam turbine components.</p>																																												
<p align="center">WIRE CHEMISTRY WT%</p>	<table border="0"> <tr> <td>Carbon</td> <td>0.18</td> <td>0.23</td> <td>Copper</td> <td>-</td> <td>0.50</td> </tr> <tr> <td>Manganese</td> <td>0.40</td> <td>0.60</td> <td>Vanadium</td> <td>0.08</td> <td>0.15</td> </tr> <tr> <td>Silicon</td> <td>0.60</td> <td>0.90</td> <td>Oxygen</td> <td>-</td> <td>0.0025 (25ppm)</td> </tr> <tr> <td>Sulfur</td> <td>-</td> <td>0.008</td> <td>Nitrogen</td> <td>-</td> <td>0.005 (50ppm)</td> </tr> <tr> <td>Phosphorus</td> <td>-</td> <td>0.015</td> <td>Hydrogen</td> <td>-</td> <td>0.0010 (10ppm)</td> </tr> <tr> <td>Chromium</td> <td>0.80</td> <td>1.20</td> <td>Molybdenum</td> <td>0.80</td> <td>1.20</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Iron</td> <td></td> <td>Balance</td> </tr> </table>			Carbon	0.18	0.23	Copper	-	0.50	Manganese	0.40	0.60	Vanadium	0.08	0.15	Silicon	0.60	0.90	Oxygen	-	0.0025 (25ppm)	Sulfur	-	0.008	Nitrogen	-	0.005 (50ppm)	Phosphorus	-	0.015	Hydrogen	-	0.0010 (10ppm)	Chromium	0.80	1.20	Molybdenum	0.80	1.20				Iron		Balance
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<p align="center">PACKAGING</p>	<p>Sealed, air-evacuated, argon filled Vapor Barrier envelopes with desiccants ensure full protection from atmospheric contamination and prolonged shelf-life.</p>																																												
<p>DFARS Compliant</p>		<p align="right">www.usweldingcorp.com</p>																																											