

DIFFUSALOY 6 WZ

A specially developed semi-basic high speed tool steel electrode depositing a highly alloyed heat treatable weld metal. The weld metal is air hardening and can retain its high hardness upto temperatures as high as 500⁰ C. It has excellent weldability in flat, horizontal and vertical upward positions. The weld bead is smooth and has excellent cutting, shaving and piercing qualities.

Applications:

For repair and rebuilding of composite high speed tool steel dies, tools. Examples are cutting, piercing and shaving tools, hot working punches and dies, extrusion moulds and dies, shear-blades, milling and cutting tools, ingot lifting tongs, rolling mill guides, wood working tools and cutting edges on stamping dies.

Recommendations:

Provides maximum hardness of edges at high temperatures. For use where cutting, shaving, or piercing qualities are required. Excellent for knife edges, and machine tool parts subject to heavy frictional wear. Ideal for building composite blanking or punching dies.

Procedure:

Prepare the plate by grinding and remove rust or paint marks if any. Use AC/DC power source. On DC, use reverse polarity. Employ lowest possible welding current. Use stringer beads. Chip slag between beads, and peen to minimize stresses. If the base metal is hardenable steel, preheat it to 250 - 400⁰ C depending on the base metal composition. Keep interpass temperature greater than 300⁰ C. As welded hardness of the weld metal is 60 to 64 HRc, which can be further increased by oil tempering it at 550⁰ C for 1 hour, once or twice. The increase in hardness is marginal, but the high temperature life is substantially improved by the double tempering treatment.

<u>Technical Data</u>	:	DIFFUSALOY 6 WZ		
Size (mm), Ø	:	3.15	4.00	5.00
Recommended Welding Current (Amps)	:	90 - 120	120 – 150	150 – 200
Hardness	:	60 – 64 HRC		
Coating Colour	:	Black		

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